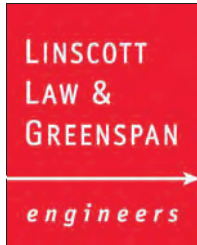


APPENDIX A

TRAFFIC ANALYSIS SCOPE OF WORK

MEMORANDUM

Approved 06/27/2022
- J. Que



To: Steve Finton, P.E., Deputy Public Works Director – City Engineer Date: June 22, 2022
Cc: Brenda Moun, P.E., Engineering Manager
Jessamine Que, Associate Engineer
City of Torrance, Public Works Department
From: Richard E. Barretto, P.E., Principal LLG Ref: 2.19.4123.1
LLG, Engineers

Subject: 2555 W. 190th Street Warehouse / Manufacturing, Torrance
Updated Local Circulation Analysis Scope of Work

Engineers & Planners
Traffic
Transportation
Parking

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As a follow-up to our coordination efforts, Linscott, Law & Greenspan, Engineers (LLG) is pleased to submit the following revised work scope for the preparation of a Local Circulation Analysis (LCA) for the 2555 W. 190th Street Warehouse / Manufacturing Project (hereinafter referred to as Project) in the City of Torrance. The work scope has been revised to reflect updates to the project site plan(s) which alters access to the site along with updates to reflect the current City guidelines. The work program details summarized below are based on our prior collaboration on this project and City’s current requirements, as well as prior work on the subject property.

The analysis for the proposed Project will satisfy the traffic impact requirements of the City of Torrance. The following links provide access to the *City of Torrance Traffic Circulation Analysis (TCA) Guidelines* (www.torranceca.gov/tca-guidelines) as well as the *City of Torrance Traffic Impact Assessment Guidelines for Land Use Projects, dated January 2021* (www.torranceca.gov/traffic-reports).

Traffic Study Scope of Work

A. Project Location: The Project site is located at 2555 W. 190th Street in the City of Torrance, California. It is bounded by Crenshaw Boulevard/Crenshaw Place on to the west and by W. 190th Street to the south. The Project site currently developed with an existing 160,000 square-foot (SF) office building in addition to excess surface parking areas. See the attached **Figure 1-1**, a Vicinity Map that illustrates the general location of the Project and surrounding street system. **Figure 2-1** presents existing aerial photograph of the Project site.

B. Project Description: The proposed Project includes a state-of-the-art warehouse/cross dock industrial warehouse and/or manufacturing that would be developed with either of the two (2) options:

- Option A includes 284,130 square-feet (SF) of floor area consisting of 85,239 SF of warehouse, 170,478 SF of manufacturing, and 28,413 SF of office, inclusive of 13,530 SF of mezzanine space. Parking for the Project,

calculated at 1 space per 1500 SF for warehouse/storage space, 1 space per 400 SF of manufacturing, and 1 space per 250 SF of office space per Section 93.2.33 of the City's Municipal Code, will be provided via 600 on-site parking spaces. **Figure 2-2** illustrates Scheme 10c - Conceptual Site Plan (LAX18-0056-00_SS010c) for Project Option A, prepared by Ware Malcomb, dated 05-13-2022.

- Option B includes 270,600 SF of floor area consisting of 257,070 SF of warehouse, and 13,530 SF of office space. Parking for this Project option, calculated at 1 space per 1500 SF for warehouse/storage space, and 1 space per 250 SF of office space per Section 93.2.33 of the City's Municipal Code, will be provided via 377 on-site parking spaces. **Figure 2-3** illustrates Scheme 10d - Conceptual Site Plan (LAX18-0056-00_SS010d) for Project Option A, prepared by Ware Malcomb, dated 05-13-2022.

The Project site plan indicates that vehicular access will be maintained at the two (2) existing unsignalized full access driveway on 190th Street, and the signalized intersection of 190th Street at Honeywell, as well as the existing unsignalized full access driveway on Crenshaw Place. A fifth unsignalized driveway, to be located on Crenshaw Place in close proximity to Crenshaw Boulevard, is proposed and will serve as the primary access for the Project's truck-related traffic; as a Project Design Feature, a northbound right-turn pocket will be constructed at this driveway.

It is anticipated that, whether one tenant or two tenants occupies the Project, access to the "gated/secured" truck loading areas would require trucks to enter the site via the proposed northerly driveway on Crenshaw Place. All large semi-trucks (tractor-trailer) will be prohibited from entering the site via the existing signalized site driveway along W. 190th Street, but subject to confirmation with the City, it is expected truck traffic would be allowed to exit. Site access for passenger-vehicles would be allowed at all project driveways. It is expected that only single-unit/box trucks (SU-40 or smaller) no longer than 40-feet in length would be allowed to enter via the existing signalized site driveway along W. 190th Street. **Table 1**, located at the rear of this memorandum, presents the development summary for the existing uses and the proposed uses of Project Option A and Option B.

The Project is expected to be completed in the next couple of years or so by Year 2023 but is dependent on several factors, including the timing of Project approval.

Project funding, market conditions and/or the current COVID-19 environment which could delay Project completion. Due the current COVID-19 pandemic, the Project, like most other proposed development, have experienced delays. As such, subject to confirmation by the Project Applicant, Year 2024 will be utilized to assess the Project's potential opening year (full buildout/occupancy) traffic impacts within a near-term traffic setting.

C. Project Trip Generation:

The trip generation potential of the proposed Project development options will be estimated using the average rates given in the *Trip Generation, 11th Edition, Institute of Transportation Engineers (ITE)*, Washington, D.C. (2021) – See attached **Table 2**. Based on the anticipated project uses, and as shown in the upper portion of **Table 2**, trips generated by the proposed Project will be estimated using ITE Land Use 140: Manufacturing, ITE Land Use 150: Warehousing, and/or ITE Land Use 710: General Office Building average trip rates. For the Existing Land Use, ITE Land Use 710: General Office Building average trip rates will be used to forecast the trip generation potential of the existing 160,000 SF office building.

Table 3 presents the trip generation forecast for the Existing Land Use and the proposed Project.

Existing Land Use

For informational purposes **Table 3** includes trip generation estimates for the existing site based on ITE trip rates. As shown in the upper portion of **Table 3**, the Existing Land Use has a trip generation potential of 1,734 daily trips, with 243 trips (214 inbound, 29 outbound) produced in the AM peak hour and 230 trips (39 inbound, 191 outbound) produced in the PM peak hour on a weekday. It should be noted that to provide a conservative assessment no trip credit will be applied.

Proposed Project Option A

A review of the middle portion of **Table 3** indicates that the proposed Project, after applying passenger car equivalent (PCE) factors to the warehousing/manufacturing components, is forecast to generate approximately 1,562 weekday daily PCE trips, with 231 PCE trips (181 inbound, 50 outbound) produced in the AM peak hour and 258 PCE trips (77 inbound, 181 outbound) produced in the PM peak hour. Of the total trips generated by Project, truck trips related to the warehousing/manufacturing components are forecast total 494 weekday daily PCE trips, with 94 PCE trips produced in the AM peak hour and 125 PCE trips produced in the PM peak hour.

A comparison of trips generated by Project Option A to the Existing Land Use indicates that the net trip generation for the proposed Project would result in 172 fewer daily trips, 12 fewer AM peak hour trips, and 28 more PM peak hour trips. However, since the existing office building is currently vacant, the existing trip credit will not be applied to the analysis to provide a conservative assessment.

Proposed Project Option B

For Proposed Option B, a review of the middle portion of *Table 4* indicates that, after applying passenger car equivalent (PCE) factors to the warehousing component, the Project is forecast to generate approximately 723 weekday daily PCE trips, with 84 PCE trips (65 inbound, 19 outbound) produced in the AM peak hour and 90 PCE trips (26 inbound, 64 outbound) produced in the PM peak hour. Of the total trips generated by Project, truck trips related to the warehousing component are forecast total 226 weekday daily PCE trips, with 32 PCE trips produced in the AM peak hour and 40 PCE trips produced in the PM peak hour.

A comparison of trips generated by Project Option B to the Existing Land Use indicates that the net trip generation for the proposed Project would result in 1,011 fewer daily trips, 159 fewer AM peak hour trips, and 140 fewer PM peak hour trips. However, since the existing office building is currently vacant, the existing trip credit will not be applied to the analysis.

Need for Traffic Analysis

Per the City's requirements¹, a traffic report "is generally needed if a project generates over 500 trips per day...". Given the Project's trips amount of 1,562 daily trips, an assessment of the Project will be completed. Therefore, a focused traffic study/local circulation analysis is required.

A comparison of trips generated by Project Option A to that of Option B indicates that Option A will result in a greater amount of trips. As such, the potential traffic impact of Option A will be evaluated in the LCA to provide a conservative assessment.

¹ The City of Torrance *Traffic Impact Analysis Report Guidelines*.

D. Project Trip Distribution Patterns: See attached *Figures 5-1* and *5-2* for the Project Trip Distribution Pattern for passenger car traffic and truck traffic, respectively, for review by the City. It is noted that the truck trip distribution considers existing truck turning constraints/restriction at local area intersections, inclusive of constraints at Crenshaw Place and Crenshaw Boulevard and 190th Street at Honeywell Dr (Easterly site access). Project traffic volumes both entering and exiting the site will be distributed and assigned to the adjacent street system based on the following considerations:

- A. location of site access points in relation to the surrounding street system,
- B. the site's proximity to major traffic carriers and regional access routes,
- C. physical characteristics of the circulation system such as lane channelization and presence of traffic signals that affect travel patterns,
- D. presence of traffic congestion in the surrounding vicinity,
- E. ingress/egress availability at the Project site
- F. Torrance Truck Route Map and
- G. input from City staff.

E. Background Traffic:

- Project Completion Year: 2024 (to be confirmed with Project applicant)
- Ambient Growth Rate: 0.525% per year

F. Study Intersections: The potential study intersections, listed below, were identified based on coordination efforts with City staff and proximity to the site, and prior analyses of the Project site. Subject to confirmation by City staff, the following locations will be analyzed, inclusive of the Project site driveways:

1. Crenshaw Boulevard at 182nd Street
2. I-405 Northbound Ramps at 182nd Street
3. Crenshaw Boulevard at I-405 Southbound Ramps
4. Western Avenue at I-405 NB Ramps
5. Crenshaw Boulevard at Crenshaw Place
6. Crenshaw Boulevard at 190th Street
7. Crenshaw Place at 190th Street
8. Easterly (Honeywell) Site Driveway at 190th Street
9. Van Ness Avenue at 190th Street
10. I-405 Southbound Ramps at 190th Street
11. Western Avenue at 190th Street

G. Traffic Counts: Traffic counts at the study intersections were collected during the weekday AM peak period (7:00 AM – 9:00 AM) and PM peak period (4:00 PM – 6:00 PM). The count data anticipated for this project will utilize manual vehicular turning movement counts with truck classifications that were collected in May 2019. To establish existing 2022 conditions, the 2019 traffic counts will be factored by an annual growth rate 0.525% per year.

H. Level of Service Criteria: Level of service calculations will be based on Intersection Capacity Utilization (ICU) methods of analyses. According to the City of Torrance, LOS D or better is the City’s target for intersection operation. The LOS D objective for the roadway network reflects the City’s desire to maintain a minimum acceptable condition during the morning and evening peak commute hours on all intersections within the City.

➤ Level of Service Criteria and Thresholds: The City of Torrance uses the following criteria to assess the need for project-related improvements. For intersections under City of Torrance jurisdiction, a developer may be required to incorporate offsite work into the project to offset the project’s negative effect in the City’s traffic circulation when the following conditions are met:

- For signalized intersections, project-related improvements are needed if the project related increase in the volume to capacity (V/C) ratio equals or exceeds the threshold shown below:

Level of Service (LOS)	Project-Related V/C Increase
C	0.04 or more
D	0.02 or more
E/F	0.01 or more

- For unsignalized intersections, project-related improvements are needed if the project:

Existing + Ambient Growth + Project	Signal Warrant Analysis Result
Degrades to E or F	Traffic signal is warranted

Source: City of Torrance Traffic Circulation Analysis (TCA) Guidelines www.torranceca.gov/tca-guidelines

I. Analysis Methodology: The LOS calculations will be based on *Intersection Capacity Utilization (ICU)* methodology for signalized intersections. The need for

project-related offsite improvements that the developer may be required to incorporate to offset the project's negative effect in the City's traffic circulation will be based on the thresholds noted above.

The following scenarios are those for which LOS calculations will be performed using the ICU and HCM methodologies per the City's TCA guidelines:

- A. Existing (E)
- B. Forecast Opening Year (E + Ambient Growth to Year 2024, A)
- C. Forecast Opening Year with Project (E + A + P)
- D. Scenario C with improvements, if necessary

J. Other Issues:

- Evaluate site access and internal circulation, especially as it relates to existing/proposed driveways, fire-truck/large truck access and access from Crenshaw Place and W. 190th Street.
- Assess queuing at off-ramp intersections in anticipation of Caltrans requirements.
- Referenced planned / funded improvements at the I-405 SB Ramps/Crenshaw Boulevard and I-405 NB Ramps /182nd Street will be completed by Caltrans. The improvements include the construction of a new "slip" on-ramp from NB Crenshaw Boulevard to SB I-405, which would allow for the removal of the NB left-turn at this intersection. In addition, NB loop on-ramp will be constructed which would result in the removal of the I-405 NB "hook" on-ramp on 182nd Street.
- Other future improvements along the I-405 Freeway include the construction of "direct" off and on-ramps from SB I-405 to Western Avenue. This future improvement would result in the removal of the I-405 SB "hook" ramps at 190th Street.
- Prepare a conceptual improvement plan which will identify physical improvements, along with signing and striping improvements, to restrict large trucks from making a southbound left along Crenshaw Boulevard at Crenshaw Place to access the Project's primary truck access (Driveway A) on Crenshaw Place.
- Perform a queuing analysis along 190th Street at the proposed right-turn pocket at Crenshaw Place. In addition, perform a queuing analysis along Crenshaw Place at the proposed right-turn pocket at the Project Driveway A. Validate the proposed pocket lengths and discuss how



many on-street parking spaces would be affected (i.e. removed) as a result of this Project Design Feature.

- Evaluate Crenshaw Place related to truck access. Identify any improvements to help facilitate ingress and egress to the site with minimal disruption to the existing uses.

* * * * *

We appreciate the opportunity to provide this scope of work. Should you have any questions, please call Shane Green or me at (949) 825-6175. Thank You.

Recommended by:

Consultant's Representative

Date

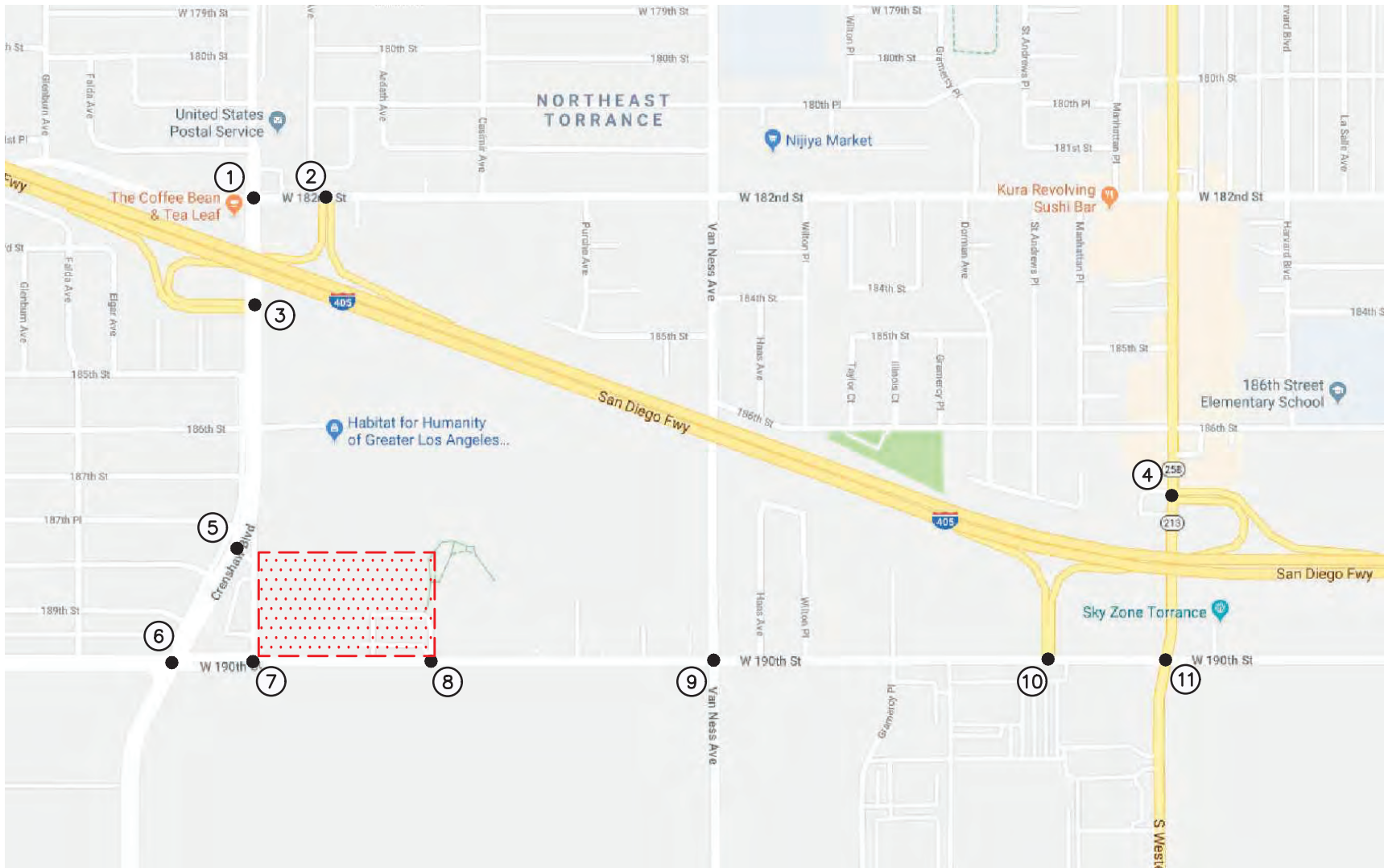
Approved by:

City of Torrance

Date

- cc: File
Harriet Rapista, CCA
Tiffany Sukay, CCA
Shane Green, LLG
Jessamine Que, City of Torrance

Attachments



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SOURCE: GOOGLE

KEY

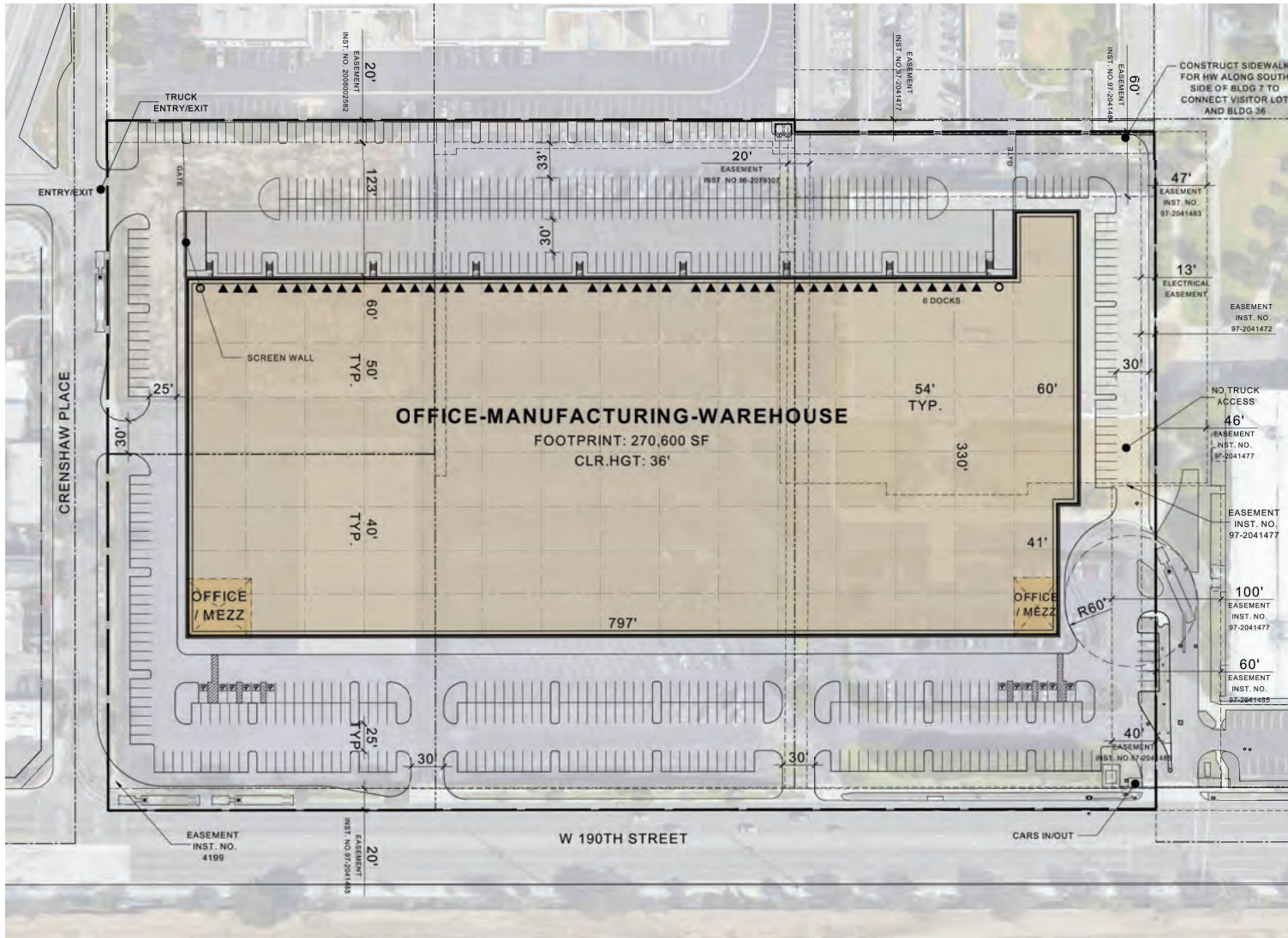
Ⓝ = STUDY INTERSECTION

▤ = PROJECT SITE

FIGURE 1-1

VICINITY MAP

2555 W. 190TH STREET WAREHOUSE/MANUFACTURING PROJECT, TORRANCE



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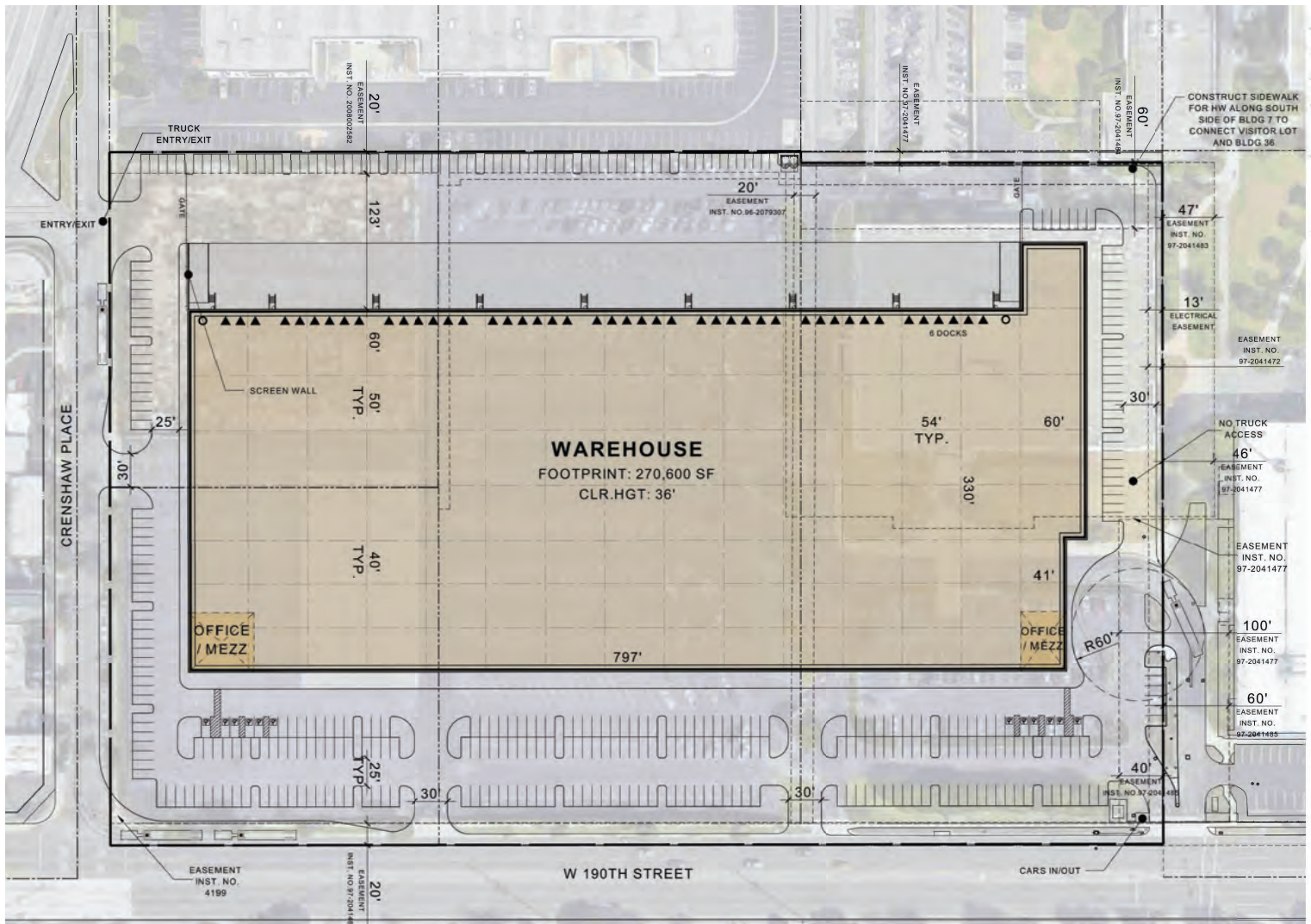
SOURCE: WARE MALCOMB

FIGURE 2-2

PROPOSED SITE PLAN - OPTION A

2555 W. 190TH STREET WAREHOUSE/MANUFACTURING PROJECT, TORRANCE





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SOURCE: WARE MALCOMB

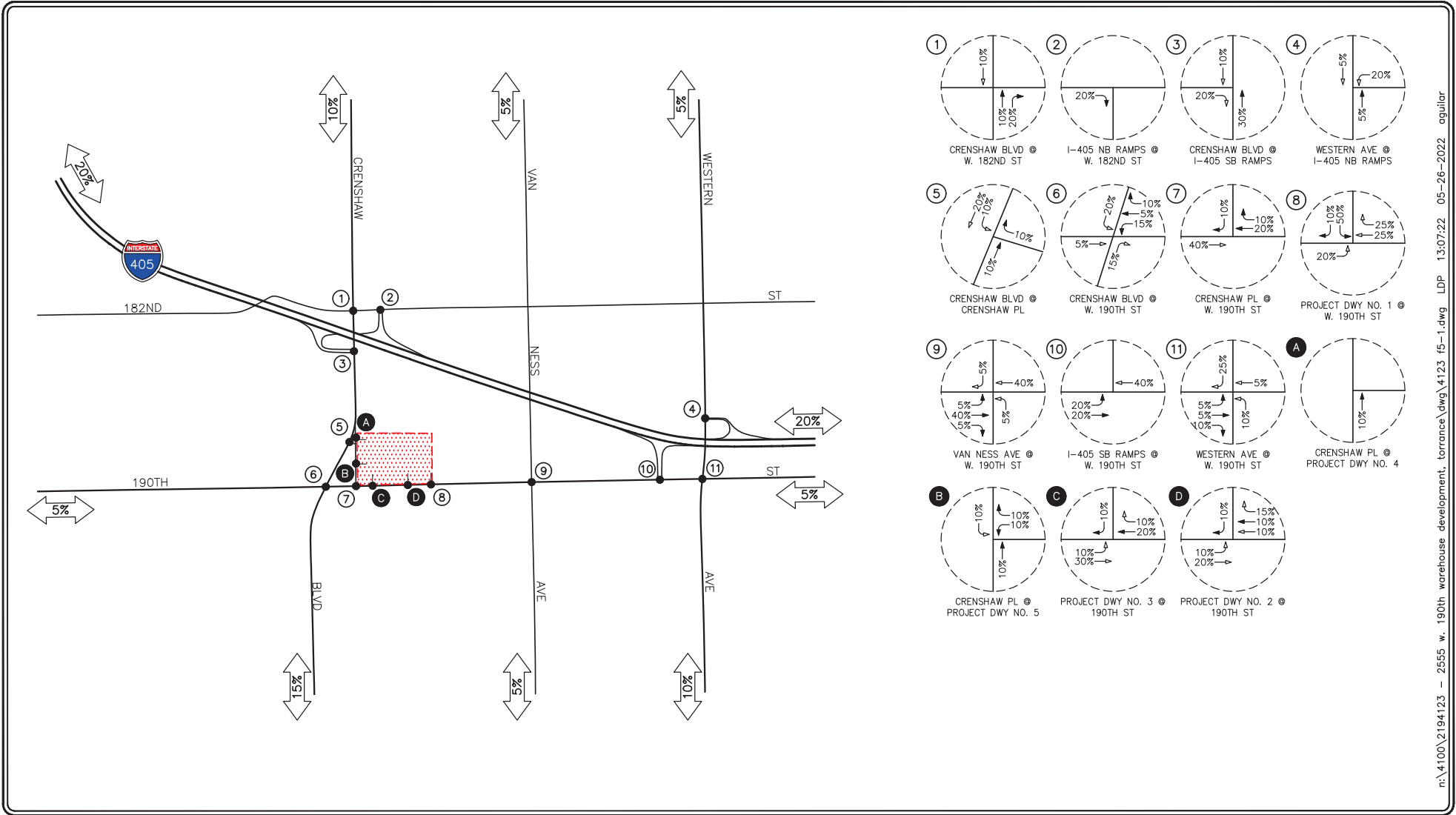
FIGURE 2-3

PROPOSED SITE PLAN - OPTION B

2555 W. 190TH STREET WAREHOUSE/MANUFACTURING PROJECT, TORRANCE

LINSCOTT
LAW &
GREENSPAN
engineers

NO SCALE



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 NO SCALE





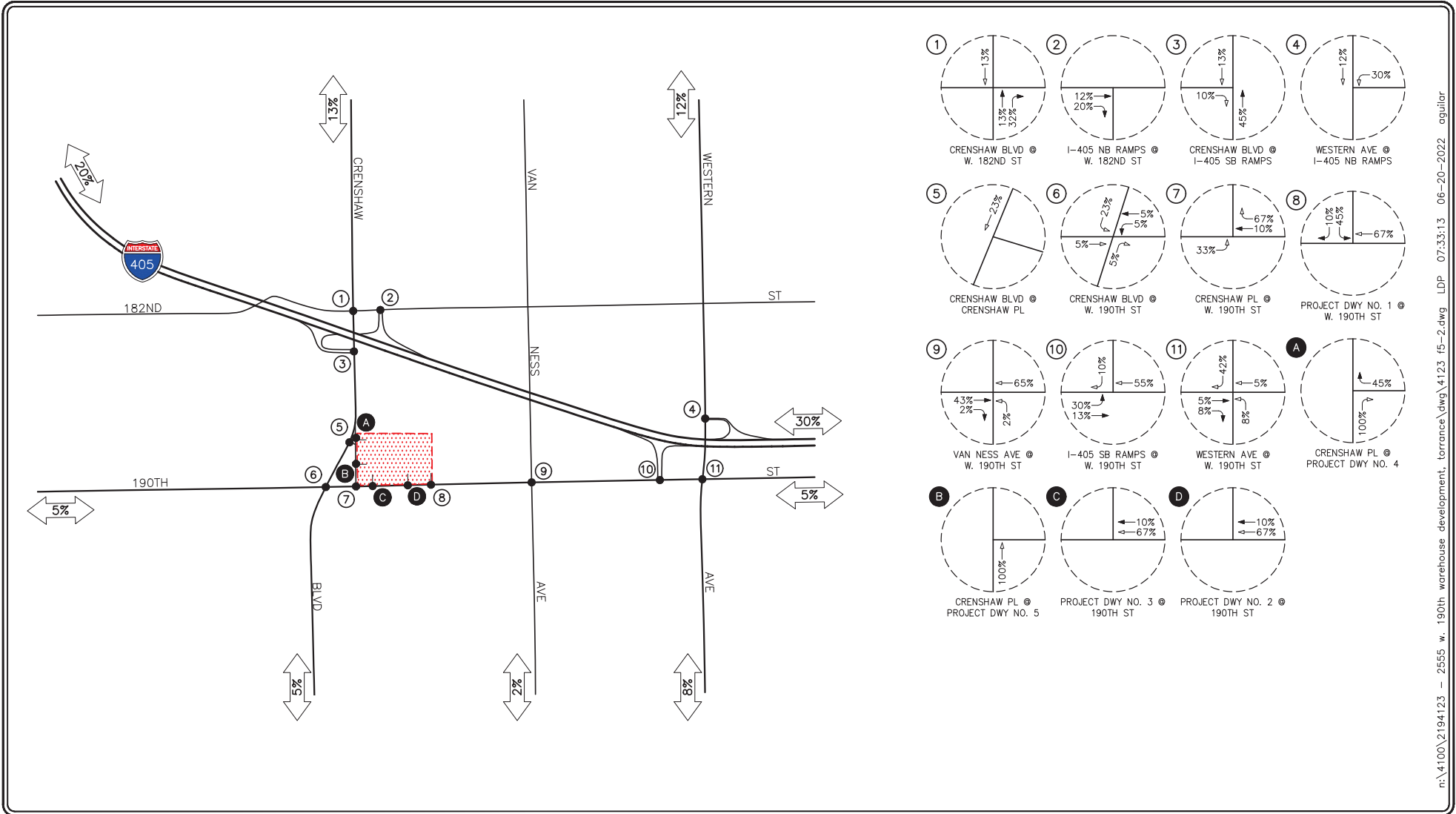
KEY
 = INBOUND PERCENTAGE
 = OUTBOUND PERCENTAGE
 = STUDY INTERSECTION
 = PROJECT SITE

FIGURE 5-1
PROJECT TRAFFIC DISTRIBUTION PATTERN (PASSENGER CARS)
 2555 W. 190TH STREET WAREHOUSE/MANUFACTURING PROJECT, TORRANCE



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- KEY**
- ← = INBOUND PERCENTAGE
 - = OUTBOUND PERCENTAGE
 - ⊕ = STUDY INTERSECTION
 - ▨ = PROJECT SITE

FIGURE 5-2

PROJECT TRAFFIC DISTRIBUTION PATTERN (TRUCKS)
 2555 W. 190TH STREET WAREHOUSE/MANUFACTURING PROJECT, TORRANCE

TABLE 1
PROJECT DEVELOPMENT SUMMARY

Land Use / Project Description	Existing Development – Square-Footage (SF)	Proposed Project Development Option A – Square-Footage (SF) ²	Proposed Project Development Option B – Square-Footage (SF) ³
<u>Office / Warehouse / Manufacturing Floor Area Allocation</u>			
<input type="checkbox"/> Office	160,000 SF	28,413 SF	13,530 SF
<input type="checkbox"/> Warehouse	--	85,239 SF	257,070 SF
<input type="checkbox"/> Manufacturing	---	170,478 SF	---
Total Building Floor Area	160,000 SF	284,130 SF	270,600 SF

Notes:

- SF = square foot of development

² Source: Conceptual Site Plan Scheme 10c (LAX18-0056-00), prepared by Ware Malcomb, dated 05.13.2022.

³ Source: Conceptual Site Plan Scheme 10d (LAX18-0056-00), prepared by Ware Malcomb, dated 05.13.2022.

TABLE 2
PROJECT TRIP GENERATION RATES WITH PCE CONVERSION FACTORS⁴

ITE Land Use Code	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Trip Generation Rates:</u>							
▪ 140: Manufacturing – Total (TE/1000 SF)	4.75	0.52	0.16	0.68	0.23	0.51	0.74
❑ Passenger Cars – 79.57% Daily (TE/1000 SF)	3.78	0.37	0.12	0.49	0.15	0.33	0.48
❑ 2 Axle Trucks – 3.46% Daily/16.95% Peak Hour (TE/1000 SF)	0.16	0.03	0.00	0.03	0.01	0.03	0.04
❑ 3 Axle Trucks – 4.64% Daily/22.71% Peak Hour (TE/1000 SF)	0.22	0.03	0.01	0.04	0.02	0.04	0.06
❑ 4+ Axle Trucks – 12.33% Daily/60.34% Peak Hour (TE/1000 SF)	0.59	0.09	0.03	0.12	0.05	0.11	0.16
▪ 150: Warehousing – Total (TE/1000 SF)	1.71	0.13	0.04	0.17	0.05	0.13	0.18
❑ Passenger Cars – 79.57% Daily (TE/1000 SF)	1.36	0.09	0.03	0.12	0.03	0.09	0.12
❑ 2 Axle Trucks – 3.46% Daily/16.95% Peak Hour (TE/1000 SF)	0.06	0.01	0.00	0.01	0.00	0.01	0.01
❑ 3 Axle Trucks – 4.64% Daily/22.71% Peak Hour (TE/1000 SF)	0.08	0.01	0.00	0.01	0.00	0.01	0.01
❑ 4+ Axle Trucks – 12.33% Daily/60.34% Peak Hour (TE/1000 SF)	0.21	0.02	0.01	0.03	0.02	0.02	0.04
▪ 710: General Office Building (TE/1000 SF)	10.84	88%	12%	1.52	17%	83%	1.44

Notes:

- TE/1000 SF = Trip ends per 1,000 SF of development
- SF = Square-feet of gross floor area
- PCE = Passenger Car Equivalent

⁴ Source: *Trip Generation, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021)*. Recommended mix of traffic, including mix of 2-axle, 3-axle, and 4+-axle trucks are based on the *Truck Trip Generation Study – City of Fontana, August 2003*. All 2-axle, 3-axle and 4+-axle trucks are converted to passenger car equivalents using a factor of 1.5 vehicles per truck, 2.0 vehicles per truck, and 3.0 vehicles per truck, respectively.

TABLE 3
PROJECT TRIP GENERATION FORECAST – OPTION A⁵

ITE Land Use Code / Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Existing Land Use Trip Generation Forecast:</u>							
▪ 710: Office Building (160,000 SF)	1,734	214	29	243	39	191	230
<u>Project Trip Generation Forecast – Option A:</u>							
▪ 150: Warehousing (85,239 SF)							
☐ Passenger Cars	116	8	2	10	3	7	10
☐ 2 Axle Trucks	8	1	0	1	0	1	1
☐ 3 Axle Trucks	14	2	0	2	0	2	2
☐ 4+ Axle Trucks	54	5	3	8	5	5	10
Warehousing Total	192	16	5	21	8	15	23
▪ 140: Manufacturing (170,478 SF)							
☐ Passenger Cars	644	63	21	84	26	56	82
☐ 2 Axle Trucks	41	8	0	8	3	7	10
☐ 3 Axle Trucks	75	10	4	14	7	13	20
☐ 4+ Axle Trucks	302	46	15	61	26	56	82
Manufacturing Total	1,062	127	40	167	62	132	194
▪ 710: Office Space (28,413 SF)	308	38	5	43	7	34	41
Total Passenger Car Traffic	1,068	109	28	137	36	97	133
Total Truck PCE Traffic	494	72	22	94	41	84	125
Total Project Trip Generation	1,562	181	50	231	77	181	258

⁵ Source: *Trip Generation, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021)*. Recommended mix of traffic, including mix of 2-axle, 3-axle, and 4+-axle trucks are based on the *Truck Trip Generation Study – City of Fontana, August 2003*. All 2-axle, 3-axle and 4+-axle trucks are converted to passenger car equivalents using a factor of 1.5 vehicles per truck, 2.0 vehicles per truck, and 3.0 vehicles per truck, respectively.

TABLE 4
PROJECT TRIP GENERATION FORECAST – OPTION B⁶

ITE Land Use Code / Project Description	Daily 2-Way	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
<u>Existing Land Use Trip Generation Forecast:</u>							
▪ 710: Office Building (160,000 SF)	1,734	214	29	243	39	191	230
<u>Project Trip Generation Forecast:</u>							
▪ 150: Warehousing (257,070 SF)							
☐ Passenger Cars	350	23	8	31	8	23	31
☐ 2 Axle Trucks	23	4	0	4	0	4	4
☐ 3 Axle Trucks	41	5	0	5	0	5	5
☐ 4+ Axle Trucks	162	15	8	23	15	16	31
Warehousing Total	576	47	16	63	23	48	71
▪ 710: Office Space (13,530 SF)	147	18	3	21	3	16	19
Total Passenger Car Traffic	497	41	11	52	11	39	50
Total Truck PCE Traffic	226	24	8	32	15	25	40
Total Project Trip Generation	723	65	19	84	26	64	90

⁶ Source: *Trip Generation, 11th Edition, Institute of Transportation Engineers (ITE), Washington, D.C. (2021)*. Recommended mix of traffic, including mix of 2-axle, 3-axle, and 4+-axle trucks are based on the *Truck Trip Generation Study – City of Fontana, August 2003*. All 2-axle, 3-axle and 4+-axle trucks are converted to passenger car equivalents using a factor of 1.5 vehicles per truck, 2.0 vehicles per truck, and 3.0 vehicles per truck, respectively.

APPENDIX B
EXISTING TRAFFIC COUNT DATA

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-001
 Date: 5/8/2019

Total

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	2	1	0	1	3	0	0	1	2	0	0	1.5	1.5	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	10	122	79	0	0	191	21	0	20	36	31	0	106	135	65	0	816
7:15 AM	9	165	87	0	0	233	40	0	23	49	32	0	101	156	62	0	957
7:30 AM	17	239	115	0	0	297	119	0	46	65	25	0	96	170	55	0	1244
7:45 AM	18	251	133	0	2	320	106	0	63	94	27	0	111	167	35	0	1327
8:00 AM	17	255	124	0	5	283	32	0	35	71	38	0	133	134	41	0	1168
8:15 AM	11	206	125	0	5	295	18	0	34	76	21	0	121	129	56	0	1097
8:30 AM	15	212	123	0	7	292	35	0	31	57	38	0	111	135	49	0	1105
8:45 AM	19	224	113	0	6	275	24	0	38	69	25	0	102	116	66	0	1077
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	116	1674	899	0	25	2186	395	0	290	517	237	0	881	1142	429	0	8791
APPROACH %'s :	4.31%	62.25%	33.43%	0.00%	0.96%	83.88%	15.16%	0.00%	27.78%	49.52%	22.70%	0.00%	35.93%	46.57%	17.50%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	63	951	497	0	12	1195	275	0	178	306	111	0	461	600	187	0	4836
PEAK HR FACTOR :	0.875	0.932	0.934	0.000	0.600	0.934	0.578	0.000	0.706	0.814	0.730	0.000	0.867	0.882	0.835	0.000	0.911
	0.940				0.866				0.808				0.972				
PM	1	2	1	0	1	3	0	0	1	2	0	0	1.5	1.5	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	17	191	231	0	14	238	35	0	30	106	12	0	135	123	66	0	1198
4:15 PM	11	224	241	0	22	237	24	0	44	104	17	0	114	112	70	0	1220
4:30 PM	11	264	260	0	24	273	37	0	28	87	8	0	136	120	67	0	1315
4:45 PM	18	289	220	0	17	244	38	0	32	93	13	0	96	130	70	0	1260
5:00 PM	26	262	264	0	21	238	49	0	22	105	6	0	124	132	58	0	1307
5:15 PM	17	328	254	0	18	267	51	0	39	94	12	0	112	137	63	0	1392
5:30 PM	20	280	230	0	20	237	43	0	19	103	8	0	131	142	57	0	1290
5:45 PM	17	272	255	0	15	240	32	0	35	113	14	0	113	123	67	0	1296
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	137	2110	1955	0	151	1974	309	0	249	805	90	0	961	1019	518	0	10278
APPROACH %'s :	3.26%	50.21%	46.53%	0.00%	6.20%	81.10%	12.70%	0.00%	21.77%	70.37%	7.87%	0.00%	38.47%	40.79%	20.74%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	80	1142	1003	0	74	982	175	0	115	415	40	0	480	534	245	0	5285
PEAK HR FACTOR :	0.769	0.870	0.950	0.000	0.881	0.919	0.858	0.000	0.737	0.918	0.714	0.000	0.916	0.940	0.914	0.000	0.949
	0.929				0.916				0.880				0.954				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-001
 Date: 5/8/2019

Cars

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	2	1	0	1	3	0	0	1	2	0	0	1.5	1.5	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	10	121	77	0	0	189	21	0	20	36	31	0	103	133	64	0	805
7:15 AM	8	160	86	0	0	232	40	0	23	49	32	0	100	156	61	0	947
7:30 AM	16	230	113	0	0	293	119	0	46	65	25	0	93	168	55	0	1223
7:45 AM	18	246	130	0	2	311	106	0	62	92	27	0	109	166	34	0	1303
8:00 AM	17	249	119	0	5	277	32	0	35	70	38	0	126	131	41	0	1140
8:15 AM	11	200	123	0	5	288	18	0	34	74	21	0	112	127	56	0	1069
8:30 AM	15	206	123	0	6	285	35	0	31	57	37	0	107	133	48	0	1083
8:45 AM	19	218	107	0	6	272	24	0	38	69	25	0	96	116	66	0	1056
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	114	1630	878	0	24	2147	395	0	289	512	236	0	846	1130	425	0	8626
APPROACH %'s :	4.35%	62.17%	33.49%	0.00%	0.94%	83.67%	15.39%	0.00%	27.87%	49.37%	22.76%	0.00%	35.24%	47.06%	17.70%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	62	925	485	0	12	1169	275	0	177	301	111	0	440	592	186	0	4735
PEAK HR FACTOR :	0.86	0.929	0.933	0.000	0.600	0.940	0.578	0.000	0.714	0.818	0.730	0.000	0.873	0.881	0.830	0.000	0.908
	0.934				0.869				0.814				0.964				
PM	1	2	1	0	1	3	0	0	1	2	0	0	1.5	1.5	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	17	185	229	0	14	234	34	0	30	106	11	0	131	123	66	0	1180
4:15 PM	11	221	235	0	22	234	24	0	44	104	17	0	113	112	69	0	1206
4:30 PM	11	262	254	0	24	271	37	0	28	84	8	0	133	120	67	0	1299
4:45 PM	18	287	219	0	17	243	38	0	32	93	13	0	95	130	69	0	1254
5:00 PM	26	258	262	0	21	237	49	0	22	103	6	0	121	130	58	0	1293
5:15 PM	16	323	250	0	18	266	51	0	39	93	12	0	110	137	63	0	1378
5:30 PM	20	273	225	0	20	235	43	0	19	103	8	0	129	142	56	0	1273
5:45 PM	17	272	252	0	15	237	32	0	35	111	14	0	113	123	67	0	1288
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	136	2081	1926	0	151	1957	308	0	249	797	89	0	945	1017	515	0	10171
APPROACH %'s :	3.28%	50.23%	46.49%	0.00%	6.25%	81.00%	12.75%	0.00%	21.94%	70.22%	7.84%	0.00%	38.15%	41.06%	20.79%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	79	1126	989	0	74	975	175	0	115	410	40	0	473	532	244	0	5232
PEAK HR FACTOR :	0.76	0.872	0.944	0.000	0.881	0.916	0.858	0.000	0.737	0.923	0.714	0.000	0.917	0.937	0.910	0.000	0.949
	0.931				0.913				0.883				0.955				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-001
 Date: 5/8/2019

2axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	2 NT	1 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1.5 WL	1.5 WT	0 WR	0 WU	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	2	1	0	5
7:15 AM	1	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	7
7:30 AM	1	6	2	0	0	2	0	0	0	0	0	0	1	2	0	0	14
7:45 AM	0	3	3	0	0	5	0	0	1	2	0	0	0	1	0	0	15
8:00 AM	0	3	4	0	0	5	0	0	0	1	0	0	3	3	0	0	19
8:15 AM	0	4	2	0	0	6	0	0	0	2	0	0	3	2	0	0	19
8:30 AM	0	5	0	0	1	5	0	0	0	0	1	0	1	2	0	0	15
8:45 AM	0	6	5	0	0	3	0	0	0	0	0	0	4	0	0	0	18
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	32	17	0	1	27	0	0	1	5	1	0	13	12	1	0	112
	3.92%	62.75%	33.33%	0.00%	3.57%	96.43%	0.00%	0.00%	14.29%	71.43%	14.29%	0.00%	50.00%	46.15%	3.85%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	16	11	0	0	18	0	0	1	5	0	0	7	8	0	0	67
PEAK HR FACTOR :	0.250	0.667	0.688	0.000	0.000	0.750	0.000	0.000	0.250	0.625	0.000	0.000	0.583	0.667	0.000	0.000	0.882
	0.778				0.750				0.500				0.625				
PM	1 NL	2 NT	1 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1.5 WL	1.5 WT	0 WR	0 WU	
4:00 PM	0	3	2	0	0	3	1	0	0	0	1	0	1	0	0	0	11
4:15 PM	0	3	4	0	0	2	0	0	0	0	0	0	1	0	1	0	11
4:30 PM	0	2	4	0	0	1	0	0	0	3	0	0	3	0	0	0	13
4:45 PM	0	2	1	0	0	1	0	0	0	0	0	0	0	0	1	0	5
5:00 PM	0	3	1	0	0	1	0	0	0	2	0	0	0	1	0	0	8
5:15 PM	1	5	3	0	0	1	0	0	0	1	0	0	2	0	0	0	13
5:30 PM	0	7	4	0	0	1	0	0	0	0	0	0	2	0	1	0	15
5:45 PM	0	0	3	0	0	2	0	0	0	0	0	0	0	0	0	0	5
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	1	25	22	0	0	12	1	0	0	6	1	0	9	1	3	0	81
	2.08%	52.08%	45.83%	0.00%	0.00%	92.31%	7.69%	0.00%	0.00%	85.71%	14.29%	0.00%	69.23%	7.69%	23.08%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	15	11	0	0	5	0	0	0	3	0	0	4	1	1	0	41
PEAK HR FACTOR :	0.25	0.536	0.688	0.000	0.000	0.625	0.000	0.000	0.000	0.375	0.000	0.000	0.500	0.250	0.250	0.000	0.683
	0.614				0.625				0.375				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-001
 Date: 5/8/2019

3axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	2	1	0	1	3	0	0	1	2	0	0	1.5	1.5	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:30 AM	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	0	4
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	2
8:00 AM	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	4	0	0	0	5
8:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	2	0	0	0	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	6	0	0	0	3	0	0	0	0	0	0	9	0	1	0	19
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	90.00%	0.00%	10.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	5	0	0	0	2	0	0	0	0	0	0	6	0	1	0	14
PEAK HR FACTOR :	0.000	0.625	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.250	0.000	0.700
	0.625				0.500								0.438				

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	1	2	1	0	1	3	0	0	1	2	0	0	1.5	1.5	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	3	0	0	0	1	0	0	0	2	0	0	0	1	0	0	7
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	0	0	0	1	0	0	0	2	0	0	0	1	0	0	5
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.625
	0.250				0.250				0.250				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-001
 Date: 5/8/2019

4axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	2 NT	1 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1.5 WL	1.5 WT	0 WR	0 WU	
7:00 AM	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	6
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2
7:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	3
7:45 AM	0	2	0	0	0	3	0	0	0	0	0	0	2	0	0	0	7
8:00 AM	0	1	1	0	0	1	0	0	0	0	0	0	3	0	0	0	6
8:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	2	0	0	0	4
8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	3
8:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	6	4	0	0	9	0	0	0	0	0	0	13	0	2	0	34
	0.00%	60.00%	40.00%	0.00%	0.00%	100.00%	0.00%	0.00%					86.67%	0.00%	13.33%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	5	1	0	0	6	0	0	0	0	0	0	8	0	0	0	20
PEAK HR FACTOR :	0.000	0.625	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.714
			0.750			0.500								0.667			
PM	1 NL	2 NT	1 NR	0 NU	1 SL	3 ST	0 SR	0 SU	1 EL	2 ET	0 ER	0 EU	1.5 WL	1.5 WT	0 WR	0 WU	
4:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	3	0	0	0	5
4:15 PM	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
4:30 PM	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
5:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	4
5:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	1	7	0	0	4	0	0	0	0	0	0	7	0	0	0	19
	0.00%	12.50%	87.50%	0.00%	0.00%	100.00%	0.00%	0.00%					100.00%	0.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	3	0	0	1	0	0	0	0	0	0	3	0	0	0	7
PEAK HR FACTOR :	0.00	0.000	0.750	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.438
			0.750			0.250								0.250			

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-405 NB Ramps & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-002
 Date: 5/8/2019

Total

NS/EW Streets:	I-405 NB Ramps				I-405 NB Ramps				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	185	0	1	0	0	0	0	0	0	40	70	0	34	122	0	0	452
7:15 AM	142	0	3	0	0	0	0	0	0	59	74	0	32	184	0	0	494
7:30 AM	146	0	1	0	0	0	0	0	0	83	97	0	28	166	0	0	521
7:45 AM	136	0	2	0	0	0	0	0	0	117	100	0	56	195	0	0	606
8:00 AM	149	0	4	0	0	0	0	0	0	98	106	0	49	147	0	0	553
8:15 AM	122	0	3	0	0	0	0	0	0	117	100	0	49	195	0	0	586
8:30 AM	165	0	6	0	0	0	0	0	0	100	92	0	29	152	0	0	544
8:45 AM	119	0	5	0	0	0	0	0	0	98	90	0	50	166	0	0	528
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1164	0	25	0	0	0	0	0	0	712	729	0	327	1327	0	0	4284
APPROACH %'s :	97.90%	0.00%	2.10%	0.00%					0.00%	49.41%	50.59%	0.00%	19.77%	80.23%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	572	0	15	0	0	0	0	0	0	432	398	0	183	689	0	0	2289
PEAK HR FACTOR :	0.867	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.000	0.923	0.939	0.000	0.817	0.883	0.000	0.000	0.944
	0.858								0.956				0.869				
PM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	215	0	19	1	0	0	0	0	0	228	105	0	38	104	0	0	710
4:15 PM	191	0	12	0	0	0	0	0	0	229	154	0	28	110	0	0	724
4:30 PM	230	0	8	0	0	0	0	0	0	227	135	0	26	102	0	0	728
4:45 PM	186	0	16	0	0	0	0	0	0	233	133	0	26	130	0	0	724
5:00 PM	192	0	16	0	0	0	0	0	0	216	155	0	29	119	0	0	727
5:15 PM	165	0	11	0	0	0	0	0	0	200	187	0	34	131	0	0	728
5:30 PM	213	0	15	0	0	0	0	0	0	201	164	0	39	130	0	0	762
5:45 PM	173	0	7	1	0	0	0	0	0	224	137	0	41	140	0	0	723
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1565	0	104	2	0	0	0	0	0	1758	1170	0	261	966	0	0	5826
APPROACH %'s :	93.66%	0.00%	6.22%	0.12%					0.00%	60.04%	39.96%	0.00%	21.27%	78.73%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	756	0	58	0	0	0	0	0	0	850	639	0	128	510	0	0	2941
PEAK HR FACTOR :	0.887	0.000	0.906	0.000	0.000	0.000	0.000	0.000	0.000	0.912	0.854	0.000	0.821	0.973	0.000	0.000	0.965
	0.893								0.962				0.944				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-405 NB Ramps & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-002
 Date: 5/8/2019

Cars

NS/EW Streets:	I-405 NB Ramps				I-405 NB Ramps				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	181	0	1	0	0	0	0	0	0	39	69	0	33	120	0	0	443
7:15 AM	140	0	2	0	0	0	0	0	0	59	74	0	32	184	0	0	491
7:30 AM	142	0	1	0	0	0	0	0	0	80	94	0	28	165	0	0	510
7:45 AM	133	0	1	0	0	0	0	0	0	115	97	0	55	194	0	0	595
8:00 AM	141	0	4	0	0	0	0	0	0	97	102	0	48	146	0	0	538
8:15 AM	114	0	3	0	0	0	0	0	0	115	97	0	49	191	0	0	569
8:30 AM	160	0	6	0	0	0	0	0	0	99	92	0	29	150	0	0	536
8:45 AM	113	0	5	0	0	0	0	0	0	95	86	0	49	166	0	0	514
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1124	0	23	0	0	0	0	0	0	699	711	0	323	1316	0	0	4196
APPROACH %'s :	97.99%	0.00%	2.01%	0.00%					0.00%	49.57%	50.43%	0.00%	19.71%	80.29%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	548	0	14	0	0	0	0	0	0	426	388	0	181	681	0	0	2238
PEAK HR FACTOR :	0.86	0.000	0.583	0.000	0.000	0.000	0.000	0.000	0.000	0.926	0.951	0.000	0.823	0.878	0.000	0.000	0.940
	0.846								0.960				0.865				
PM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	211	0	19	1	0	0	0	0	0	225	104	0	37	103	0	0	700
4:15 PM	190	0	12	0	0	0	0	0	0	227	150	0	28	110	0	0	717
4:30 PM	225	0	8	0	0	0	0	0	0	224	132	0	26	102	0	0	717
4:45 PM	184	0	16	0	0	0	0	0	0	232	130	0	26	130	0	0	718
5:00 PM	189	0	16	0	0	0	0	0	0	213	153	0	28	116	0	0	715
5:15 PM	165	0	11	0	0	0	0	0	0	199	184	0	34	131	0	0	724
5:30 PM	209	0	15	0	0	0	0	0	0	201	159	0	39	130	0	0	753
5:45 PM	173	0	7	1	0	0	0	0	0	221	135	0	41	139	0	0	717
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1546	0	104	2	0	0	0	0	0	1742	1147	0	259	961	0	0	5761
APPROACH %'s :	93.58%	0.00%	6.30%	0.12%					0.00%	60.30%	39.70%	0.00%	21.23%	78.77%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	747	0	58	0	0	0	0	0	0	845	626	0	127	507	0	0	2910
PEAK HR FACTOR :	0.89	0.000	0.906	0.000	0.000	0.000	0.000	0.000	0.000	0.911	0.851	0.000	0.814	0.968	0.000	0.000	0.966
	0.898								0.960				0.938				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-405 NB Ramps & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-002
 Date: 5/8/2019

2axle

NS/EW Streets:	I-405 NB Ramps				I-405 NB Ramps				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	4
7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	2	0	0	0	0	0	0	0	0	3	3	0	0	1	0	0	9
7:45 AM	1	0	1	0	0	0	0	0	0	2	3	0	1	1	0	0	9
8:00 AM	2	0	0	0	0	0	0	0	0	1	3	0	1	1	0	0	8
8:15 AM	2	0	0	0	0	0	0	0	0	2	3	0	0	3	0	0	10
8:30 AM	1	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	4
8:45 AM	4	0	0	0	0	0	0	0	0	3	3	0	1	0	0	0	11
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	15	0	2	0	0	0	0	0	0	12	15	0	3	9	0	0	56
APPROACH %'s :	88.24%	0.00%	11.76%	0.00%					0.00%	44.44%	55.56%	0.00%	25.00%	75.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	6	0	1	0	0	0	0	0	0	6	9	0	2	7	0	0	31
PEAK HR FACTOR :	0.750	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.750	0.000	0.500	0.583	0.000	0.000	0.775
	0.875								0.750				0.750				
PM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	1	0	0	0	0	0	0	0	0	3	1	0	1	1	0	0	7
4:15 PM	1	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	5
4:30 PM	5	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	10
4:45 PM	1	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	0	0	0	0	3	1	0	1	2	0	0	7
5:15 PM	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3
5:30 PM	3	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	7
5:45 PM	0	0	0	0	0	0	0	0	0	1	2	0	0	1	0	0	4
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	11	0	0	0	0	0	0	0	0	14	16	0	2	4	0	0	47
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%					0.00%	46.67%	53.33%	0.00%	33.33%	66.67%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	4	0	0	0	0	0	0	0	0	5	9	0	1	2	0	0	21
PEAK HR FACTOR :	0.33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.563	0.000	0.250	0.250	0.000	0.000	0.750
	0.333								0.875				0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-405 NB Ramps & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-002
 Date: 5/8/2019

3axle

NS/EW Streets:	I-405 NB Ramps				I-405 NB Ramps				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:15 AM	4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	5
8:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	11	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	13
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%									50.00%	50.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	9	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	10
PEAK HR FACTOR :	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.500
	0.563												0.250				
PM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	4
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%					0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
PEAK HR FACTOR :	0.25	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.500
	0.250												0.250				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-405 NB Ramps & W 182nd St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-002
 Date: 5/8/2019

4axle

NS/EW Streets:	I-405 NB Ramps				I-405 NB Ramps				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	1	0	0	0	0	0	0	0	0	1	1	0	0	1	0	0	4
7:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	4	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5
8:15 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:30 AM	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	14	0	0	0	0	0	0	0	0	1	3	0	0	1	0	0	19
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%					0.00%	25.00%	75.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	9	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	10
PEAK HR FACTOR :	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.500
	0.563								0.250								

NS/EW Streets:	I-405 NB Ramps				I-405 NB Ramps				W 182nd St				W 182nd St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	1.5	0	0.5	0	0	0	0	0	0	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:45 PM	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2
5:00 PM	3	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	4
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	7	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	14
APPROACH %'s :	100.00%	0.00%	0.00%	0.00%					0.00%	0.00%	100.00%	0.00%	0	0	0	0	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	4	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	8
PEAK HR FACTOR :	0.33	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.333								1.000								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & I-405 SB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-003
 Date: 5/8/2019

Total

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				I-405 SB Ramps				I-405 SB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	117	212	0	0	0	220	86	0	8	0	118	0	0	0	0	0	761
7:15 AM	123	243	0	0	0	291	101	0	8	0	165	0	0	0	0	0	931
7:30 AM	131	342	0	0	0	295	94	0	17	0	231	0	0	0	0	0	1110
7:45 AM	142	391	0	0	0	358	108	0	23	0	245	0	0	0	0	0	1267
8:00 AM	160	365	0	0	0	317	123	0	15	0	201	0	0	0	0	0	1181
8:15 AM	122	309	0	0	0	348	86	0	12	0	198	0	0	0	0	0	1075
8:30 AM	147	315	0	0	0	345	101	0	21	0	221	0	0	0	0	0	1150
8:45 AM	96	337	0	0	0	334	97	0	8	0	204	0	0	0	0	0	1076
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1038	2514	0	0	0	2508	796	0	112	0	1583	0	0	0	0	0	8551
APPROACH %'s :	29.22%	70.78%	0.00%	0.00%	0.00%	75.91%	24.09%	0.00%	6.61%	0.00%	93.39%	0.00%	0	0	0	0	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	571	1380	0	0	0	1368	418	0	71	0	865	0	0	0	0	0	4673
PEAK HR FACTOR :	0.892	0.882	0.000	0.000	0.000	0.955	0.850	0.000	0.772	0.000	0.883	0.000	0.000	0.000	0.000	0.000	0.922
	0.915				0.958				0.873								
PM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	31	383	0	0	0	346	42	0	57	0	155	0	0	0	0	0	1014
4:15 PM	18	411	0	0	0	345	30	0	85	0	142	0	0	0	0	0	1031
4:30 PM	40	483	0	0	0	372	37	0	58	0	171	0	0	0	0	0	1161
4:45 PM	40	461	0	0	0	304	29	0	70	0	202	0	0	0	0	0	1106
5:00 PM	31	494	0	0	0	362	30	0	60	0	227	0	0	0	0	0	1204
5:15 PM	30	529	0	0	0	346	34	0	48	0	205	0	0	0	0	0	1192
5:30 PM	29	453	0	0	0	351	26	0	42	0	225	0	0	0	0	0	1126
5:45 PM	24	495	0	0	0	345	32	0	52	0	234	0	0	0	0	0	1182
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	243	3709	0	0	0	2771	260	0	472	0	1561	0	0	0	0	0	9016
APPROACH %'s :	6.15%	93.85%	0.00%	0.00%	0.00%	91.42%	8.58%	0.00%	23.22%	0.00%	76.78%	0.00%	0	0	0	0	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	114	1971	0	0	0	1404	122	0	202	0	891	0	0	0	0	0	4704
PEAK HR FACTOR :	0.919	0.931	0.000	0.000	0.000	0.970	0.897	0.000	0.842	0.000	0.952	0.000	0.000	0.000	0.000	0.000	0.977
	0.932				0.973				0.952								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & I-405 SB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-003
 Date: 5/8/2019

Cars

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				I-405 SB Ramps				I-405 SB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	113	208	0	0	0	215	85	0	8	0	116	0	0	0	0	0	745
7:15 AM	115	236	0	0	0	290	100	0	8	0	163	0	0	0	0	0	912
7:30 AM	122	329	0	0	0	289	92	0	17	0	228	0	0	0	0	0	1077
7:45 AM	136	381	0	0	0	350	107	0	23	0	243	0	0	0	0	0	1240
8:00 AM	156	358	0	0	0	303	122	0	14	0	198	0	0	0	0	0	1151
8:15 AM	118	301	0	0	0	334	85	0	12	0	195	0	0	0	0	0	1045
8:30 AM	143	309	0	0	0	334	99	0	21	0	216	0	0	0	0	0	1122
8:45 AM	81	326	0	0	0	324	97	0	8	0	199	0	0	0	0	0	1035
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	984	2448	0	0	0	2439	787	0	111	0	1558	0	0	0	0	0	8327
APPROACH %'s :	28.67%	71.33%	0.00%	0.00%	0.00%	75.60%	24.40%	0.00%	6.65%	0.00%	93.35%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																
PEAK HR VOL :	553	1349	0	0	0	1321	413	0	70	0	852	0	0	0	0	0	TOTAL
PEAK HR FACTOR :	0.89	0.885	0.000	0.000	0.000	0.944	0.846	0.000	0.761	0.000	0.877	0.000	0.000	0.000	0.000	0.000	4558
	0.920				0.949				0.867								0.919
PM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	27	374	0	0	0	336	42	0	57	0	153	0	0	0	0	0	989
4:15 PM	16	403	0	0	0	341	30	0	84	0	140	0	0	0	0	0	1014
4:30 PM	40	475	0	0	0	367	37	0	57	0	170	0	0	0	0	0	1146
4:45 PM	39	458	0	0	0	302	29	0	70	0	197	0	0	0	0	0	1095
5:00 PM	31	488	0	0	0	359	30	0	60	0	225	0	0	0	0	0	1193
5:15 PM	30	519	0	0	0	342	34	0	48	0	204	0	0	0	0	0	1177
5:30 PM	28	443	0	0	0	347	26	0	42	0	225	0	0	0	0	0	1111
5:45 PM	23	492	0	0	0	342	32	0	51	0	232	0	0	0	0	0	1172
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	234	3652	0	0	0	2736	260	0	469	0	1546	0	0	0	0	0	8897
APPROACH %'s :	6.02%	93.98%	0.00%	0.00%	0.00%	91.32%	8.68%	0.00%	23.28%	0.00%	76.72%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																
PEAK HR VOL :	112	1942	0	0	0	1390	122	0	201	0	886	0	0	0	0	0	TOTAL
PEAK HR FACTOR :	0.90	0.935	0.000	0.000	0.000	0.968	0.897	0.000	0.838	0.000	0.955	0.000	0.000	0.000	0.000	0.000	4653
	0.935				0.972				0.954								0.975

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & I-405 SB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-003
 Date: 5/8/2019

2axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				I-405 SB Ramps				I-405 SB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	1	2	0	0	0	2	0	0	0	0	2	0	0	0	0	0	7
7:15 AM	3	6	0	0	0	0	0	0	0	0	1	0	0	0	0	0	10
7:30 AM	4	10	0	0	0	3	1	0	0	0	2	0	0	0	0	0	20
7:45 AM	2	8	0	0	0	3	0	0	0	0	2	0	0	0	0	0	15
8:00 AM	1	4	0	0	0	9	1	0	1	0	3	0	0	0	0	0	19
8:15 AM	3	5	0	0	0	8	1	0	0	0	2	0	0	0	0	0	19
8:30 AM	2	5	0	0	0	6	2	0	0	0	5	0	0	0	0	0	20
8:45 AM	9	11	0	0	0	7	0	0	0	0	1	0	0	0	0	0	28
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	25	51	0	0	0	38	5	0	1	0	18	0	0	0	0	0	138
APPROACH %'s :	32.89%	67.11%	0.00%	0.00%	0.00%	88.37%	11.63%	0.00%	5.26%	0.00%	94.74%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	8	22	0	0	0	26	4	0	1	0	12	0	0	0	0	0	73
PEAK HR FACTOR :	0.667	0.688	0.000	0.000	0.000	0.722	0.500	0.000	0.250	0.000	0.600	0.000	0.000	0.000	0.000	0.000	0.913
	0.750				0.750				0.650								
PM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	6	0	0	0	6	0	0	0	0	1	0	0	0	0	0	13
4:15 PM	0	6	0	0	0	3	0	0	1	0	0	0	0	0	0	0	10
4:30 PM	0	6	0	0	0	4	0	0	1	0	1	0	0	0	0	0	12
4:45 PM	0	3	0	0	0	1	0	0	0	0	4	0	0	0	0	0	8
5:00 PM	0	4	0	0	0	1	0	0	0	0	2	0	0	0	0	0	7
5:15 PM	0	9	0	0	0	3	0	0	0	0	1	0	0	0	0	0	13
5:30 PM	0	9	0	0	0	2	0	0	0	0	0	0	0	0	0	0	11
5:45 PM	0	3	0	0	0	2	0	0	1	0	2	0	0	0	0	0	8
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	46	0	0	0	22	0	0	3	0	11	0	0	0	0	0	82
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	21.43%	0.00%	78.57%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	25	0	0	0	8	0	0	1	0	5	0	0	0	0	0	39
PEAK HR FACTOR :	0.00	0.694	0.000	0.000	0.000	0.667	0.000	0.000	0.250	0.000	0.625	0.000	0.000	0.000	0.000	0.000	0.750
	0.694				0.667				0.500								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & I-405 SB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-003
 Date: 5/8/2019

3axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				I-405 SB Ramps				I-405 SB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	2	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
8:15 AM	1	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	6
8:30 AM	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	4	5	0	0	0	13	0	0	0	0	0	0	0	0	0	0	22
PEAK HR :	07:45 AM - 08:45 AM																
PEAK HR VOL :	2	3	0	0	0	9	0	0	0	0	0	0	0	0	0	0	TOTAL
PEAK HR FACTOR :	0.500	0.375	0.000	0.000	0.000	0.563	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14
	0.417				0.563												0.583

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				I-405 SB Ramps				I-405 SB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	1	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	6
PEAK HR :	05:00 PM - 06:00 PM																
PEAK HR VOL :	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	TOTAL
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3
	0.250				0.250												0.375

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & I-405 SB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-003
 Date: 5/8/2019

4axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				I-405 SB Ramps				I-405 SB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	3	2	0	0	0	2	1	0	0	0	0	0	0	0	0	0	8
7:15 AM	5	1	0	0	0	0	1	0	0	0	1	0	0	0	0	0	8
7:30 AM	3	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	7
7:45 AM	4	2	0	0	0	4	1	0	0	0	0	0	0	0	0	0	11
8:00 AM	2	2	0	0	0	4	0	0	0	0	0	0	0	0	0	0	8
8:15 AM	0	1	0	0	0	3	0	0	0	0	1	0	0	0	0	0	5
8:30 AM	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	4
8:45 AM	6	0	0	0	0	3	0	0	0	0	4	0	0	0	0	0	13
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	25	10	0	0	0	18	4	0	0	0	7	0	0	0	0	0	64
APPROACH %'s :	71.43%	28.57%	0.00%	0.00%	0.00%	81.82%	18.18%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	8	6	0	0	0	12	1	0	0	0	1	0	0	0	0	0	28
PEAK HR FACTOR :	0.500	0.750	0.000	0.000	0.000	0.750	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.636
	0.583				0.650				0.250								
PM	1	3	0	0	0	3	0	0	0.5	0	1.5	0	0	0	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	4	1	0	0	0	4	0	0	0	0	1	0	0	0	0	0	10
4:15 PM	1	2	0	0	0	1	0	0	0	0	2	0	0	0	0	0	6
4:30 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	3
5:00 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
5:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	8	8	0	0	0	11	0	0	0	0	4	0	0	0	0	0	31
APPROACH %'s :	50.00%	50.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	2	3	0	0	0	4	0	0	0	0	0	0	0	0	0	0	9
PEAK HR FACTOR :	0.50	0.750	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750
	0.625				0.500												

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & I-405 NB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-004
 Date: 5/8/2019

Total

NS/EW Streets:	Western Ave				Western Ave				I-405 NB Ramps				I-405 NB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	
7:00 AM	0	173	82	0	5	190	2	0	0	0	0	0	232	0	51	0	735
7:15 AM	0	238	97	0	7	234	1	0	0	0	0	0	212	0	43	0	832
7:30 AM	0	229	87	0	8	290	0	0	2	0	0	0	231	1	46	0	894
7:45 AM	0	314	90	0	4	293	0	0	0	0	0	0	227	0	46	0	974
8:00 AM	0	219	93	0	15	285	0	0	0	0	0	0	237	0	46	0	895
8:15 AM	0	244	84	0	4	301	0	0	1	0	0	0	248	0	40	0	922
8:30 AM	0	203	65	0	6	249	1	0	0	0	0	0	213	1	55	0	793
8:45 AM	0	231	62	0	7	235	2	0	0	0	0	0	214	0	59	0	810
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	1851	660	0	56	2077	6	0	3	0	0	0	1814	2	386	0	6855
APPROACH %'s :	0.00%	73.72%	26.28%	0.00%	2.62%	97.10%	0.28%	0.00%	100.00%	0.00%	0.00%	0.00%	82.38%	0.09%	17.53%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	1006	354	0	31	1169	0	0	3	0	0	0	943	1	178	0	3685
PEAK HR FACTOR :	0.000	0.801	0.952	0.000	0.517	0.971	0.000	0.000	0.375	0.000	0.000	0.000	0.951	0.250	0.967	0.000	0.946
	0.842				0.984				0.375				0.974				
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	
4:00 PM	0	303	96	0	10	234	0	0	1	0	0	0	134	0	55	0	833
4:15 PM	0	285	108	0	13	197	0	0	1	0	0	0	139	0	52	0	795
4:30 PM	0	335	112	0	8	241	0	0	0	0	0	0	160	0	44	0	900
4:45 PM	0	353	118	0	9	237	0	0	0	0	0	0	156	0	49	0	922
5:00 PM	0	370	144	0	16	252	0	0	0	0	0	0	124	0	47	0	953
5:15 PM	0	381	150	0	14	240	0	0	0	0	0	0	140	0	47	0	972
5:30 PM	0	350	136	0	12	261	0	0	0	0	0	0	143	0	59	0	961
5:45 PM	0	287	119	0	8	240	0	0	0	0	0	0	184	0	47	0	885
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	2664	983	0	90	1902	0	0	2	0	0	0	1180	0	400	0	7221
APPROACH %'s :	0.00%	73.05%	26.95%	0.00%	4.52%	95.48%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	74.68%	0.00%	25.32%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	1454	548	0	51	990	0	0	0	0	0	0	563	0	202	0	3808
PEAK HR FACTOR :	0.000	0.954	0.913	0.000	0.797	0.948	0.000	0.000	0.000	0.000	0.000	0.000	0.902	0.000	0.856	0.000	0.979
	0.943				0.953								0.933				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & I-405 NB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-004
 Date: 5/8/2019

Cars

NS/EW Streets:	Western Ave				Western Ave				I-405 NB Ramps				I-405 NB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	166	80	0	5	184	2	0	0	0	0	0	221	0	50	0	708
7:15 AM	0	231	94	0	7	225	1	0	0	0	0	0	203	0	43	0	804
7:30 AM	0	219	83	0	8	281	0	0	0	0	0	0	218	1	45	0	855
7:45 AM	0	303	88	0	4	286	0	0	0	0	0	0	217	0	44	0	942
8:00 AM	0	206	89	0	14	280	0	0	0	0	0	0	225	0	45	0	859
8:15 AM	0	235	80	0	4	293	0	0	1	0	0	0	241	0	40	0	894
8:30 AM	0	191	61	0	6	239	1	0	0	0	0	0	200	1	52	0	751
8:45 AM	0	221	58	0	6	228	2	0	0	0	0	0	206	0	57	0	778
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	1772	633	0	54	2016	6	0	1	0	0	0	1731	2	376	0	6591
APPROACH %'s :	0.00%	73.68%	26.32%	0.00%	2.60%	97.11%	0.29%	0.00%	100.00%	0.00%	0.00%	0.00%	82.08%	0.09%	17.83%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	963	340	0	30	1140	0	0	1	0	0	0	901	1	174	0	3550
PEAK HR FACTOR :	0.00	0.795	0.955	0.000	0.536	0.973	0.000	0.000	0.250	0.000	0.000	0.000	0.935	0.250	0.967	0.000	0.942
	0.833				0.985				0.250				0.957				
PM	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	293	94	0	10	229	0	0	1	0	0	0	130	0	55	0	812
4:15 PM	0	274	104	0	13	189	0	0	1	0	0	0	136	0	51	0	768
4:30 PM	0	329	109	0	8	236	0	0	0	0	0	0	153	0	44	0	879
4:45 PM	0	342	115	0	9	233	0	0	0	0	0	0	150	0	49	0	898
5:00 PM	0	363	138	0	15	247	0	0	0	0	0	0	119	0	46	0	928
5:15 PM	0	367	146	0	14	236	0	0	0	0	0	0	135	0	47	0	945
5:30 PM	0	343	130	0	12	259	0	0	0	0	0	0	139	0	57	0	940
5:45 PM	0	275	117	0	8	235	0	0	0	0	0	0	180	0	45	0	860
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	2586	953	0	89	1864	0	0	2	0	0	0	1142	0	394	0	7030
APPROACH %'s :	0.00%	73.07%	26.93%	0.00%	4.56%	95.44%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	74.35%	0.00%	25.65%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	1415	529	0	50	975	0	0	0	0	0	0	543	0	199	0	3711
PEAK HR FACTOR :	0.00	0.964	0.906	0.000	0.833	0.941	0.000	0.000	0.000	0.000	0.000	0.000	0.905	0.000	0.873	0.000	0.982
	0.947				0.946				0.000				0.932				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & I-405 NB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-004
 Date: 5/8/2019

2axle

NS/EW Streets:	Western Ave				Western Ave				I-405 NB Ramps				I-405 NB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	5	2	0	0	6	0	0	0	0	0	0	5	0	1	0	19
7:15 AM	0	4	1	0	0	8	0	0	0	0	0	0	1	0	0	0	14
7:30 AM	0	9	1	0	0	6	0	0	2	0	0	0	2	0	1	0	21
7:45 AM	0	11	1	0	0	5	0	0	0	0	0	0	1	0	1	0	19
8:00 AM	0	13	3	0	1	2	0	0	0	0	0	0	2	0	1	0	22
8:15 AM	0	6	4	0	0	6	0	0	0	0	0	0	1	0	0	0	17
8:30 AM	0	7	2	0	0	7	0	0	0	0	0	0	3	0	3	0	22
8:45 AM	0	8	4	0	1	6	0	0	0	0	0	0	0	0	1	0	20
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	63	18	0	2	46	0	0	2	0	0	0	15	0	8	0	154
APPROACH %'s :	0.00%	77.78%	22.22%	0.00%	4.17%	95.83%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	65.22%	0.00%	34.78%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	39	9	0	1	19	0	0	2	0	0	0	6	0	3	0	79
PEAK HR FACTOR :	0.000	0.750	0.563	0.000	0.250	0.792	0.000	0.000	0.250	0.000	0.000	0.000	0.750	0.000	0.750	0.000	0.898
	0.750				0.833				0.250				0.750				
PM	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	8	2	0	0	3	0	0	0	0	0	0	3	0	0	0	16
4:15 PM	0	6	4	0	0	6	0	0	0	0	0	0	2	0	1	0	19
4:30 PM	0	6	1	0	0	1	0	0	0	0	0	0	3	0	0	0	11
4:45 PM	0	8	3	0	0	4	0	0	0	0	0	0	1	0	0	0	16
5:00 PM	0	6	3	0	0	5	0	0	0	0	0	0	3	0	1	0	18
5:15 PM	0	12	3	0	0	3	0	0	0	0	0	0	2	0	0	0	20
5:30 PM	0	4	2	0	0	1	0	0	0	0	0	0	1	0	1	0	9
5:45 PM	0	11	1	0	0	2	0	0	0	0	0	0	0	0	1	0	15
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	61	19	0	0	25	0	0	0	0	0	0	15	0	4	0	124
APPROACH %'s :	0.00%	76.25%	23.75%	0.00%	0.00%	100.00%	0.00%	0.00%	0	0	0	0	78.95%	0.00%	21.05%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	30	11	0	0	13	0	0	0	0	0	0	7	0	2	0	63
PEAK HR FACTOR :	0.00	0.625	0.917	0.000	0.000	0.650	0.000	0.000	0.000	0.000	0.000	0.000	0.583	0.000	0.500	0.000	0.788
	0.683				0.650				0.583				0.563				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & I-405 NB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-004
 Date: 5/8/2019

3axle

NS/EW Streets:	Western Ave				Western Ave				I-405 NB Ramps				I-405 NB Ramps				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	2	0	0	0	3
7:30 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
8:15 AM	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	0	4
8:30 AM	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	5	3	0	0	3	0	0	0	0	0	0	6	0	0	0	17
APPROACH %'s :	0.00%	62.50%	37.50%	0.00%	0.00%	100.00%	0.00%	0.00%					100.00%	0.00%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	3	2	0	0	2	0	0	0	0	0	0	2	0	0	0	9
PEAK HR FACTOR :	0.000	0.375	0.250	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.563
	0.417				0.500								0.500				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	
4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	3	0	0	0	1	0	0	0	0	0	0	1	0	0	0	5
4:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	2	0	1	0	5
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	6	0	0	1	5	0	0	0	0	0	0	6	0	1	0	19
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	16.67%	83.33%	0.00%	0.00%					85.71%	0.00%	14.29%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	2	0	0	1	0	0	0	0	0	0	0	3	0	0	0	6
PEAK HR FACTOR :	0.00	0.500	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.750
	0.500				0.250								0.375				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & I-405 NB Ramps
 City: Torrance
 Control: Signalized

Project ID: 19-05251-004
 Date: 5/8/2019

4axle

NS/EW Streets:	Western Ave				Western Ave				I-405 NB Ramps				I-405 NB Ramps				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	5	0	0	0	6
7:15 AM	0	3	2	0	0	0	0	0	0	0	0	0	6	0	0	0	11
7:30 AM	0	0	1	0	0	3	0	0	0	0	0	0	11	0	0	0	15
7:45 AM	0	0	1	0	0	1	0	0	0	0	0	0	9	0	1	0	12
8:00 AM	0	0	1	0	0	3	0	0	0	0	0	0	9	0	0	0	13
8:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	5	0	0	0	7
8:30 AM	0	4	1	0	0	3	0	0	0	0	0	0	9	0	0	0	17
8:45 AM	0	2	0	0	0	1	0	0	0	0	0	0	8	0	1	0	12
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	11	6	0	0	12	0	0	0	0	0	0	62	0	2	0	93
APPROACH %'s :	0.00%	64.71%	35.29%	0.00%	0.00%	100.00%	0.00%	0.00%					96.88%	0.00%	3.13%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	1	3	0	0	8	0	0	0	0	0	0	34	0	1	0	47
PEAK HR FACTOR :	0.000	0.250	0.750	0.000	0.000	0.667	0.000	0.000	0.000	0.000	0.000	0.000	0.773	0.000	0.250	0.000	0.783
	1.000				0.667								0.795				
PM	0	2	1	0	1	3	0	0	0	1	0	0	1.5	0	0.5	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	0	4
4:15 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	3
4:30 PM	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	0	8
4:45 PM	0	2	0	0	0	0	0	0	0	0	0	0	5	0	0	0	7
5:00 PM	0	1	3	0	0	0	0	0	0	0	0	0	2	0	0	0	6
5:15 PM	0	1	1	0	0	1	0	0	0	0	0	0	2	0	0	0	5
5:30 PM	0	3	4	0	0	1	0	0	0	0	0	0	1	0	1	0	10
5:45 PM	0	0	1	0	0	2	0	0	0	0	0	0	2	0	0	0	5
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	11	11	0	0	8	0	0	0	0	0	0	17	0	1	0	48
APPROACH %'s :	0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%					94.44%	0.00%	5.56%	0.00%	
PEAK HR :	04:45 PM - 05:45 PM																TOTAL
PEAK HR VOL :	0	7	8	0	0	2	0	0	0	0	0	0	10	0	1	0	28
PEAK HR FACTOR :	0.00	0.583	0.500	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.250	0.000	0.700
	0.536				0.500								0.550				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & Crenshaw PI
 City: Torrance
 Control: 1-Way Stop (WB)

Project ID: 19-05251-005
 Date: 5/8/2019

Total

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				Crenshaw PI				Crenshaw PI				TOTAL	
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
AM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	WR2	TOTAL
7:00 AM	0	285	1	0	7	322	0	1	0	0	0	0	0	0	1	0	2	619
7:15 AM	0	384	4	0	0	431	0	2	0	0	0	0	0	0	0	0	10	831
7:30 AM	0	462	1	0	8	488	0	2	0	0	0	0	0	0	0	0	29	990
7:45 AM	0	514	0	0	9	570	0	2	0	0	0	0	0	0	4	0	24	1123
8:00 AM	0	526	2	0	9	530	0	0	0	0	0	0	0	0	1	0	11	1079
8:15 AM	0	425	2	0	9	515	0	3	0	0	0	0	1	0	0	0	13	968
8:30 AM	0	464	4	0	14	531	0	3	0	0	0	0	1	0	0	0	11	1028
8:45 AM	0	438	1	0	12	552	0	0	0	0	0	0	0	0	0	0	29	1032
TOTAL VOLUMES :	0	3498	15	0	68	3939	0	13	0	0	0	0	2	0	6	0	129	7670
APPROACH %'s :	0.00%	99.57%	0.43%	0.00%	1.69%	97.99%	0.00%	0.32%					1.46%	0.00%	4.38%	0.00%	94.16%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL	
PEAK HR VOL :	0	1929	8	0	41	2146	0	8	0	0	0	0	2	0	5	0	59	4198
PEAK HR FACTOR :	0.000	0.917	0.500	0.000	0.732	0.941	0.000	0.667	0.000	0.000	0.000	0.000	0.500	0.000	0.313	0.000	0.615	0.935
	0.917				0.944								0.589					
PM	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	WR2	TOTAL
4:00 PM	0	361	0	0	4	480	0	1	0	0	0	0	1	0	2	0	18	867
4:15 PM	0	446	2	0	3	487	0	0	0	0	0	0	0	0	1	0	16	955
4:30 PM	0	447	0	0	4	524	0	1	0	0	0	0	1	0	2	0	22	1001
4:45 PM	0	446	2	0	9	487	0	3	0	0	0	0	0	0	0	0	16	963
5:00 PM	0	455	2	0	7	554	0	3	0	0	0	0	0	0	4	0	34	1059
5:15 PM	0	518	3	0	2	548	0	2	0	0	0	0	0	0	1	0	26	1100
5:30 PM	0	457	0	0	4	551	0	1	0	0	0	0	0	0	0	0	20	1033
5:45 PM	0	489	1	0	7	555	0	3	0	0	0	0	0	0	1	0	12	1068
TOTAL VOLUMES :	0	3619	10	0	40	4186	0	14	0	0	0	0	2	0	11	0	164	8046
APPROACH %'s :	0.00%	99.72%	0.28%	0.00%	0.94%	98.73%	0.00%	0.33%					1.13%	0.00%	6.21%	0.00%	92.66%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL	
PEAK HR VOL :	0	1919	6	0	20	2208	0	9	0	0	0	0	0	0	6	0	92	4260
PEAK HR FACTOR :	0.000	0.926	0.500	0.000	0.714	0.995	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.676	0.968
	0.924				0.990								0.645					

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & Crenshaw PI
 City: Torrance
 Control: 1-Way Stop (WB)

Project ID: 19-05251-005
 Date: 5/8/2019

Cars

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				Crenshaw PI				Crenshaw PI					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		WR2
7:00 AM	0	278	1	0	7	313	0	1	0	0	0	0	0	0	1	0	2	603
7:15 AM	0	368	4	0	0	426	0	2	0	0	0	0	0	0	0	0	10	810
7:30 AM	0	442	1	0	7	482	0	2	0	0	0	0	0	0	0	0	29	963
7:45 AM	0	502	0	0	9	560	0	2	0	0	0	0	0	0	4	0	23	1100
8:00 AM	0	513	2	0	9	514	0	0	0	0	0	0	0	0	1	0	10	1049
8:15 AM	0	413	2	0	8	501	0	3	0	0	0	0	1	0	0	0	13	941
8:30 AM	0	457	3	0	14	513	0	3	0	0	0	0	1	0	0	0	9	1000
8:45 AM	0	420	1	0	12	537	0	0	0	0	0	0	0	0	0	0	26	996
TOTAL VOLUMES :	0	3393	14	0	66	3846	0	13	0	0	0	0	2	0	6	0	122	7462
APPROACH %'s :	0.00%	99.59%	0.41%	0.00%	1.68%	97.99%	0.00%	0.33%					1.54%	0.00%	4.62%	0.00%	93.85%	
PEAK HR :	07:45 AM - 08:45 AM																	TOTAL
PEAK HR VOL :	0	1885	7	0	40	2088	0	8	0	0	0	0	2	0	5	0	55	4090
PEAK HR FACTOR :	0.00	0.919	0.583	0.000	0.714	0.932	0.000	0.667	0.000	0.000	0.000	0.000	0.500	0.000	0.313	0.000	0.598	0.930
	0.918				0.935								0.574					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		WR2
4:00 PM	0	351	0	0	4	469	0	1	0	0	0	0	1	0	2	0	17	845
4:15 PM	0	435	2	0	3	481	0	0	0	0	0	0	0	0	1	0	15	937
4:30 PM	0	440	0	0	4	518	0	1	0	0	0	0	1	0	2	0	22	988
4:45 PM	0	442	2	0	8	484	0	3	0	0	0	0	0	0	0	0	15	954
5:00 PM	0	451	2	0	6	547	0	3	0	0	0	0	0	0	4	0	34	1047
5:15 PM	0	509	3	0	2	546	0	2	0	0	0	0	0	0	1	0	25	1088
5:30 PM	0	446	0	0	3	548	0	1	0	0	0	0	0	0	0	0	20	1018
5:45 PM	0	484	0	0	7	552	0	3	0	0	0	0	0	0	1	0	12	1059
TOTAL VOLUMES :	0	3558	9	0	37	4145	0	14	0	0	0	0	2	0	11	0	160	7936
APPROACH %'s :	0.00%	99.75%	0.25%	0.00%	0.88%	98.78%	0.00%	0.33%					1.16%	0.00%	6.36%	0.00%	92.49%	
PEAK HR :	05:00 PM - 06:00 PM																	TOTAL
PEAK HR VOL :	0	1890	5	0	18	2193	0	9	0	0	0	0	0	0	6	0	91	4212
PEAK HR FACTOR :	0.00	0.928	0.417	0.000	0.643	0.993	0.000	0.750	0.000	0.000	0.000	0.000	0.000	0.000	0.375	0.000	0.669	0.968
	0.925				0.988								0.638					

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & Crenshaw PI
 City: Torrance
 Control: 1-Way Stop (WB)

Project ID: 19-05251-005
 Date: 5/8/2019

2axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				Crenshaw PI				Crenshaw PI					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		WR2
7:00 AM	0	2	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	8
7:15 AM	0	10	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	13
7:30 AM	0	12	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	15
7:45 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	1	13
8:00 AM	0	6	0	0	0	10	0	0	0	0	0	0	0	0	0	0	1	17
8:15 AM	0	9	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	17
8:30 AM	0	5	0	0	0	13	0	0	0	0	0	0	0	0	0	0	1	19
8:45 AM	0	11	0	0	0	8	0	0	0	0	0	0	0	0	0	0	3	22
TOTAL VOLUMES :	0	61	0	0	1	56	0	0	0	0	0	0	0	0	0	0	6	124
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	1.75%	98.25%	0.00%	0.00%					0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL	
PEAK HR VOL :	0	26	0	0	0	37	0	0	0	0	0	0	0	0	0	0	3	66
PEAK HR FACTOR :	0.000	0.722	0.000	0.000	0.000	0.712	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.868
	0.722				0.712								0.750					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		WR2
4:00 PM	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	1	10
4:15 PM	0	7	0	0	0	3	0	0	0	0	0	0	0	0	0	0	1	11
4:30 PM	0	4	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	9
4:45 PM	0	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	5
5:00 PM	0	3	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	9
5:15 PM	0	8	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	10
5:30 PM	0	9	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	11
5:45 PM	0	4	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	6
TOTAL VOLUMES :	0	41	1	0	3	22	0	0	0	0	0	0	0	0	0	0	4	71
APPROACH %'s :	0.00%	97.62%	2.38%	0.00%	12.00%	88.00%	0.00%	0.00%					0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL	
PEAK HR VOL :	0	24	1	0	2	8	0	0	0	0	0	0	0	0	0	0	1	36
PEAK HR FACTOR :	0.00	0.667	0.250	0.000	0.500	0.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.818
	0.694				0.417								0.250					

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & Crenshaw PI
 City: Torrance
 Control: 1-Way Stop (WB)

Project ID: 19-05251-005
 Date: 5/8/2019

3axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				Crenshaw PI				Crenshaw PI					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		WR2
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
7:30 AM	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	6
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5
8:15 AM	0	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	4
8:30 AM	0	0	1	0	0	5	0	0	0	0	0	0	0	0	0	0	1	7
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	0	9	1	0	1	12	0	0	0	0	0	0	0	0	0	0	1	24
APPROACH %'s :	0.00%	90.00%	10.00%	0.00%	7.69%	92.31%	0.00%	0.00%					0.00%	0.00%	0.00%	0.00%	100.00%	
PEAK HR :	07:45 AM - 08:45 AM																	TOTAL
PEAK HR VOL :	0	5	1	0	1	8	0	0	0	0	0	0	0	0	0	0	1	16
PEAK HR FACTOR :	0.000	0.417	0.250	0.000	0.250	0.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.571
	0.500				0.450								0.250					
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		WR2
4:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	8
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%					0.00%	0.00%	0.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																	TOTAL
PEAK HR VOL :	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4
PEAK HR FACTOR :	0.00	0.250	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500
	0.250				0.375													

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & Crenshaw PI
 City: Torrance
 Control: 1-Way Stop (WB)

Project ID: 19-05251-005
 Date: 5/8/2019

4axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				Crenshaw PI				Crenshaw PI					
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		WR2
7:00 AM	0	5	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	7
7:15 AM	0	6	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7
7:30 AM	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	6
7:45 AM	0	6	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	10
8:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	8
8:15 AM	0	1	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	6
8:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:45 AM	0	7	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	14
TOTAL VOLUMES :	0	35	0	0	0	25	0	0	0	0	0	0	0	0	0	0	0	60
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL	
PEAK HR VOL :	0	13	0	0	0	13	0	0	0	0	0	0	0	0	0	0	0	26
PEAK HR FACTOR :	0.000	0.542	0.000	0.000	0.000	0.650	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.650
	0.542				0.650													
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		WR2
4:00 PM	0	5	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	11
4:15 PM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	5
4:30 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
4:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
5:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
TOTAL VOLUMES :	0	16	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	31
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL	
PEAK HR VOL :	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	8
PEAK HR FACTOR :	0.00	0.500	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000
	0.500				0.500													

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-006
 Date: 5/8/2019

Total

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	3	1	0	1	3	1	0	0	3	1	0	0	4	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	27	239	39	0	17	235	70	1	56	214	7	0	48	241	13	0	1207
7:15 AM	31	291	36	0	18	312	81	0	57	241	11	0	58	284	7	0	1427
7:30 AM	29	410	54	0	19	415	82	2	73	255	11	0	39	286	27	0	1702
7:45 AM	35	387	65	0	35	430	103	0	109	286	20	0	77	297	42	0	1886
8:00 AM	34	414	75	0	23	435	89	2	97	301	19	0	71	258	17	0	1835
8:15 AM	22	332	61	0	33	423	87	1	86	314	17	0	60	258	12	0	1706
8:30 AM	24	340	56	0	29	389	92	2	92	252	16	0	57	273	20	0	1642
8:45 AM	24	386	81	0	29	431	102	3	70	264	15	0	44	229	20	0	1698
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	226	2799	467	0	203	3070	706	11	640	2127	116	0	454	2126	158	0	13103
APPROACH %'s :	6.47%	80.15%	13.37%	0.00%	5.09%	76.94%	17.69%	0.28%	22.20%	73.78%	4.02%	0.00%	16.58%	77.65%	5.77%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	120	1543	255	0	110	1703	361	5	365	1156	67	0	247	1099	98	0	7129
PEAK HR FACTOR :	0.857	0.932	0.850	0.000	0.786	0.979	0.876	0.625	0.837	0.920	0.838	0.000	0.802	0.925	0.583	0.000	0.945
	0.917				0.959				0.952				0.868				
PM	1	3	1	0	1	3	1	0	0	3	1	0	0	4	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	18	329	61	0	47	346	85	0	37	322	36	0	41	191	27	0	1540
4:15 PM	30	324	39	0	51	369	86	2	49	328	22	0	44	185	22	0	1551
4:30 PM	18	403	65	0	27	440	91	1	76	353	42	0	48	212	24	0	1800
4:45 PM	22	341	61	0	41	399	64	0	46	314	22	0	54	220	22	0	1606
5:00 PM	29	377	62	0	43	407	88	4	66	373	23	0	37	238	27	0	1774
5:15 PM	31	450	74	0	41	416	90	0	60	354	20	0	50	279	27	0	1892
5:30 PM	31	379	63	1	20	416	95	2	47	376	14	0	57	269	31	0	1801
5:45 PM	32	410	66	0	27	433	80	0	47	324	21	0	47	282	18	0	1787
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	211	3013	491	1	297	3226	679	9	428	2744	200	0	378	1876	198	0	13751
APPROACH %'s :	5.68%	81.08%	13.21%	0.03%	7.05%	76.61%	16.12%	0.21%	12.69%	81.38%	5.93%	0.00%	15.42%	76.51%	8.08%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	123	1616	265	1	131	1672	353	6	220	1427	78	0	191	1068	103	0	7254
PEAK HR FACTOR :	0.961	0.898	0.895	0.250	0.762	0.965	0.929	0.375	0.833	0.949	0.848	0.000	0.838	0.947	0.831	0.000	0.959
	0.903				0.988				0.933				0.954				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-006
 Date: 5/8/2019

Cars

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	3	1	0	1	3	1	0	0	3	1	0	0	4	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	27	236	34	0	17	229	69	1	53	213	6	0	45	230	12	0	1172
7:15 AM	29	282	33	0	17	310	80	0	54	236	11	0	51	277	6	0	1386
7:30 AM	29	396	50	0	19	411	80	2	69	250	11	0	36	274	25	0	1652
7:45 AM	35	379	63	0	35	421	101	0	102	284	20	0	72	293	42	0	1847
8:00 AM	34	405	73	0	23	423	86	2	97	296	18	0	63	247	16	0	1783
8:15 AM	22	321	55	0	32	412	84	1	85	309	17	0	56	243	11	0	1648
8:30 AM	23	335	52	0	28	378	87	2	91	247	14	0	48	266	20	0	1591
8:45 AM	24	370	75	0	28	421	97	3	68	255	14	0	38	222	20	0	1635
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	223	2724	435	0	199	3005	684	11	619	2090	111	0	409	2052	152	0	12714
APPROACH %'s :	6.59%	80.54%	12.86%	0.00%	5.10%	77.07%	17.54%	0.28%	21.95%	74.11%	3.94%	0.00%	15.65%	78.53%	5.82%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	120	1501	241	0	109	1667	351	5	353	1139	66	0	227	1057	94	0	6930
PEAK HR FACTOR :	0.86	0.927	0.825	0.000	0.779	0.985	0.869	0.625	0.865	0.922	0.825	0.000	0.788	0.902	0.560	0.000	0.938
	0.909				0.957				0.948				0.846				
PM	1	3	1	0	1	3	1	0	0	3	1	0	0	4	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	17	324	58	0	44	342	79	0	32	310	35	0	37	190	26	0	1494
4:15 PM	30	317	38	0	48	367	85	2	49	323	22	0	43	183	20	0	1527
4:30 PM	18	397	62	0	27	435	90	1	75	345	42	0	47	207	23	0	1769
4:45 PM	22	339	57	0	40	397	64	0	46	299	21	0	51	217	20	0	1573
5:00 PM	29	372	62	0	42	403	86	4	66	364	23	0	37	238	26	0	1752
5:15 PM	31	444	69	0	41	414	90	0	59	346	20	0	48	277	27	0	1866
5:30 PM	30	370	57	1	20	414	94	2	44	367	14	0	57	268	30	0	1768
5:45 PM	31	406	63	0	27	430	80	0	47	317	20	0	47	280	18	0	1766
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	208	2969	466	1	289	3202	668	9	418	2671	197	0	367	1860	190	0	13515
APPROACH %'s :	5.71%	81.48%	12.79%	0.03%	6.93%	76.82%	16.03%	0.22%	12.72%	81.28%	6.00%	0.00%	15.18%	76.95%	7.86%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	121	1592	251	1	130	1661	350	6	216	1394	77	0	189	1063	101	0	7152
PEAK HR FACTOR :	0.98	0.896	0.909	0.250	0.774	0.966	0.931	0.375	0.818	0.950	0.837	0.000	0.829	0.949	0.842	0.000	0.958
	0.903				0.985				0.931				0.953				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-006
 Date: 5/8/2019

2axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	3 NT	1 NR	0 NU	1 SL	3 ST	1 SR	0 SU	0 EL	3 ET	1 ER	0 EU	0 WL	4 WT	0 WR	0 WU	
7:00 AM	0	2	0	0	0	4	0	0	0	1	1	0	1	5	0	0	14
7:15 AM	1	4	0	0	1	1	0	0	2	3	0	0	1	3	0	0	16
7:30 AM	0	10	2	0	0	2	0	0	2	4	0	0	1	6	0	0	27
7:45 AM	0	6	0	0	0	5	2	0	1	2	0	0	0	2	0	0	18
8:00 AM	0	4	2	0	0	7	3	0	0	4	1	0	1	7	1	0	30
8:15 AM	0	8	2	0	1	6	1	0	1	4	0	0	2	10	1	0	36
8:30 AM	1	4	1	0	0	9	3	0	0	4	2	0	2	5	0	0	31
8:45 AM	0	11	3	0	0	8	1	0	0	5	1	0	2	6	0	0	37
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	49	10	0	2	42	10	0	6	27	5	0	10	44	2	0	209
	3.28%	80.33%	16.39%	0.00%	3.70%	77.78%	18.52%	0.00%	15.79%	71.05%	13.16%	0.00%	17.86%	78.57%	3.57%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	28	6	0	1	20	6	0	4	14	1	0	4	25	2	0	111
PEAK HR FACTOR :	0.000	0.700	0.750	0.000	0.250	0.714	0.500	0.000	0.500	0.875	0.250	0.000	0.500	0.625	0.500	0.000	0.771
	0.708				0.675				0.792				0.596				
PM	1 NL	3 NT	1 NR	0 NU	1 SL	3 ST	1 SR	0 SU	0 EL	3 ET	1 ER	0 EU	0 WL	4 WT	0 WR	0 WU	
4:00 PM	1	3	2	0	2	2	3	0	1	6	1	0	1	0	1	0	23
4:15 PM	0	3	0	0	0	2	1	0	0	3	0	0	0	2	2	0	13
4:30 PM	0	5	2	0	0	5	0	0	0	5	0	0	0	3	0	0	20
4:45 PM	0	1	2	0	0	1	0	0	0	12	1	0	2	0	1	0	20
5:00 PM	0	4	0	0	1	3	1	0	0	4	0	0	0	0	1	0	14
5:15 PM	0	6	3	0	0	1	0	0	0	4	0	0	0	2	0	0	16
5:30 PM	0	8	2	0	0	0	1	0	2	7	0	0	0	0	1	0	21
5:45 PM	1	3	3	0	0	1	0	0	0	6	1	0	0	1	0	0	16
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	2	33	14	0	3	15	6	0	3	47	3	0	3	8	6	0	143
	4.08%	67.35%	28.57%	0.00%	12.50%	62.50%	25.00%	0.00%	5.66%	88.68%	5.66%	0.00%	17.65%	47.06%	35.29%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	21	8	0	1	5	2	0	2	21	1	0	0	3	2	0	67
PEAK HR FACTOR :	0.25	0.656	0.667	0.000	0.250	0.417	0.500	0.000	0.250	0.750	0.250	0.000	0.000	0.375	0.500	0.000	0.798
	0.750				0.400				0.667				0.625				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-006
 Date: 5/8/2019

3axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1	3	1	0	1	3	1	0	0	3	1	0	0	4	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	2	3	0	0	6
7:15 AM	1	1	0	0	0	1	0	0	0	1	0	0	1	2	0	0	7
7:30 AM	0	3	0	0	0	1	1	0	0	1	0	0	0	2	1	0	9
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	2	0	0	0	1	0	0	0	1	0	0	1	2	0	0	7
8:15 AM	0	2	0	0	0	2	0	0	0	1	0	0	1	2	0	0	8
8:30 AM	0	0	0	0	1	2	2	0	0	0	0	0	2	2	0	0	9
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1	9	0	0	1	8	3	0	0	6	0	0	7	13	1	0	49
APPROACH %'s :	10.00%	90.00%	0.00%	0.00%	8.33%	66.67%	25.00%	0.00%	0.00%	100.00%	0.00%	0.00%	33.33%	61.90%	4.76%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	8	0	0	0	4	1	0	0	3	0	0	2	6	1	0	25
PEAK HR FACTOR :	0.000	0.667	0.000	0.000	0.000	0.500	0.250	0.000	0.000	0.750	0.000	0.000	0.500	0.750	0.250	0.000	0.694
	0.667				0.625				0.750				0.750				
PM	1	3	1	0	1	3	1	0	0	3	1	0	0	4	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
4:15 PM	0	1	0	0	1	0	0	0	0	2	0	0	1	0	0	0	5
4:30 PM	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:00 PM	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	3
5:15 PM	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	3
5:30 PM	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	1	4	2	0	1	3	0	0	0	8	0	0	2	1	0	0	22
APPROACH %'s :	14.29%	57.14%	28.57%	0.00%	25.00%	75.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	66.67%	33.33%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	1	1	2	0	0	3	0	0	0	4	0	0	0	0	0	0	11
PEAK HR FACTOR :	0.25	0.250	0.500	0.000	0.000	0.375	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.688
	0.500				0.375				0.500								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw Blvd & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-006
 Date: 5/8/2019

4axle

NS/EW Streets:	Crenshaw Blvd				Crenshaw Blvd				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	1 NL	3 NT	1 NR	0 NU	1 SL	3 ST	1 SR	0 SU	0 EL	3 ET	1 ER	0 EU	0 WL	4 WT	0 WR	0 WU	
7:00 AM	0	1	5	0	0	1	1	0	3	0	0	0	0	3	1	0	
7:15 AM	0	4	3	0	0	0	1	0	1	1	0	0	5	2	1	0	
7:30 AM	0	1	2	0	0	1	1	0	2	0	0	0	2	4	1	0	
7:45 AM	0	1	2	0	0	4	0	0	6	0	0	0	5	2	0	0	
8:00 AM	0	3	0	0	0	4	0	0	0	0	0	0	6	2	0	0	
8:15 AM	0	1	4	0	0	3	2	0	0	0	0	0	1	3	0	0	
8:30 AM	0	1	3	0	0	0	0	0	1	1	0	0	5	0	0	0	
8:45 AM	0	5	3	0	1	2	4	0	2	2	0	0	4	1	0	0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	17	22	0	1	15	9	0	15	4	0	0	28	17	3	0	131
	0.00%	43.59%	56.41%	0.00%	4.00%	60.00%	36.00%	0.00%	78.95%	21.05%	0.00%	0.00%	58.33%	35.42%	6.25%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	6	8	0	0	12	3	0	8	0	0	0	14	11	1	0	63
PEAK HR FACTOR :	0.000	0.500	0.500	0.000	0.000	0.750	0.375	0.000	0.333	0.000	0.000	0.000	0.583	0.688	0.250	0.000	0.788
	0.700				0.750				0.333				0.813				
PM	1 NL	3 NT	1 NR	0 NU	1 SL	3 ST	1 SR	0 SU	0 EL	3 ET	1 ER	0 EU	0 WL	4 WT	0 WR	0 WU	
4:00 PM	0	1	1	0	1	2	3	0	4	5	0	0	3	1	0	0	
4:15 PM	0	3	1	0	2	0	0	0	0	0	0	0	0	0	0	0	
4:30 PM	0	0	1	0	0	0	1	0	1	2	0	0	0	2	1	0	
4:45 PM	0	1	2	0	1	1	0	0	0	3	0	0	1	2	1	0	
5:00 PM	0	0	0	0	0	1	1	0	0	3	0	0	0	0	0	0	
5:15 PM	0	0	1	0	0	1	0	0	1	2	0	0	2	0	0	0	
5:30 PM	0	1	3	0	0	0	0	0	1	2	0	0	0	1	0	0	
5:45 PM	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	7	9	0	4	6	5	0	7	18	0	0	6	7	2	0	71
	0.00%	43.75%	56.25%	0.00%	26.67%	40.00%	33.33%	0.00%	28.00%	72.00%	0.00%	0.00%	40.00%	46.67%	13.33%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	2	4	0	0	3	1	0	2	8	0	0	2	2	0	0	24
PEAK HR FACTOR :	0.00	0.500	0.333	0.000	0.000	0.750	0.250	0.000	0.500	0.667	0.000	0.000	0.250	0.500	0.000	0.000	0.750
	0.375				0.500				0.833				0.500				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw PI & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-007
 Date: 5/8/2019

Total

NS/EW Streets:	Crenshaw PI				Crenshaw PI				190th St				190th St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	0	0	0	0	3	0	3	0	0	260	0	0	0	282	11	0					559
7:15 AM	0	0	0	0	1	0	3	0	1	299	0	1	0	359	14	0					678
7:30 AM	0	0	0	0	4	0	4	0	0	307	0	0	0	354	23	0					692
7:45 AM	0	0	0	0	6	0	0	1	0	400	0	0	0	413	33	0					853
8:00 AM	0	0	0	0	3	0	5	0	1	405	0	0	0	360	15	0					789
8:15 AM	0	0	0	0	6	0	6	0	0	400	0	0	0	321	17	0					750
8:30 AM	0	0	0	0	10	0	4	0	3	355	0	0	0	339	26	0					737
8:45 AM	0	0	0	0	8	0	2	0	2	351	0	0	0	303	26	1					693
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	0	0	0	0	41	0	27	1	7	2777	0	1	0	2731	165	1					5751
					59.42%	0.00%	39.13%	1.45%	0.25%	99.71%	0.00%	0.04%	0.00%	94.27%	5.70%	0.03%					
PEAK HR :	07:45 AM - 08:45 AM																				TOTAL
PEAK HR VOL :	0	0	0	0	25	0	15	1	4	1560	0	0	0	1433	91	0					3129
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.625	0.000	0.625	0.250	0.333	0.963	0.000	0.000	0.000	0.867	0.689	0.000					0.917
							0.732			0.963				0.854							
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	0	0	0	0	4	0	4	0	1	430	0	0	0	240	16	0					695
4:15 PM	0	0	0	0	4	0	7	0	1	415	0	2	0	268	16	0					713
4:30 PM	0	0	0	0	7	0	5	0	0	444	0	0	0	281	21	0					758
4:45 PM	0	0	0	0	6	0	4	0	3	409	0	1	0	293	17	0					733
5:00 PM	0	0	0	0	4	0	12	0	0	479	0	0	0	307	34	0					836
5:15 PM	0	0	0	0	1	0	7	0	0	479	0	1	0	346	27	0					861
5:30 PM	0	0	0	0	4	0	6	0	5	444	0	1	0	354	15	0					829
5:45 PM	0	0	0	0	5	0	7	0	1	432	0	0	0	336	7	0					788
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	0	0	0	0	35	0	52	0	11	3532	0	5	0	2425	153	0					6213
					40.23%	0.00%	59.77%	0.00%	0.31%	99.55%	0.00%	0.14%	0.00%	94.07%	5.93%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																				TOTAL
PEAK HR VOL :	0	0	0	0	14	0	32	0	6	1834	0	2	0	1343	83	0					3314
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.700	0.000	0.667	0.000	0.300	0.957	0.000	0.500	0.000	0.948	0.610	0.000					0.962
							0.719			0.959				0.956							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw PI & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-007
 Date: 5/8/2019

Cars

NS/EW Streets:	Crenshaw PI				Crenshaw PI				190th St				190th St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	0	0	0	0	3	0	2	0	0	256	0	0	0	267	11	0					539
7:15 AM	0	0	0	0	1	0	3	0	1	290	0	1	0	340	14	0					650
7:30 AM	0	0	0	0	4	0	4	0	0	296	0	0	0	338	23	0					665
7:45 AM	0	0	0	0	6	0	0	1	0	396	0	0	0	402	32	0					837
8:00 AM	0	0	0	0	3	0	5	0	1	396	0	0	0	341	15	0					761
8:15 AM	0	0	0	0	6	0	5	0	0	390	0	0	0	304	16	0					721
8:30 AM	0	0	0	0	10	0	3	0	3	343	0	0	0	326	24	0					709
8:45 AM	0	0	0	0	7	0	2	0	2	337	0	0	0	287	25	1					661
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	0	0	0	0	40	0	24	1	7	2704	0	1	0	2605	160	1					5543
					61.54%	0.00%	36.92%	1.54%	0.26%	99.71%	0.00%	0.04%	0.00%	94.18%	5.78%	0.04%					
PEAK HR :	07:45 AM - 08:45 AM																				TOTAL
PEAK HR VOL :	0	0	0	0	25	0	13	1	4	1525	0	0	0	1373	87	0					3028
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.625	0.000	0.650	0.250	0.333	0.963	0.000	0.000	0.000	0.854	0.680	0.000					0.904
							0.750			0.963				0.841							
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	0	0	0	0	2	0	4	0	1	412	0	0	0	234	16	0					669
4:15 PM	0	0	0	0	4	0	6	0	1	405	0	2	0	263	15	0					696
4:30 PM	0	0	0	0	7	0	4	0	0	434	0	0	0	275	20	0					740
4:45 PM	0	0	0	0	6	0	4	0	3	392	0	1	0	286	15	0					707
5:00 PM	0	0	0	0	4	0	12	0	0	466	0	0	0	305	34	0					821
5:15 PM	0	0	0	0	1	0	7	0	0	466	0	1	0	342	26	0					843
5:30 PM	0	0	0	0	4	0	5	0	5	430	0	1	0	352	15	0					812
5:45 PM	0	0	0	0	5	0	7	0	1	421	0	0	0	334	7	0					775
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	0	0	0	0	33	0	49	0	11	3426	0	5	0	2391	148	0					6063
					40.24%	0.00%	59.76%	0.00%	0.32%	99.54%	0.00%	0.15%	0.00%	94.17%	5.83%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																				TOTAL
PEAK HR VOL :	0	0	0	0	14	0	31	0	6	1783	0	2	0	1333	82	0					3251
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.700	0.000	0.646	0.000	0.300	0.957	0.000	0.500	0.000	0.947	0.603	0.000					0.964
							0.703			0.959				0.961							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw PI & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-007
 Date: 5/8/2019

2axle

NS/EW Streets:	Crenshaw PI				Crenshaw PI				190th St				190th St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	6	0	0	0	0	0	0	8
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	8	0	0	0	0	0	0	10
7:30 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	16
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	2	1	0	0	0	0	0	5
8:00 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	9	0	0	0	0	0	0	16
8:15 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	10	1	0	0	0	0	0	17
8:30 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	6	1	0	0	0	0	0	12
8:45 AM	0	0	0	0	1	0	0	0	0	8	0	0	0	10	1	0	0	0	0	0	20
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	0	0	0	0	1	0	1	0	0	39	0	0	0	59	4	0	0	0	0	0	104
					50.00%	0.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	93.65%	6.35%	0.00%					
PEAK HR :	07:45 AM - 08:45 AM																				TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	20	0	0	0	27	3	0	0	0	0	0	50
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.714	0.000	0.000	0.000	0.675	0.750	0.000					0.735
										0.714				0.682							
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	0	0	0	0	2	0	0	0	0	10	0	0	0	2	0	0	0	0	0	0	14
4:15 PM	0	0	0	0	0	0	1	0	0	4	0	0	0	4	1	0	0	0	0	0	10
4:30 PM	0	0	0	0	0	0	1	0	0	6	0	0	0	2	1	0	0	0	0	0	10
4:45 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	2	2	0	0	0	0	0	15
5:00 PM	0	0	0	0	0	0	0	0	0	8	0	0	0	2	0	0	0	0	0	0	10
5:15 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	2	1	0	0	0	0	0	10
5:30 PM	0	0	0	0	0	0	1	0	0	10	0	0	0	1	0	0	0	0	0	0	12
5:45 PM	0	0	0	0	0	0	0	0	0	8	0	0	0	1	0	0	0	0	0	0	9
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					TOTAL
APPROACH %'s :	0	0	0	0	2	0	3	0	0	64	0	0	0	16	5	0	0	0	0	0	90
					40.00%	0.00%	60.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	76.19%	23.81%	0.00%					
PEAK HR :	05:00 PM - 06:00 PM																				TOTAL
PEAK HR VOL :	0	0	0	0	0	0	1	0	0	33	0	0	0	6	1	0	0	0	0	0	41
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.825	0.000	0.000	0.000	0.750	0.250	0.000					0.854
							0.250			0.825				0.583							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw PI & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-007
 Date: 5/8/2019

3axle

NS/EW Streets:	Crenshaw PI				Crenshaw PI				190th St				190th St				TOTAL				
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND								
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0				5	
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0				4	
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0				4	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0				4	
8:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0				4	
8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	2	1	0				5	
8:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0				3	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL				
APPROACH %'s :	0	0	0	0	0	0	2	0	0	7	0	0	0	19	1	0	29				
PEAK HR :	07:45 AM - 08:45 AM																TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	2	0	0	3	0	0	0	7	1	0	13				
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.750	0.000	0.000	0.000	0.583	0.250	0.000	0.650				
					0.500				0.750				0.667								
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU					
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0				2	
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0				3	
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0				2	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0				1	
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0				2	
5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0				3	
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0				1	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL				
APPROACH %'s :	0	0	0	0	0	0	0	0	0	11	0	0	0	3	0	0	14				
PEAK HR :	05:00 PM - 06:00 PM																TOTAL				
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6				
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500				
									0.500												

National Data & Surveying Services

Intersection Turning Movement Count

Location: Crenshaw PI & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-007
 Date: 5/8/2019

4axle

NS/EW Streets:	Crenshaw PI				Crenshaw PI				190th St				190th St				TOTAL			
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND							
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	0				7
7:15 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	8	0	0				14
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0				7
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	9	0	0				11
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	7	0	0				8
8:15 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	0				8
8:30 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	5	0	0				11
8:45 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	0				9
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	27	0	0	0	48	0	0				75
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%				
PEAK HR :	07:45 AM - 08:45 AM									12	0	0		26	0	0				TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	12	0	0	0	26	0	0				38
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.722	0.000	0.000				0.864
										0.500				0.722						
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0				10
4:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0				4
4:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0				6
4:45 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0				10
5:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0				3
5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0				5
5:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0				4
5:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0				4
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	31	0	0	0	15	0	0				46
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%				
PEAK HR :	05:00 PM - 06:00 PM									12	0	0		4	0	0				TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	12	0	0	0	4	0	0				16
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.500	0.000	0.000				0.800
										1.000				0.500						

National Data & Surveying Services

Intersection Turning Movement Count

Location: ITT Technical Institute Dwy & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-008
 Date: 5/8/2019

Total

NS/EW Streets:	ITT Technical Institute Dwy				ITT Technical Institute Dwy				190th St				190th St				TOTAL			
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND							
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
7:00 AM	0	0	0	0	0	0	1	0	7	259	0	0	0	308	11	0				586
7:15 AM	0	0	0	0	0	0	1	0	3	294	0	0	0	367	6	0				671
7:30 AM	0	0	0	0	0	0	0	0	5	308	0	0	0	414	7	0				734
7:45 AM	0	0	0	0	0	0	1	0	4	399	0	0	0	442	12	0				858
8:00 AM	0	0	0	0	0	0	1	0	8	408	0	0	0	348	7	0				772
8:15 AM	0	0	0	0	0	0	1	0	7	395	0	0	0	341	5	0				749
8:30 AM	0	0	0	0	0	0	3	0	8	359	0	0	0	353	7	0				730
8:45 AM	0	0	0	0	0	0	1	0	17	349	0	0	0	319	3	0				689
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	0	0	0	0	0	0	9	0	59	2771	0	0	0	2892	58	0				5789
					0.00%	0.00%	100.00%	0.00%	2.08%	97.92%	0.00%	0.00%	0.00%	98.03%	1.97%	0.00%				
PEAK HR :	07:30 AM - 08:30 AM																			TOTAL
PEAK HR VOL :	0	0	0	0	0	0	3	0	24	1510	0	0	0	1545	31	0				3113
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.925	0.000	0.000	0.000	0.874	0.646	0.000				0.907
							0.750			0.922				0.868						
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
4:00 PM	0	0	0	0	1	0	14	0	0	440	0	0	0	245	0	0				700
4:15 PM	0	0	0	0	2	0	6	0	0	413	0	0	0	272	0	0				693
4:30 PM	0	0	0	0	0	0	18	0	1	469	0	0	0	287	0	0				775
4:45 PM	0	0	0	0	0	0	17	0	1	428	0	0	0	304	0	0				750
5:00 PM	0	0	0	0	3	0	11	0	0	474	0	0	0	323	0	0				811
5:15 PM	0	0	0	0	3	0	25	0	0	473	0	0	0	351	0	0				852
5:30 PM	0	0	0	0	0	0	13	0	0	448	0	0	0	343	0	0				804
5:45 PM	0	0	0	0	0	0	8	0	1	449	0	0	0	341	0	0				799
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	0	0	0	0	9	0	112	0	3	3594	0	0	0	2466	0	0				6184
					7.44%	0.00%	92.56%	0.00%	0.08%	99.92%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%				
PEAK HR :	05:00 PM - 06:00 PM																			TOTAL
PEAK HR VOL :	0	0	0	0	6	0	57	0	1	1844	0	0	0	1358	0	0				3266
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.570	0.000	0.250	0.973	0.000	0.000	0.000	0.967	0.000	0.000				0.958
							0.563			0.973				0.967						

National Data & Surveying Services

Intersection Turning Movement Count

Location: ITT Technical Institute Dwy & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-008
 Date: 5/8/2019

Cars

NS/EW Streets:	ITT Technical Institute Dwy				ITT Technical Institute Dwy				190th St				190th St				TOTAL			
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND							
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
7:00 AM	0	0	0	0	0	0	1	0	7	255	0	0	0	293	11	0				567
7:15 AM	0	0	0	0	0	0	1	0	3	285	0	0	0	348	6	0				643
7:30 AM	0	0	0	0	0	0	0	0	5	297	0	0	0	399	7	0				708
7:45 AM	0	0	0	0	0	0	1	0	4	395	0	0	0	430	12	0				842
8:00 AM	0	0	0	0	0	0	1	0	8	399	0	0	0	329	7	0				744
8:15 AM	0	0	0	0	0	0	1	0	7	384	0	0	0	319	5	0				716
8:30 AM	0	0	0	0	0	0	2	0	8	347	0	0	0	339	6	0				702
8:45 AM	0	0	0	0	0	0	1	0	17	334	0	0	0	304	3	0				659
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	0	0	0	0	0	0	8	0	59	2696	0	0	0	2761	57	0				5581
					0.00%	0.00%	100.00%	0.00%	2.14%	97.86%	0.00%	0.00%	0.00%	97.98%	2.02%	0.00%				
PEAK HR :	07:30 AM - 08:30 AM																TOTAL			
PEAK HR VOL :	0	0	0	0	0	0	3	0	24	1475	0	0	0	1477	31	0				3010
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.750	0.924	0.000	0.000	0.000	0.859	0.646	0.000				0.894
							0.750			0.921				0.853						
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
4:00 PM	0	0	0	0	1	0	14	0	0	420	0	0	0	239	0	0				674
4:15 PM	0	0	0	0	2	0	6	0	0	403	0	0	0	266	0	0				677
4:30 PM	0	0	0	0	0	0	18	0	1	459	0	0	0	280	0	0				758
4:45 PM	0	0	0	0	0	0	17	0	1	411	0	0	0	295	0	0				724
5:00 PM	0	0	0	0	3	0	11	0	0	462	0	0	0	321	0	0				797
5:15 PM	0	0	0	0	3	0	25	0	0	460	0	0	0	346	0	0				834
5:30 PM	0	0	0	0	0	0	13	0	0	434	0	0	0	341	0	0				788
5:45 PM	0	0	0	0	0	0	8	0	1	438	0	0	0	339	0	0				786
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	0	0	0	0	9	0	112	0	3	3487	0	0	0	2427	0	0				6038
					7.44%	0.00%	92.56%	0.00%	0.09%	99.91%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%				
PEAK HR :	05:00 PM - 06:00 PM																TOTAL			
PEAK HR VOL :	0	0	0	0	6	0	57	0	1	1794	0	0	0	1347	0	0				3205
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.500	0.000	0.570	0.000	0.250	0.971	0.000	0.000	0.000	0.973	0.000	0.000				0.961
							0.563			0.971				0.973						

National Data & Surveying Services

Intersection Turning Movement Count

Location: ITT Technical Institute Dwy & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-008
 Date: 5/8/2019

2axle

NS/EW Streets:	ITT Technical Institute Dwy				ITT Technical Institute Dwy				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	6	0	0	7
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	8	0	0	10
7:30 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	7	0	0	15
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	5
8:00 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	9	0	0	16
8:15 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	15	0	0	22
8:30 AM	0	0	0	0	0	0	1	0	0	4	0	0	0	6	1	0	12
8:45 AM	0	0	0	0	0	0	0	0	0	10	0	0	0	9	0	0	19
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	1	0	0	41	0	0	0	63	1	0	106
					0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	98.44%	1.56%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	24	0	0	0	34	0	0	58
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.567	0.000	0.000	0.659
										0.750				0.567			
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	2	0	0	14
4:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	0	9
4:30 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	3	0	0	9
4:45 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	4	0	0	15
5:00 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	2	0	0	9
5:15 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	3	0	0	10
5:30 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	1	0	0	11
5:45 PM	0	0	0	0	0	0	0	0	0	8	0	0	0	1	0	0	9
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	65	0	0	0	21	0	0	86
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	32	0	0	0	7	0	0	39
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.800	0.000	0.000	0.000	0.583	0.000	0.000	0.886
										0.800				0.583			

National Data & Surveying Services

Intersection Turning Movement Count

Location: ITT Technical Institute Dwy & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-008
 Date: 5/8/2019

3axle

NS/EW Streets:	ITT Technical Institute Dwy				ITT Technical Institute Dwy				190th St				190th St				TOTAL			
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND							
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	5	
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	4	
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	4	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	0	4	
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0	3	
8:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	5	
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL			
APPROACH %'s :	0	0	0	0	0	0	0	0	0	7	0	0	0	20	0	0	27			
PEAK HR :	07:30 AM - 08:30 AM																TOTAL			
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	3	0	0	0	8	0	0	11			
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.667	0.000	0.000	0.688			
										0.750				0.667						

NS/EW Streets:	ITT Technical Institute Dwy				ITT Technical Institute Dwy				190th St				190th St				TOTAL			
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND							
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	3	
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	2	
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2	
5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL			
APPROACH %'s :	0	0	0	0	0	0	0	0	0	11	0	0	0	3	0	0	14			
PEAK HR :	05:00 PM - 06:00 PM																TOTAL			
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6			
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500			
										0.500										

National Data & Surveying Services

Intersection Turning Movement Count

Location: ITT Technical Institute Dwy & 190th St
 City: Torrance
 Control: 1-Way Stop (SB)

Project ID: 19-05251-008
 Date: 5/8/2019

4axle

NS/EW Streets:	ITT Technical Institute Dwy				ITT Technical Institute Dwy				190th St				190th St				TOTAL			
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND							
AM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	0	0	7	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	8	0	0	0	14	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0	0	7	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	9	0	0	0	11	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	7	0	0	0	8	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	3	0	0	0	5	0	0	0	8	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	5	0	0	0	11	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	0	0	9	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL			
APPROACH %'s :	0	0	0	0	0	0	0	0	0	27	0	0	0	48	0	0	75			
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%				
PEAK HR :	07:30 AM - 08:30 AM																TOTAL			
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	8	0	0	0	26	0	0	34			
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.722	0.000	0.000	0.773			
									0.667				0.722							
PM	0	0	0	0	0	1	0	0	0	3	0	0	0	3	0	0	0	3	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
4:00 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	0	10	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	6	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	0	10	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	5	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	0	4	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	0	4	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL			
APPROACH %'s :	0	0	0	0	0	0	0	0	0	31	0	0	0	15	0	0	46			
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%				
PEAK HR :	05:00 PM - 06:00 PM																TOTAL			
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	12	0	0	0	4	0	0	16			
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.000	0.000	0.000	0.000	0.500	0.000	0.000	0.800			
									1.000				0.500							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Honeywell Dwy & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-009
 Date: 5/8/2019

Total

NS/EW Streets:	Honeywell Dwy				Honeywell Dwy				190th St				190th St				TOTAL			
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND							
AM	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
7:00 AM	0	0	0	0	0	0	0	0	1	241	0	0	0	326	0	0				568
7:15 AM	0	0	0	0	0	0	0	0	5	304	0	0	0	358	3	0				670
7:30 AM	0	0	0	0	0	0	1	0	3	316	0	0	0	442	2	0				764
7:45 AM	0	0	0	0	1	0	1	0	14	378	0	0	0	442	4	0				840
8:00 AM	0	0	0	0	1	0	2	0	12	383	0	0	0	348	1	0				747
8:15 AM	0	0	0	0	0	0	0	0	9	410	0	0	0	352	2	0				773
8:30 AM	0	0	0	0	0	0	2	0	9	325	0	0	0	359	3	0				698
8:45 AM	0	0	0	0	0	0	0	0	8	357	0	0	0	317	11	0				693
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	0	0	0	0	2	0	6	0	61	2714	0	0	0	2944	26	0				5753
					25.00%	0.00%	75.00%	0.00%	2.20%	97.80%	0.00%	0.00%	0.00%	99.12%	0.88%	0.00%				
PEAK HR :	07:30 AM - 08:30 AM																TOTAL			
PEAK HR VOL :	0	0	0	0	2	0	4	0	38	1487	0	0	0	1584	9	0				3124
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.679	0.907	0.000	0.000	0.000	0.896	0.563	0.000				0.930
							0.500				0.910				0.893					
PM	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
4:00 PM	0	0	0	0	4	0	2	0	1	441	0	0	0	261	5	0				714
4:15 PM	0	0	0	0	3	0	5	0	1	429	0	0	0	264	1	0				703
4:30 PM	0	0	0	0	5	0	4	0	1	451	0	0	0	292	2	0				755
4:45 PM	0	0	0	0	8	0	4	0	1	438	0	0	0	297	2	0				750
5:00 PM	0	0	0	0	7	0	4	0	0	464	0	0	0	320	0	0				795
5:15 PM	0	0	0	0	12	0	2	0	1	477	0	0	0	337	0	0				829
5:30 PM	0	0	0	0	2	0	2	0	1	446	0	0	0	355	0	0				806
5:45 PM	0	0	0	0	8	0	3	0	0	461	0	0	0	315	2	0				789
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	0	0	0	0	49	0	26	0	6	3607	0	0	0	2441	12	0				6141
					65.33%	0.00%	34.67%	0.00%	0.17%	99.83%	0.00%	0.00%	0.00%	99.51%	0.49%	0.00%				
PEAK HR :	05:00 PM - 06:00 PM																TOTAL			
PEAK HR VOL :	0	0	0	0	29	0	11	0	2	1848	0	0	0	1327	2	0				3219
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.604	0.000	0.688	0.000	0.500	0.969	0.000	0.000	0.000	0.935	0.250	0.000				0.971
							0.714				0.968				0.936					

National Data & Surveying Services

Intersection Turning Movement Count

Location: Honeywell Dwy & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-009
 Date: 5/8/2019

Cars

NS/EW Streets:	Honeywell Dwy				Honeywell Dwy				190th St				190th St				TOTAL	
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					
AM	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
7:00 AM	0	0	0	0	0	0	0	0	1	235	0	0	0	308	0	0		544
7:15 AM	0	0	0	0	0	0	0	0	5	295	0	0	0	342	3	0		645
7:30 AM	0	0	0	0	0	0	1	0	3	306	0	0	0	427	2	0		739
7:45 AM	0	0	0	0	1	0	1	0	14	375	0	0	0	429	4	0		824
8:00 AM	0	0	0	0	1	0	2	0	12	375	0	0	0	327	1	0		718
8:15 AM	0	0	0	0	0	0	0	0	9	398	0	0	0	333	2	0		742
8:30 AM	0	0	0	0	0	0	1	0	9	314	0	0	0	345	3	0		672
8:45 AM	0	0	0	0	0	0	0	0	8	341	0	0	0	302	11	0		662
TOTAL VOLUMES :	0	0	0	0	2	0	5	0	61	2639	0	0	0	2813	26	0		5546
APPROACH %'s :					28.57%	0.00%	71.43%	0.00%	2.26%	97.74%	0.00%	0.00%	0.00%	99.08%	0.92%	0.00%		
PEAK HR :	07:30 AM - 08:30 AM																	
PEAK HR VOL :	0	0	0	0	2	0	4	0	38	1454	0	0	0	1516	9	0		3023
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.500	0.000	0.500	0.000	0.679	0.913	0.000	0.000	0.000	0.883	0.563	0.000		0.917
							0.500				0.916				0.880			
PM	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0		
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU		
4:00 PM	0	0	0	0	4	0	2	0	1	420	0	0	0	255	5	0		687
4:15 PM	0	0	0	0	3	0	5	0	1	419	0	0	0	258	1	0		687
4:30 PM	0	0	0	0	5	0	4	0	1	442	0	0	0	284	2	0		738
4:45 PM	0	0	0	0	8	0	4	0	1	419	0	0	0	289	2	0		723
5:00 PM	0	0	0	0	7	0	4	0	0	454	0	0	0	319	0	0		784
5:15 PM	0	0	0	0	12	0	2	0	1	464	0	0	0	331	0	0		810
5:30 PM	0	0	0	0	2	0	2	0	1	431	0	0	0	353	0	0		789
5:45 PM	0	0	0	0	8	0	3	0	0	451	0	0	0	313	2	0		777
TOTAL VOLUMES :	0	0	0	0	49	0	26	0	6	3500	0	0	0	2402	12	0		5995
APPROACH %'s :					65.33%	0.00%	34.67%	0.00%	0.17%	99.83%	0.00%	0.00%	0.00%	99.50%	0.50%	0.00%		
PEAK HR :	05:00 PM - 06:00 PM																	
PEAK HR VOL :	0	0	0	0	29	0	11	0	2	1800	0	0	0	1316	2	0		3160
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.604	0.000	0.688	0.000	0.500	0.970	0.000	0.000	0.000	0.932	0.250	0.000		0.975
							0.714				0.969				0.933			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Honeywell Dwy & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-009
 Date: 5/8/2019

2axle

NS/EW Streets:	Honeywell Dwy				Honeywell Dwy				190th St				190th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	9	0	0	10
7:15 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	0	9
7:30 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	14
7:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
8:00 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	12	0	0	18
8:15 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	12	0	0	19
8:30 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	7	0	0	11
8:45 AM	0	0	0	0	0	0	0	0	0	11	0	0	0	9	0	0	20
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	41	0	0	0	64	0	0	105
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	21	0	0	0	34	0	0	55
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.708	0.000	0.000	0.724
										0.750				0.708			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	12	0	0	0	2	0	0	14
4:15 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	0	9
4:30 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	3	0	0	9
4:45 PM	0	0	0	0	0	0	0	0	0	13	0	0	0	4	0	0	17
5:00 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	1	0	0	6
5:15 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	4	0	0	11
5:30 PM	0	0	0	0	0	0	0	0	0	10	0	0	0	1	0	0	11
5:45 PM	0	0	0	0	0	0	0	0	0	8	0	0	0	1	0	0	9
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	65	0	0	0	21	0	0	86
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	30	0	0	0	7	0	0	37
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.438	0.000	0.000	0.841
										0.750				0.438			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Honeywell Dwy & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-009
 Date: 5/8/2019

3axle

NS/EW Streets:	Honeywell Dwy				Honeywell Dwy				190th St				190th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
8:30 AM	0	0	0	0	0	0	1	0	0	2	0	0	0	2	0	0	5
8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	1	0	0	7	0	0	0	19	0	0	27
	0.00%				0.00% 100.00% 0.00%				0.00% 100.00% 0.00% 0.00%				0.00% 100.00% 0.00% 0.00%				
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	3	0	0	0	8	0	0	11
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.667	0.000	0.000	0.688
									0.750				0.667				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	11	0	0	0	3	0	0	14
	0.00%				0.00%				0.00% 100.00% 0.00% 0.00%				0.00% 100.00% 0.00% 0.00%				
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	6
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.500
									0.500								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Honeywell Dwy & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-009
 Date: 5/8/2019

4axle

NS/EW Streets:	Honeywell Dwy				Honeywell Dwy				190th St				190th St				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0	
7:00 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	4	0	0	9
7:15 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	8	0	0	12
7:30 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	5	0	0	7
7:45 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	9	0	0	11
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	7	0	0	8
8:15 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	0	9
8:30 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	0	10
8:45 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	5	0	0	9
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	27	0	0	0	48	0	0	75
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	9	0	0	0	26	0	0	35
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.563	0.000	0.000	0.000	0.722	0.000	0.000	0.795
										0.563				0.722			
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	0	0	0	2	0	0	1	3	0	0	0	3	0	0	
4:00 PM	0	0	0	0	0	0	0	0	0	7	0	0	0	4	0	0	11
4:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
4:30 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	6
4:45 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	10
5:00 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	5
5:30 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	5
5:45 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	31	0	0	0	15	0	0	46
									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	12	0	0	0	4	0	0	16
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.500	0.000	0.000	0.800
										0.750				0.500			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Van Ness Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-010
 Date: 5/8/2019

Total

NS/EW Streets:	Van Ness Ave				Van Ness Ave				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	14	59	36	0	17	96	46	0	8	226	13	0	30	275	15	0	835
7:15 AM	10	73	30	0	13	136	63	0	19	258	11	0	20	292	16	0	941
7:30 AM	24	89	39	0	16	195	104	0	18	269	20	0	23	339	13	0	1149
7:45 AM	30	124	37	0	34	217	96	0	26	327	27	0	46	311	30	0	1305
8:00 AM	14	96	37	0	21	156	72	0	30	335	28	0	48	297	17	0	1151
8:15 AM	24	99	44	0	27	184	75	0	28	318	28	0	43	253	14	0	1137
8:30 AM	22	80	36	0	22	149	89	0	23	293	30	0	44	278	17	0	1083
8:45 AM	19	80	34	0	19	166	71	0	31	277	29	0	29	245	23	0	1023
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	157	700	293	0	169	1299	616	0	183	2303	186	0	283	2290	145	0	8624
APPROACH %'s :	13.65%	60.87%	25.48%	0.00%	8.11%	62.33%	29.56%	0.00%	6.85%	86.19%	6.96%	0.00%	10.41%	84.25%	5.33%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	92	408	157	0	98	752	347	0	102	1249	103	0	160	1200	74	0	4742
PEAK HR FACTOR :	0.767	0.823	0.892	0.000	0.721	0.866	0.834	0.000	0.850	0.932	0.920	0.000	0.833	0.885	0.617	0.000	0.908
	0.860				0.862				0.925				0.926				
PM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	25	154	47	0	23	120	52	0	58	339	26	0	15	184	19	0	1062
4:15 PM	19	146	47	0	20	106	40	0	50	364	23	0	12	198	18	0	1043
4:30 PM	24	194	58	0	25	110	55	0	59	382	30	0	13	212	20	0	1182
4:45 PM	13	141	41	0	23	110	47	0	62	364	30	0	13	236	15	0	1095
5:00 PM	48	192	57	0	26	132	47	0	60	373	31	0	20	210	31	0	1227
5:15 PM	29	207	57	0	25	133	48	0	67	401	30	0	15	263	29	0	1304
5:30 PM	32	184	59	0	20	135	71	0	65	361	29	0	27	240	26	0	1249
5:45 PM	24	198	39	0	21	150	56	0	61	369	32	0	12	237	21	0	1220
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	214	1416	405	0	183	996	416	0	482	2953	231	0	127	1780	179	0	9382
APPROACH %'s :	10.52%	69.58%	19.90%	0.00%	11.47%	62.45%	26.08%	0.00%	13.15%	80.55%	6.30%	0.00%	6.09%	85.33%	8.58%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	133	781	212	0	92	550	222	0	253	1504	122	0	74	950	107	0	5000
PEAK HR FACTOR :	0.693	0.943	0.898	0.000	0.885	0.917	0.782	0.000	0.944	0.938	0.953	0.000	0.685	0.903	0.863	0.000	0.959
	0.948				0.952				0.943				0.921				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Van Ness Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-010
 Date: 5/8/2019

Cars

NS/EW Streets:	Van Ness Ave				Van Ness Ave				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	12	59	35	0	17	95	44	0	8	223	13	0	28	258	15	0	807
7:15 AM	10	72	30	0	13	135	61	0	18	249	11	0	19	280	16	0	914
7:30 AM	24	86	36	0	16	193	103	0	17	258	20	0	20	325	13	0	1111
7:45 AM	30	120	35	0	32	213	94	0	26	324	27	0	41	299	29	0	1270
8:00 AM	14	95	34	0	21	156	71	0	30	327	28	0	41	276	15	0	1108
8:15 AM	24	99	42	0	25	184	74	0	28	306	28	0	38	237	13	0	1098
8:30 AM	22	79	33	0	22	147	85	0	23	282	30	0	42	266	16	0	1047
8:45 AM	19	78	31	0	17	162	70	0	31	261	29	0	27	233	23	0	981
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	155	688	276	0	163	1285	602	0	181	2230	186	0	256	2174	140	0	8336
APPROACH %'s :	13.85%	61.48%	24.66%	0.00%	7.95%	62.68%	29.37%	0.00%	6.97%	85.87%	7.16%	0.00%	9.96%	84.59%	5.45%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																
PEAK HR VOL :	92	400	147	0	94	746	342	0	101	1215	103	0	140	1137	70	0	TOTAL
PEAK HR FACTOR :	0.77	0.833	0.875	0.000	0.734	0.876	0.830	0.000	0.842	0.929	0.920	0.000	0.854	0.875	0.603	0.000	4587
	0.864				0.872				0.921				0.913				0.903
PM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	25	153	46	0	23	118	49	0	56	322	26	0	14	181	19	0	1032
4:15 PM	18	143	44	0	20	105	40	0	50	353	23	0	10	192	18	0	1016
4:30 PM	23	193	57	0	24	110	55	0	59	374	29	0	12	206	20	0	1162
4:45 PM	10	139	40	0	23	109	46	0	60	347	29	0	13	231	14	0	1061
5:00 PM	48	190	57	0	25	131	47	0	59	365	29	0	19	209	30	0	1209
5:15 PM	29	204	55	0	25	131	48	0	65	391	29	0	13	256	29	0	1275
5:30 PM	31	180	57	0	20	135	71	0	65	349	28	0	27	240	26	0	1229
5:45 PM	24	193	37	0	21	149	56	0	61	358	31	0	12	235	20	0	1197
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	208	1395	393	0	181	988	412	0	475	2859	224	0	120	1750	176	0	9181
APPROACH %'s :	10.42%	69.89%	19.69%	0.00%	11.45%	62.49%	26.06%	0.00%	13.35%	80.35%	6.30%	0.00%	5.87%	85.53%	8.60%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																
PEAK HR VOL :	132	767	206	0	91	546	222	0	250	1463	117	0	71	940	105	0	TOTAL
PEAK HR FACTOR :	0.69	0.940	0.904	0.000	0.910	0.916	0.782	0.000	0.962	0.935	0.944	0.000	0.657	0.918	0.875	0.000	4910
	0.936				0.950				0.943				0.936				0.963

National Data & Surveying Services

Intersection Turning Movement Count

Location: Van Ness Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-010
 Date: 5/8/2019

2axle

NS/EW Streets:	Van Ness Ave				Van Ness Ave				190th St				190th St				TOTAL			
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND							
AM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
7:00 AM	2	0	1	0	0	1	1	0	0	0	0	0	1	8	0	0				14
7:15 AM	0	1	0	0	0	1	1	0	1	2	0	0	0	3	0	0				9
7:30 AM	0	3	1	0	0	2	1	0	1	8	0	0	1	7	0	0				24
7:45 AM	0	4	1	0	2	3	2	0	0	1	0	0	0	2	1	0				16
8:00 AM	0	1	3	0	0	0	1	0	0	6	0	0	3	12	1	0				27
8:15 AM	0	0	0	0	1	0	1	0	0	7	0	0	4	8	1	0				22
8:30 AM	0	1	0	0	0	2	4	0	0	5	0	0	0	6	1	0				19
8:45 AM	0	2	0	0	2	3	1	0	0	10	0	0	1	7	0	0				26
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	2	12	6	0	5	12	12	0	2	39	0	0	10	53	4	0				157
PEAK HR :	07:30 AM - 08:30 AM																TOTAL			
PEAK HR VOL :	0	8	5	0	3	5	5	0	1	22	0	0	8	29	3	0				89
PEAK HR FACTOR :	0.000	0.500	0.417	0.000	0.375	0.417	0.625	0.000	0.250	0.688	0.000	0.000	0.500	0.604	0.750	0.000				0.824
	0.650				0.464				0.639				0.625							
PM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0				
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				
4:00 PM	0	1	0	0	0	2	3	0	1	10	0	0	0	0	0	0				17
4:15 PM	1	3	0	0	0	1	0	0	0	4	0	0	1	5	0	0				15
4:30 PM	0	1	1	0	0	0	0	0	0	5	1	0	0	2	0	0				10
4:45 PM	2	2	0	0	0	1	1	0	2	12	0	0	0	2	0	0				22
5:00 PM	0	1	0	0	0	1	0	0	1	4	1	0	1	1	1	0				11
5:15 PM	0	3	1	0	0	2	0	0	2	5	0	0	1	4	0	0				18
5:30 PM	1	4	0	0	0	0	0	0	0	10	0	0	0	0	0	0				15
5:45 PM	0	5	1	0	0	1	0	0	0	9	0	0	0	1	0	0				17
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU				TOTAL
APPROACH %'s :	4	20	3	0	0	8	4	0	6	59	2	0	3	15	1	0				125
PEAK HR :	05:00 PM - 06:00 PM																TOTAL			
PEAK HR VOL :	1	13	2	0	0	4	0	0	3	28	1	0	2	6	1	0				61
PEAK HR FACTOR :	0.25	0.650	0.500	0.000	0.000	0.500	0.000	0.000	0.375	0.700	0.250	0.000	0.500	0.375	0.250	0.000				0.847
	0.667				0.500				0.800				0.450							

National Data & Surveying Services

Intersection Turning Movement Count

Location: Van Ness Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-010
 Date: 5/8/2019

3axle

NS/EW Streets:	Van Ness Ave				Van Ness Ave				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	4	0	0	5
7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
7:45 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	4
8:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
8:45 AM	0	0	1	0	0	0	0	0	0	2	0	0	0	0	0	0	3
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	1	0	0	1	2	0	0	7	0	0	0	15	0	0	26
	0.00%	0.00%	100.00%	0.00%	0.00%	33.33%	66.67%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	1	0	0	0	3	0	0	0	9	0	0	13
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.750	0.000	0.000	0.813
						0.250				0.750				0.750			
PM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	1	0	0	0	4
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	0	0	0	0	0	9	0	0	1	2	0	0	12
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	33.33%	66.67%	0.00%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	5	0	0	1	0	0	0	6
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.417	0.000	0.000	0.250	0.000	0.000	0.000	0.375
										0.417				0.250			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Van Ness Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-010
 Date: 5/8/2019

4axle

NS/EW Streets:	Van Ness Ave				Van Ness Ave				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	0	3	0	0	1	5	0	0	9
7:15 AM	0	0	0	0	0	0	0	0	0	6	0	0	1	8	0	0	15
7:30 AM	0	0	2	0	0	0	0	0	0	2	0	0	2	4	0	0	10
7:45 AM	0	0	1	0	0	0	0	0	0	2	0	0	5	9	0	0	17
8:00 AM	0	0	0	0	0	0	0	0	0	1	0	0	4	7	1	0	13
8:15 AM	0	0	2	0	1	0	0	0	0	4	0	0	1	5	0	0	13
8:30 AM	0	0	3	0	0	0	0	0	0	5	0	0	2	5	0	0	15
8:45 AM	0	0	2	0	0	1	0	0	0	4	0	0	1	5	0	0	13
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	0	0	10	0	1	1	0	0	0	27	0	0	17	48	1	0	105
APPROACH %'s :	0.00%	0.00%	100.00%	0.00%	50.00%	50.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	25.76%	72.73%	1.52%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	0	0	5	0	1	0	0	0	0	9	0	0	12	25	1	0	53
PEAK HR FACTOR :	0.000	0.000	0.625	0.000	0.250	0.000	0.000	0.000	0.000	0.563	0.000	0.000	0.600	0.694	0.250	0.000	0.779
	0.625				0.250				0.563				0.679				
PM	2	2	1	0	1	2	1	0	1	3	1	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	1	0	0	0	0	0	1	6	0	0	1	3	0	0	12
4:15 PM	0	0	3	0	0	0	0	0	0	5	0	0	1	1	0	0	10
4:30 PM	1	0	0	0	1	0	0	0	0	2	0	0	1	2	0	0	7
4:45 PM	1	0	1	0	0	0	0	0	0	5	1	0	0	3	1	0	12
5:00 PM	0	1	0	0	1	0	0	0	0	2	1	0	0	0	0	0	5
5:15 PM	0	0	1	0	0	0	0	0	0	2	1	0	0	3	0	0	7
5:30 PM	0	0	2	0	0	0	0	0	0	2	1	0	0	0	0	0	5
5:45 PM	0	0	1	0	0	0	0	0	0	2	1	0	0	1	1	0	6
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	2	1	9	0	2	0	0	0	1	26	5	0	3	13	2	0	64
APPROACH %'s :	16.67%	8.33%	75.00%	0.00%	100.00%	0.00%	0.00%	0.00%	3.13%	81.25%	15.63%	0.00%	16.67%	72.22%	11.11%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	1	4	0	1	0	0	0	0	8	4	0	0	4	1	0	23
PEAK HR FACTOR :	0.00	0.250	0.500	0.000	0.250	0.000	0.000	0.000	0.000	1.000	1.000	0.000	0.000	0.333	0.250	0.000	0.821
	0.625				0.250				1.000				0.417				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-405 SB Ramps & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-011
 Date: 5/8/2019

Total

NS/EW Streets:	I-405 SB Ramps				I-405 SB Ramps				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	0	0	0	1.5	0	0.5	0	2	3	0	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	87	0	9	0	180	93	0	0	0	308	22	0	699
7:15 AM	0	0	0	0	94	0	21	0	170	127	0	0	0	334	36	1	783
7:30 AM	0	0	0	0	117	0	17	0	174	158	0	0	0	372	26	0	864
7:45 AM	0	0	0	0	145	0	29	0	179	211	0	0	0	385	20	0	969
8:00 AM	0	0	0	0	103	0	24	0	171	210	0	0	0	347	29	0	884
8:15 AM	0	0	0	0	115	0	23	0	175	197	0	0	0	335	31	0	876
8:30 AM	0	0	0	0	141	0	27	0	184	170	0	0	0	329	29	0	880
8:45 AM	0	0	0	0	151	0	22	0	154	181	0	0	0	293	21	0	822
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	953	0	172	0	1387	1347	0	0	0	2703	214	1	6777
					84.71%	0.00%	15.29%	0.00%	50.73%	49.27%	0.00%	0.00%	0.00%	92.63%	7.33%	0.03%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	504	0	103	0	709	788	0	0	0	1396	109	0	3609
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.869	0.000	0.888	0.000	0.963	0.934	0.000	0.000	0.000	0.906	0.879	0.000	0.931
							0.872				0.960				0.929		
PM	0	0	0	0	1.5	0	0.5	0	2	3	0	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	135	0	10	0	121	325	0	0	0	204	33	0	828
4:15 PM	0	0	0	0	111	0	5	0	86	347	0	0	0	237	23	0	809
4:30 PM	0	0	0	0	134	0	6	0	107	365	0	0	0	223	32	0	867
4:45 PM	0	0	0	0	135	0	3	0	85	361	0	0	0	277	24	0	885
5:00 PM	0	0	0	0	154	0	2	0	145	396	0	0	0	248	31	0	976
5:15 PM	0	0	0	0	140	0	0	0	132	398	0	0	0	299	24	0	993
5:30 PM	0	0	0	0	155	0	4	0	167	308	0	0	0	277	24	0	935
5:45 PM	0	0	0	0	148	0	5	0	138	312	0	0	0	283	22	0	908
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1112	0	35	0	981	2812	0	0	0	2048	213	0	7201
					96.95%	0.00%	3.05%	0.00%	25.86%	74.14%	0.00%	0.00%	0.00%	90.58%	9.42%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	597	0	11	0	582	1414	0	0	0	1107	101	0	3812
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.963	0.000	0.550	0.000	0.871	0.888	0.000	0.000	0.000	0.926	0.815	0.000	0.960
							0.956				0.922				0.935		

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-405 SB Ramps & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-011
 Date: 5/8/2019

Cars

NS/EW Streets:	I-405 SB Ramps				I-405 SB Ramps				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	0	0	0	1.5	0	0.5	0	2	3	0	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	85	0	9	0	176	92	0	0	0	286	21	0	669
7:15 AM	0	0	0	0	93	0	21	0	166	122	0	0	0	324	30	1	757
7:30 AM	0	0	0	0	115	0	17	0	170	149	0	0	0	354	24	0	829
7:45 AM	0	0	0	0	142	0	28	0	172	209	0	0	0	365	17	0	933
8:00 AM	0	0	0	0	101	0	24	0	166	202	0	0	0	321	26	0	840
8:15 AM	0	0	0	0	112	0	23	0	166	193	0	0	0	315	27	0	836
8:30 AM	0	0	0	0	136	0	27	0	177	159	0	0	0	315	23	0	837
8:45 AM	0	0	0	0	145	0	22	0	144	170	0	0	0	278	19	0	778
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	929	0	171	0	1337	1296	0	0	0	2558	187	1	6479
					84.45%	0.00%	15.55%	0.00%	50.78%	49.22%	0.00%	0.00%	0.00%	93.15%	6.81%	0.04%	
PEAK HR :	07:45 AM - 08:45 AM																
PEAK HR VOL :	0	0	0	0	491	0	102	0	681	763	0	0	0	1316	93	0	TOTAL
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.864	0.000	0.911	0.000	0.962	0.913	0.000	0.000	0.000	0.901	0.861	0.000	0.923
					0.872				0.948				0.922				
PM	0	0	0	0	1.5	0	0.5	0	2	3	0	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	128	0	10	0	117	310	0	0	0	201	32	0	798
4:15 PM	0	0	0	0	106	0	5	0	83	339	0	0	0	230	22	0	785
4:30 PM	0	0	0	0	129	0	6	0	104	356	0	0	0	216	31	0	842
4:45 PM	0	0	0	0	125	0	3	0	82	350	0	0	0	271	23	0	854
5:00 PM	0	0	0	0	150	0	2	0	143	383	0	0	0	242	30	0	950
5:15 PM	0	0	0	0	135	0	0	0	129	388	0	0	0	291	24	0	967
5:30 PM	0	0	0	0	146	0	4	0	165	297	0	0	0	277	23	0	912
5:45 PM	0	0	0	0	141	0	5	0	135	300	0	0	0	280	20	0	881
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	1060	0	35	0	958	2723	0	0	0	2008	205	0	6989
					96.80%	0.00%	3.20%	0.00%	26.03%	73.97%	0.00%	0.00%	0.00%	90.74%	9.26%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																
PEAK HR VOL :	0	0	0	0	572	0	11	0	572	1368	0	0	0	1090	97	0	TOTAL
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.953	0.000	0.550	0.000	0.867	0.881	0.000	0.000	0.000	0.936	0.808	0.000	0.959
					0.959				0.922				0.942				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-405 SB Ramps & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-011
 Date: 5/8/2019

2axle

NS/EW Streets:	I-405 SB Ramps				I-405 SB Ramps				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	0	0	0	1.5	0	0.5	0	2	3	0	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	2	0	0	0	0	1	0	0	0	10	0	0	13
7:15 AM	0	0	0	0	0	0	0	0	0	2	0	0	0	5	5	0	12
7:30 AM	0	0	0	0	1	0	0	0	2	8	0	0	0	6	0	0	17
7:45 AM	0	0	0	0	2	0	0	0	2	2	0	0	0	6	1	0	13
8:00 AM	0	0	0	0	1	0	0	0	3	7	0	0	0	15	2	0	28
8:15 AM	0	0	0	0	1	0	0	0	3	2	0	0	0	12	2	0	20
8:30 AM	0	0	0	0	3	0	0	0	2	4	0	0	0	6	3	0	18
8:45 AM	0	0	0	0	4	0	0	0	3	9	0	0	0	7	1	0	24
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	14	0	0	0	15	35	0	0	0	67	14	0	145
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	7	0	0	0	10	15	0	0	0	39	8	0	79
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.583	0.000	0.000	0.000	0.833	0.536	0.000	0.000	0.000	0.650	0.667	0.000	0.705
					0.583				0.625				0.691				

NS/EW Streets:	I-405 SB Ramps				I-405 SB Ramps				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	0	0	0	0	1.5	0	0.5	0	2	3	0	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	4	0	0	0	0	8	0	0	0	1	1	0	14
4:15 PM	0	0	0	0	3	0	0	0	1	4	0	0	0	4	1	0	13
4:30 PM	0	0	0	0	5	0	0	0	0	7	0	0	0	2	0	0	14
4:45 PM	0	0	0	0	7	0	0	0	0	8	0	0	0	2	0	0	17
5:00 PM	0	0	0	0	2	0	0	0	2	8	0	0	0	4	0	0	16
5:15 PM	0	0	0	0	4	0	0	0	1	5	0	0	0	4	0	0	14
5:30 PM	0	0	0	0	6	0	0	0	2	7	0	0	0	0	1	0	16
5:45 PM	0	0	0	0	4	0	0	0	1	9	0	0	0	1	1	0	16
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	35	0	0	0	7	56	0	0	0	18	4	0	120
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	16	0	0	0	6	29	0	0	0	9	2	0	62
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.667	0.000	0.000	0.000	0.750	0.806	0.000	0.000	0.000	0.563	0.500	0.000	0.969
					0.667				0.875				0.688				

National Data & Surveying Services

Intersection Turning Movement Count

Location: I-405 SB Ramps & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-011
 Date: 5/8/2019

4axle

NS/EW Streets:	I-405 SB Ramps				I-405 SB Ramps				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	0	0	0	0	1.5	0	0.5	0	2	3	0	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	0	0	0	0	0	0	0	4	0	0	0	0	8	1	0	13
7:15 AM	0	0	0	0	1	0	0	0	3	3	0	0	0	4	1	0	12
7:30 AM	0	0	0	0	1	0	0	0	2	1	0	0	0	9	2	0	15
7:45 AM	0	0	0	0	0	0	1	0	4	0	0	0	0	12	2	0	19
8:00 AM	0	0	0	0	1	0	0	0	1	1	0	0	0	10	1	0	14
8:15 AM	0	0	0	0	1	0	0	0	6	1	0	0	0	5	2	0	15
8:30 AM	0	0	0	0	2	0	0	0	5	5	0	0	0	7	2	0	21
8:45 AM	0	0	0	0	1	0	0	0	6	0	0	0	0	8	0	0	15
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	7	0	1	0	31	11	0	0	0	63	11	0	124
					87.50%	0.00%	12.50%	0.00%	73.81%	26.19%	0.00%	0.00%	0.00%	85.14%	14.86%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	4	0	1	0	16	7	0	0	0	34	7	0	69
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.500	0.000	0.250	0.000	0.667	0.350	0.000	0.000	0.000	0.708	0.875	0.000	0.821
							0.625				0.575				0.732		
PM	0	0	0	0	1.5	0	0.5	0	2	3	0	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	3	0	0	0	3	7	0	0	0	2	0	0	15
4:15 PM	0	0	0	0	2	0	0	0	2	3	0	0	0	1	0	0	8
4:30 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	5	0	0	9
4:45 PM	0	0	0	0	3	0	0	0	3	3	0	0	0	4	1	0	14
5:00 PM	0	0	0	0	1	0	0	0	0	3	0	0	0	2	1	0	7
5:15 PM	0	0	0	0	1	0	0	0	2	2	0	0	0	3	0	0	8
5:30 PM	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	4
5:45 PM	0	0	0	0	3	0	0	0	2	3	0	0	0	2	1	0	11
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	0	0	0	0	14	0	0	0	14	26	0	0	0	19	3	0	76
					100.00%	0.00%	0.00%	0.00%	35.00%	65.00%	0.00%	0.00%	0.00%	86.36%	13.64%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	6	0	0	0	4	11	0	0	0	7	2	0	30
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.500	0.917	0.000	0.000	0.000	0.583	0.500	0.000	0.682
							0.500				0.750				0.750		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-012
 Date: 5/8/2019

Total

NS/EW Streets:	Western Ave				Western Ave				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	26	246	27	0	19	281	143	0	11	92	75	0	65	191	17	0	1193
7:15 AM	35	251	37	0	27	291	106	0	45	118	78	0	67	235	26	0	1316
7:30 AM	32	301	36	0	31	320	133	0	25	141	104	0	77	253	30	0	1483
7:45 AM	26	300	39	0	37	373	108	0	53	209	119	0	112	259	29	0	1664
8:00 AM	31	260	39	0	52	368	115	0	40	168	83	0	79	211	23	0	1469
8:15 AM	29	223	49	0	39	367	125	0	42	189	109	0	79	202	37	0	1490
8:30 AM	31	212	34	0	43	313	122	0	34	132	126	0	61	196	25	0	1329
8:45 AM	25	208	39	0	33	268	125	0	40	170	134	0	58	168	31	0	1299
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	235	2001	300	0	281	2581	977	0	290	1219	828	0	598	1715	218	0	11243
APPROACH %'s :	9.27%	78.90%	11.83%	0.00%	7.32%	67.23%	25.45%	0.00%	12.41%	52.16%	35.43%	0.00%	23.63%	67.76%	8.61%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	118	1084	163	0	159	1428	481	0	160	707	415	0	347	925	119	0	6106
PEAK HR FACTOR :	0.922	0.900	0.832	0.000	0.764	0.957	0.904	0.000	0.755	0.846	0.872	0.000	0.775	0.893	0.804	0.000	0.917
	0.925				0.966				0.841				0.869				
PM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	37	303	62	0	33	251	71	1	48	280	106	0	30	141	57	0	1420
4:15 PM	13	252	62	0	20	225	72	0	71	315	111	0	25	156	61	0	1383
4:30 PM	34	310	59	0	27	279	85	0	72	297	79	0	40	128	82	0	1492
4:45 PM	28	287	45	0	30	266	81	0	82	330	99	0	53	164	69	0	1534
5:00 PM	30	333	54	0	34	264	95	0	117	288	134	0	47	186	88	0	1670
5:15 PM	26	320	50	0	18	282	77	2	118	328	129	0	72	198	79	0	1699
5:30 PM	28	349	45	0	36	273	106	0	62	277	97	0	58	181	69	0	1581
5:45 PM	24	276	50	0	42	281	99	1	79	296	124	0	52	167	51	0	1542
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	220	2430	427	0	240	2121	686	4	649	2411	879	0	377	1321	556	0	12321
APPROACH %'s :	7.15%	78.97%	13.88%	0.00%	7.87%	69.52%	22.48%	0.13%	16.48%	61.21%	22.32%	0.00%	16.73%	58.61%	24.67%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	108	1278	199	0	130	1100	377	3	376	1189	484	0	229	732	287	0	6492
PEAK HR FACTOR :	0.900	0.915	0.921	0.000	0.774	0.975	0.889	0.375	0.797	0.906	0.903	0.000	0.795	0.924	0.815	0.000	0.955
	0.939				0.952				0.891				0.894				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-012
 Date: 5/8/2019

Cars

NS/EW Streets:	Western Ave				Western Ave				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	22	237	26	0	18	274	132	0	10	92	73	0	64	181	17	0	1146
7:15 AM	32	245	33	0	26	282	99	0	44	114	76	0	65	229	24	0	1269
7:30 AM	29	290	34	0	30	311	122	0	25	135	100	0	75	249	28	0	1428
7:45 AM	23	289	38	0	36	368	96	0	51	207	118	0	109	250	28	0	1613
8:00 AM	25	244	39	0	52	361	106	0	39	161	80	0	77	198	23	0	1405
8:15 AM	26	214	45	0	38	360	118	0	41	185	108	0	77	188	32	0	1432
8:30 AM	26	201	33	0	42	300	112	0	31	125	120	0	59	191	24	0	1264
8:45 AM	22	196	34	0	33	259	120	0	40	161	126	0	56	159	30	0	1236
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	205	1916	282	0	275	2515	905	0	281	1180	801	0	582	1645	206	0	10793
APPROACH %'s :	8.53%	79.73%	11.74%	0.00%	7.44%	68.06%	24.49%	0.00%	12.42%	52.17%	35.41%	0.00%	23.92%	67.61%	8.47%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	103	1037	156	0	156	1400	442	0	156	688	406	0	338	885	111	0	5878
PEAK HR FACTOR :	0.89	0.894	0.867	0.000	0.750	0.951	0.906	0.000	0.765	0.831	0.860	0.000	0.775	0.885	0.867	0.000	0.911
	0.918				0.962				0.831				0.862				
PM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	36	297	59	0	33	246	68	1	46	268	101	0	30	138	53	0	1376
4:15 PM	13	244	58	0	19	216	70	0	69	303	109	0	24	152	56	0	1333
4:30 PM	32	303	55	0	25	274	79	0	70	288	79	0	40	128	81	0	1454
4:45 PM	26	283	39	0	29	261	78	0	78	313	96	0	53	162	65	0	1483
5:00 PM	28	323	52	0	32	257	94	0	115	282	125	0	45	181	87	0	1621
5:15 PM	26	307	45	0	17	278	73	2	116	318	125	0	72	196	76	0	1651
5:30 PM	27	344	43	0	36	268	104	0	57	269	91	0	57	181	65	0	1542
5:45 PM	24	271	48	0	41	276	97	1	74	284	122	0	52	166	48	0	1504
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	212	2372	399	0	232	2076	663	4	625	2325	848	0	373	1304	531	0	11964
APPROACH %'s :	7.11%	79.52%	13.38%	0.00%	7.80%	69.78%	22.29%	0.13%	16.46%	61.22%	22.33%	0.00%	16.89%	59.06%	24.05%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	105	1245	188	0	126	1079	368	3	362	1153	463	0	226	724	276	0	6318
PEAK HR FACTOR :	0.94	0.905	0.904	0.000	0.768	0.970	0.885	0.375	0.780	0.906	0.926	0.000	0.785	0.923	0.793	0.000	0.957
	0.929				0.949				0.885				0.891				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-012
 Date: 5/8/2019

2axle

NS/EW Streets:	Western Ave				Western Ave				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	1	6	1	0	0	6	5	0	1	0	2	0	0	6	0	0	28
7:15 AM	2	3	3	0	0	7	3	0	0	3	0	0	1	4	2	0	28
7:30 AM	0	9	2	0	0	4	3	0	0	5	3	0	1	2	1	0	30
7:45 AM	1	10	1	0	1	3	3	0	2	1	1	0	3	4	0	0	30
8:00 AM	4	15	0	0	0	3	0	0	1	6	1	0	1	12	0	0	43
8:15 AM	1	7	3	0	0	4	3	0	0	3	0	0	1	10	3	0	35
8:30 AM	2	8	0	0	0	8	3	0	0	2	5	0	0	4	1	0	33
8:45 AM	2	11	4	0	0	5	0	0	0	7	6	0	1	6	1	0	43
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	13	69	14	0	1	40	20	0	4	27	18	0	8	48	8	0	270
APPROACH %'s :	13.54%	71.88%	14.58%	0.00%	1.64%	65.57%	32.79%	0.00%	8.16%	55.10%	36.73%	0.00%	12.50%	75.00%	12.50%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	6	41	6	0	1	14	9	0	3	15	5	0	6	28	4	0	138
PEAK HR FACTOR :	0.375	0.683	0.500	0.000	0.250	0.875	0.750	0.000	0.375	0.625	0.417	0.000	0.500	0.583	0.333	0.000	0.802
	0.697				0.857				0.719				0.679				
PM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	1	6	2	0	0	4	2	0	1	10	1	0	0	2	3	0	32
4:15 PM	0	5	2	0	1	7	0	0	2	4	1	0	1	3	3	0	29
4:30 PM	0	4	2	0	1	1	2	0	2	7	0	0	0	0	1	0	20
4:45 PM	1	3	2	0	0	5	0	0	3	15	0	0	0	1	4	0	34
5:00 PM	2	7	1	0	1	6	1	0	2	2	6	0	2	2	0	0	32
5:15 PM	0	12	3	0	1	3	2	0	2	6	1	0	0	1	0	0	31
5:30 PM	1	3	1	0	0	1	0	0	4	5	4	0	0	0	1	0	20
5:45 PM	0	3	1	0	0	2	0	0	5	6	2	0	0	1	3	0	23
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	5	43	14	0	4	29	7	0	21	55	15	0	3	10	15	0	221
APPROACH %'s :	8.06%	69.35%	22.58%	0.00%	10.00%	72.50%	17.50%	0.00%	23.08%	60.44%	16.48%	0.00%	10.71%	35.71%	53.57%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	3	25	6	0	2	12	3	0	13	19	13	0	2	4	4	0	106
PEAK HR FACTOR :	0.38	0.521	0.500	0.000	0.500	0.500	0.375	0.000	0.650	0.792	0.542	0.000	0.250	0.500	0.333	0.000	0.828
	0.567				0.531				0.865				0.625				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-012
 Date: 5/8/2019

3axle

NS/EW Streets:	Western Ave				Western Ave				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	3	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	5
7:15 AM	0	0	0	0	1	1	1	0	0	0	0	0	0	1	0	0	4
7:30 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	1	1	0	4
7:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	1	1	0	4
8:00 AM	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	2
8:15 AM	0	1	0	0	1	0	1	0	1	0	0	0	1	2	2	0	9
8:30 AM	1	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	4
8:45 AM	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	0	4
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	5	3	0	0	2	1	6	0	1	5	2	0	1	6	4	0	36
	62.50%	37.50%	0.00%	0.00%	22.22%	11.11%	66.67%	0.00%	12.50%	62.50%	25.00%	0.00%	9.09%	54.55%	36.36%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	1	2	0	0	1	0	3	0	1	1	1	0	1	4	4	0	19
PEAK HR FACTOR :	0.250	0.500	0.000	0.000	0.250	0.000	0.750	0.000	0.250	0.250	0.250	0.000	0.250	0.500	0.500	0.000	0.528
	0.375				0.500				0.750				0.450				
PM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	3	0	0	0	1	2	0	0	1	0	0	0	0	0	0	7
4:30 PM	1	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	4
4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3
5:15 PM	0	1	0	0	0	0	1	0	0	2	2	0	0	0	0	0	6
5:30 PM	0	0	1	0	0	2	0	0	0	2	0	0	0	0	0	0	5
5:45 PM	0	1	0	0	1	2	0	0	0	0	0	0	0	0	0	0	4
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
APPROACH %'s :	1	6	2	0	1	7	3	0	0	6	4	0	0	0	0	0	30
	11.11%	66.67%	22.22%	0.00%	9.09%	63.64%	27.27%	0.00%	0.00%	60.00%	40.00%	0.00%	0	0	0	0	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	2	1	0	1	4	1	0	0	5	4	0	0	0	0	0	18
PEAK HR FACTOR :	0.00	0.500	0.250	0.000	0.250	0.500	0.250	0.000	0.000	0.625	0.500	0.000	0.000	0.000	0.000	0.000	0.750
	0.750				0.500				0.563								

National Data & Surveying Services

Intersection Turning Movement Count

Location: Western Ave & 190th St
 City: Torrance
 Control: Signalized

Project ID: 19-05251-012
 Date: 5/8/2019

4axle

NS/EW Streets:	Western Ave				Western Ave				190th St				190th St				TOTAL
	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
AM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
7:00 AM	0	2	0	0	1	1	5	0	0	0	0	0	1	4	0	0	14
7:15 AM	1	3	1	0	0	1	3	0	1	1	2	0	1	1	0	0	15
7:30 AM	2	1	0	0	1	5	8	0	0	1	1	0	1	1	0	0	21
7:45 AM	2	1	0	0	0	2	8	0	0	0	0	0	0	4	0	0	17
8:00 AM	2	1	0	0	0	4	8	0	0	1	1	0	1	1	0	0	19
8:15 AM	2	1	1	0	0	3	3	0	0	1	1	0	0	2	0	0	14
8:30 AM	2	3	1	0	1	5	6	0	3	3	1	0	2	1	0	0	28
8:45 AM	1	1	1	0	0	4	5	0	0	0	1	0	1	2	0	0	16
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	12	13	4	0	3	25	46	0	4	7	7	0	7	16	0	0	144
APPROACH %'s :	41.38%	44.83%	13.79%	0.00%	4.05%	33.78%	62.16%	0.00%	22.22%	38.89%	38.89%	0.00%	30.43%	69.57%	0.00%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	8	4	1	0	1	14	27	0	0	3	3	0	2	8	0	0	71
PEAK HR FACTOR :	1.000	1.000	0.250	0.000	0.250	0.700	0.844	0.000	0.000	0.750	0.750	0.000	0.500	0.500	0.000	0.000	0.845
	0.813				0.750				0.750				0.625				
PM	2	3	1	0	2	3	1	0	2	3	1	0	2	3	0	0	TOTAL
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	
4:00 PM	0	0	1	0	0	1	1	0	1	2	4	0	0	1	1	0	12
4:15 PM	0	0	2	0	0	1	0	0	0	7	1	0	0	1	2	0	14
4:30 PM	1	3	1	0	1	2	4	0	0	2	0	0	0	0	0	0	14
4:45 PM	1	0	4	0	1	0	3	0	1	2	3	0	0	1	0	0	16
5:00 PM	0	3	1	0	1	1	0	0	0	3	1	0	0	3	1	0	14
5:15 PM	0	0	2	0	0	1	1	0	0	2	1	0	0	1	3	0	11
5:30 PM	0	2	0	0	0	2	2	0	1	1	2	0	1	0	3	0	14
5:45 PM	0	1	1	0	0	1	2	0	0	6	0	0	0	0	0	0	11
TOTAL VOLUMES :	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
	2	9	12	0	3	9	13	0	3	25	12	0	1	7	10	0	106
APPROACH %'s :	8.70%	39.13%	52.17%	0.00%	12.00%	36.00%	52.00%	0.00%	7.50%	62.50%	30.00%	0.00%	5.56%	38.89%	55.56%	0.00%	
PEAK HR :	05:00 PM - 06:00 PM																TOTAL
PEAK HR VOL :	0	6	4	0	1	5	5	0	1	12	4	0	1	4	7	0	50
PEAK HR FACTOR :	0.00	0.500	0.500	0.000	0.250	0.625	0.625	0.000	0.250	0.500	0.500	0.000	0.250	0.333	0.583	0.000	0.893
	0.625				0.688				0.708				0.750				

APPENDIX C

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX C-1

EXISTING TRAFFIC CONDITIONS

Intersection Level Of Service Report
Intersection 1: Crenshaw Boulevard at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.891

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Base Volume Input [veh/h]	65	989	513	12	1237	279	182	314	113	495	614	191
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	65	989	513	12	1237	279	182	314	113	495	614	191
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	16	247	128	3	309	70	46	79	28	124	154	48
Total Analysis Volume [veh/h]	65	989	513	12	1237	279	182	314	113	495	614	191
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	6	6	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			4,6									
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.31	0.15	0.01	0.32	0.32	0.11	0.13	0.13	0.17	0.30	0.30
Intersection LOS	D											
Intersection V/C	0.891											

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.701

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	611	16	442	411	187	705
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	611	16	442	411	187	705
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	153	4	111	103	47	176
Total Analysis Volume [veh/h]	611	16	442	411	187	705
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.22	0.27	0.27	0.12	0.22
Intersection LOS	C					
Intersection V/C	0.701					

Intersection Level Of Service Report
Intersection 3: Crenshaw Blvd at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.043

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	602	1428	1436	429	73	887
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	602	1428	1436	429	73	887
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	151	357	359	107	18	222
Total Analysis Volume [veh/h]	602	1428	1436	429	73	887
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.38	0.30	0.39	0.39	0.05	0.18
Intersection LOS	F					
Intersection V/C	1.043					

Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.870

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1047	373	33	1216	1032	185
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1047	373	33	1216	1032	185
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	262	93	8	304	258	46
Total Analysis Volume [veh/h]	1047	373	33	1216	1032	185
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.33	0.00	0.02	0.25	0.36	0.42
Intersection LOS	D					
Intersection V/C	0.870					

Intersection Level Of Service Report
Intersection 5: Crenshaw Boulevard at Crenshaw Place

Control Type:	Two-way stop	Delay (sec / veh):	255.3
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.131

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Base Volume Input [veh/h]	2004	9	51	2234	2	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2004	9	51	2234	2	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	501	2	13	559	1	1
Total Analysis Volume [veh/h]	2004	9	51	2234	2	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.41	0.02	0.13	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	53.49	0.00	255.29	36.73
Movement LOS	A	A	F	A	F	E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.77	0.00	0.50	0.50
95th-Percentile Queue Length [ft/ln]	0.00	0.00	44.30	0.00	12.50	12.50
d_A, Approach Delay [s/veh]	0.00		1.19		99.17	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	0.79					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: Crenshaw Boulevard at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.042

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵ ↵ ↵			↵ ↵ ↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Base Volume Input [veh/h]	122	1602	278	118	1768	377	389	1184	69	283	1158	104
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	122	1602	278	118	1768	377	389	1184	69	283	1158	104
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	401	70	30	442	94	97	296	17	71	290	26
Total Analysis Volume [veh/h]	122	1602	278	118	1768	377	389	1184	69	283	1158	104
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.33	0.08	0.07	0.37	0.10	0.14	0.26	0.26	0.10	0.36	0.07
Intersection LOS	F											
Intersection V/C	1.042											

**Intersection Level Of Service Report
Intersection 7: Crenshaw Place at 190th Street**

Control Type:	Two-way stop	Delay (sec / veh):	84.0
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.380

Intersection Setup

Name	Crenshaw Pl		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Crenshaw Pl		190th St		190th St	
Base Volume Input [veh/h]	26	17	4	1622	1530	95
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	17	4	1622	1530	95
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	4	1	406	383	24
Total Analysis Volume [veh/h]	26	17	4	1622	1530	95
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.38	0.06	0.02	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	83.99	44.44	24.04	0.00	0.00	0.00
Movement LOS	F	E	C	A	A	A
95th-Percentile Queue Length [veh/ln]	1.86	1.86	0.06	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	46.52	46.52	1.58	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	68.35		0.06		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.92					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Project Driveway 1 at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.503

Intersection Setup

Name	Project Dwy		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Project Dwy		190th St		190th St	
Base Volume Input [veh/h]	2	7	62	1543	1687	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	7	62	1543	1687	40
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	16	386	422	10
Total Analysis Volume [veh/h]	2	7	62	1543	1687	40
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.04	0.32	0.36	0.36
Intersection LOS	A					
Intersection V/C	0.503					

Intersection Level Of Service Report
Intersection 9: Van Ness Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.615

Intersection Setup

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	1565	0	0	1648	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	0	1565	0	0	1648	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	391	0	0	412	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	1565	0	0	1648	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.52	0.00
Intersection LOS	B											
Intersection V/C	0.615											

Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.899

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	526	107	760	826	1514	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	526	107	760	826	1514	130
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	132	27	190	207	379	33
Total Analysis Volume [veh/h]	526	107	760	826	1514	130
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.18	0.22	0.26	0.17	0.32	0.08
Intersection LOS	D					
Intersection V/C	0.899					

Intersection Level Of Service Report
Intersection 11: Western Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.805

Intersection Setup

Name	Western Ave			Western Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Western Ave			Western Ave			190th St			190th St		
Base Volume Input [veh/h]	140	1133	171	166	1486	552	166	733	432	361	974	127
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	140	1133	171	166	1486	552	166	733	432	361	974	127
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	283	43	42	372	138	42	183	108	90	244	32
Total Analysis Volume [veh/h]	140	1133	171	166	1486	552	166	733	432	361	974	127
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	8	7	4	0
Auxiliary Signal Groups			6,7			2,3			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.24	0.00	0.06	0.31	0.29	0.06	0.15	0.22	0.13	0.23	0.23
Intersection LOS	D											
Intersection V/C	0.805											

Intersection Level Of Service Report
Intersection 12: Crenshaw Place at Project Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Base Volume Input [veh/h]	99	0	0	43	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	0	0	43	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	0	0	11	0	0
Total Analysis Volume [veh/h]	99	0	0	43	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.41	0.00	9.23	8.76
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Crenshaw Place at Project Driveway 5

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Base Volume Input [veh/h]	99	0	0	43	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	99	0	0	43	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	0	0	11	0	0
Total Analysis Volume [veh/h]	99	0	0	43	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.41	0.00	9.23	8.76
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Project Driveway 3 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	Project Dwy 3		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Dwy 3		190th St		190th St	
Base Volume Input [veh/h]	0	0	0	1565	1648	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1565	1648	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	391	412	0
Total Analysis Volume [veh/h]	0	0	0	1565	1648	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	59.13	18.26	24.14	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	38.70		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 15: Project Driveway 2 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.016

Intersection Setup

Name	Project Dwy 1		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 1		190th St		190th St	
Base Volume Input [veh/h]	0	0	0	1565	1648	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1565	1648	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	391	412	0
Total Analysis Volume [veh/h]	0	0	0	1565	1648	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	44.79	18.26	24.14	0.00	0.00	0.00
Movement LOS	E	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	31.53		0.00		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Crenshaw Boulevard at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.064

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Base Volume Input [veh/h]	82	1169	1031	75	1004	178	117	426	41	496	544	250
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	82	1169	1031	75	1004	178	117	426	41	496	544	250
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	292	258	19	251	45	29	107	10	124	136	63
Total Analysis Volume [veh/h]	82	1169	1031	75	1004	178	117	426	41	496	544	250
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	6	6	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			4,6									
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.37	0.47	0.05	0.25	0.25	0.07	0.15	0.15	0.17	0.30	0.30
Intersection LOS	F											
Intersection V/C	1.064											

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.950

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	779	59	866	662	131	520
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	779	59	866	662	131	520
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	195	15	217	166	33	130
Total Analysis Volume [veh/h]	779	59	866	662	131	520
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.29	0.48	0.48	0.08	0.16
Intersection LOS	E					
Intersection V/C	0.950					

Intersection Level Of Service Report
Intersection 3: Crenshaw Blvd at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.014

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	120	2022	1440	124	206	908
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	2022	1440	124	206	908
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	506	360	31	52	227
Total Analysis Volume [veh/h]	120	2022	1440	124	206	908
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.42	0.33	0.33	0.13	0.49
Intersection LOS	F					
Intersection V/C	1.014					

Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.885

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1508	579	53	1017	599	208
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1508	579	53	1017	599	208
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	377	145	13	254	150	52
Total Analysis Volume [veh/h]	1508	579	53	1017	599	208
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.47	0.15	0.03	0.21	0.21	0.28
Intersection LOS	D					
Intersection V/C	0.885					

Intersection Level Of Service Report
Intersection 5: Crenshaw Boulevard at Crenshaw Place

Control Type:	Two-way stop	Delay (sec / veh):	41.4
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.234

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Base Volume Input [veh/h]	1971	7	30	2258	0	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1971	7	30	2258	0	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	493	2	8	565	0	2
Total Analysis Volume [veh/h]	1971	7	30	2258	0	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.23	0.02	0.00	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	41.42	0.00	170.97	22.56
Movement LOS	A	A	E	A	F	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.86	0.00	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	21.40	0.00	2.19	2.19
d_A, Approach Delay [s/veh]	0.00		0.54		22.56	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.32					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 6: Crenshaw Boulevard at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.957

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Base Volume Input [veh/h]	128	1658	283	140	1711	362	229	1481	80	198	1091	106
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	128	1658	283	140	1711	362	229	1481	80	198	1091	106
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	415	71	35	428	91	57	370	20	50	273	27
Total Analysis Volume [veh/h]	128	1658	283	140	1711	362	229	1481	80	198	1091	106
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.35	0.11	0.09	0.36	0.15	0.08	0.33	0.33	0.07	0.34	0.07
Intersection LOS	E											
Intersection V/C	0.957											

Intersection Level Of Service Report
Intersection 7: Crenshaw Place at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	21.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.034

Intersection Setup

Name	Crenshaw Pl		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Crenshaw Pl		190th St		190th St	
Base Volume Input [veh/h]	0	48	8	1911	1375	85
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	48	8	1911	1375	85
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	12	2	478	344	21
Total Analysis Volume [veh/h]	0	48	8	1911	1375	85
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.15	0.03	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	58.01	18.58	20.98	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.53	0.53	0.11	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.37	13.37	2.65	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.58		0.09		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.31					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Project Driveway 1 at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.543

Intersection Setup

Name	Project Dwy		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Project Dwy		190th St		190th St	
Base Volume Input [veh/h]	35	68	4	1923	1360	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	68	4	1923	1360	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	17	1	481	340	1
Total Analysis Volume [veh/h]	35	68	4	1923	1360	3
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.04	0.00	0.40	0.28	0.28
Intersection LOS	A					
Intersection V/C	0.543					

Intersection Level Of Service Report
Intersection 9: Van Ness Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.535

Intersection Setup

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	1920	0	0	1392	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	0	1920	0	0	1392	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	480	0	0	348	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	1920	0	0	1392	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.44	0.00
Intersection LOS	A											
Intersection V/C	0.535											

Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.770

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	630	11	602	1480	1145	108
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	630	11	602	1480	1145	108
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	158	3	151	370	286	27
Total Analysis Volume [veh/h]	630	11	602	1480	1145	108
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.22	0.21	0.31	0.24	0.07
Intersection LOS	C					
Intersection V/C	0.770					

Intersection Level Of Service Report
Intersection 11: Western Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.786

Intersection Setup

Name	Western Ave			Western Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Western Ave			Western Ave			190th St			190th St		
Base Volume Input [veh/h]	112	1326	214	136	1138	399	391	1247	511	236	754	308
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	112	1326	214	136	1138	399	391	1247	511	236	754	308
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	332	54	34	285	100	98	312	128	59	189	77
Total Analysis Volume [veh/h]	112	1326	214	136	1138	399	391	1247	511	236	754	308
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	8	7	4	0
Auxiliary Signal Groups			6,7			2,3			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.28	0.05	0.05	0.24	0.11	0.14	0.26	0.28	0.08	0.22	0.22
Intersection LOS	C											
Intersection V/C	0.786											

Intersection Level Of Service Report
Intersection 12: Crenshaw Place at Project Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↬		↵		↶	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Base Volume Input [veh/h]	93	0	0	48	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	0	0	48	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	0	0	12	0	0
Total Analysis Volume [veh/h]	93	0	0	48	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.40	0.00	9.23	8.73
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.98	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Crenshaw Place at Project Driveway 5

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Base Volume Input [veh/h]	93	0	0	48	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	93	0	0	48	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	23	0	0	12	0	0
Total Analysis Volume [veh/h]	93	0	0	48	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.40	0.00	9.23	8.73
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.98	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Project Driveway 3 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name	Project Dwy 3		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Dwy 3		190th St		190th St	
Base Volume Input [veh/h]	0	0	0	1920	1392	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1920	1392	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	480	348	0
Total Analysis Volume [veh/h]	0	0	0	1920	1392	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	51.91	15.93	19.29	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	33.92		0.00		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 15: Project Driveway 2 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name	Project Dwy 1		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 1		190th St		190th St	
Base Volume Input [veh/h]	0	0	0	1920	1392	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1920	1392	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	480	348	0
Total Analysis Volume [veh/h]	0	0	0	1920	1392	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	32.82	15.93	19.29	0.00	0.00	0.00
Movement LOS	D	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.37		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

APPENDIX C-II

**EXISTING WITH AMBIENT GROWTH (YEAR 2024)
TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: Crenshaw Boulevard at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.899

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Base Volume Input [veh/h]	66	999	518	12	1250	282	184	317	114	500	620	193
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	999	518	12	1250	282	184	317	114	500	620	193
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	250	130	3	313	71	46	79	29	125	155	48
Total Analysis Volume [veh/h]	66	999	518	12	1250	282	184	317	114	500	620	193
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	6	6	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			4,6									
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.31	0.15	0.01	0.32	0.32	0.12	0.13	0.13	0.17	0.30	0.30
Intersection LOS	D											
Intersection V/C	0.899											

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.707

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	617	16	447	415	189	712
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	617	16	447	415	189	712
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	4	112	104	47	178
Total Analysis Volume [veh/h]	617	16	447	415	189	712
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.22	0.27	0.27	0.12	0.22
Intersection LOS	C					
Intersection V/C	0.707					

Intersection Level Of Service Report
Intersection 3: Crenshaw Blvd at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.053

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	608	1443	1451	434	74	896
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	608	1443	1451	434	74	896
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	152	361	363	109	19	224
Total Analysis Volume [veh/h]	608	1443	1451	434	74	896
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.38	0.30	0.39	0.39	0.05	0.18
Intersection LOS	F					
Intersection V/C	1.053					

Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.878

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1058	377	33	1229	1043	187
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1058	377	33	1229	1043	187
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	265	94	8	307	261	47
Total Analysis Volume [veh/h]	1058	377	33	1229	1043	187
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.33	0.00	0.02	0.26	0.36	0.43
Intersection LOS	D					
Intersection V/C	0.878					

Intersection Level Of Service Report
Intersection 5: Crenshaw Boulevard at Crenshaw Place

Control Type:	Two-way stop	Delay (sec / veh):	275.7
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.141

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Base Volume Input [veh/h]	2025	9	52	2257	2	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2025	9	52	2257	2	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	506	2	13	564	1	1
Total Analysis Volume [veh/h]	2025	9	52	2257	2	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.43	0.02	0.14	0.02
d_M, Delay for Movement [s/veh]	0.00	0.00	56.07	0.00	275.67	39.11
Movement LOS	A	A	F	A	F	E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.88	0.00	0.53	0.53
95th-Percentile Queue Length [ft/ln]	0.00	0.00	46.89	0.00	13.32	13.32
d_A, Approach Delay [s/veh]	0.00		1.26		106.70	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	0.84					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: Crenshaw Boulevard at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.051

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	↵ ↵ ↵			↵ ↵ ↵			↵ ↵ ↵			↵ ↵ ↵		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Base Volume Input [veh/h]	123	1619	281	119	1787	381	393	1196	70	286	1170	105
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	1619	281	119	1787	381	393	1196	70	286	1170	105
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	405	70	30	447	95	98	299	18	72	293	26
Total Analysis Volume [veh/h]	123	1619	281	119	1787	381	393	1196	70	286	1170	105
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.34	0.08	0.07	0.37	0.10	0.14	0.26	0.26	0.10	0.37	0.07
Intersection LOS	F											
Intersection V/C	1.051											

**Intersection Level Of Service Report
Intersection 7: Crenshaw Place at 190th Street**

Control Type:	Two-way stop	Delay (sec / veh):	87.4
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.391

Intersection Setup

Name	Crenshaw Pl		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Crenshaw Pl		190th St		190th St	
Base Volume Input [veh/h]	26	17	4	1639	1546	96
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	17	4	1639	1546	96
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	4	1	410	387	24
Total Analysis Volume [veh/h]	26	17	4	1639	1546	96
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.39	0.06	0.02	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	87.43	46.47	24.42	0.00	0.00	0.00
Movement LOS	F	E	C	A	A	A
95th-Percentile Queue Length [veh/ln]	1.92	1.92	0.06	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	48.01	48.01	1.61	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	71.24		0.06		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	0.95					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Project Driveway 1 at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.507

Intersection Setup

Name	Project Dwy		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Project Dwy		190th St		190th St	
Base Volume Input [veh/h]	2	7	63	1559	1705	40
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2	7	63	1559	1705	40
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	2	16	390	426	10
Total Analysis Volume [veh/h]	2	7	63	1559	1705	40
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.04	0.32	0.36	0.36
Intersection LOS	A					
Intersection V/C	0.507					

Intersection Level Of Service Report
Intersection 9: Van Ness Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.620

Intersection Setup

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	1581	0	0	1665	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	0	1581	0	0	1665	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	395	0	0	416	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	1581	0	0	1665	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.52	0.00
Intersection LOS	B											
Intersection V/C	0.620											

Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.908

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	532	108	768	835	1530	131
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	532	108	768	835	1530	131
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	133	27	192	209	383	33
Total Analysis Volume [veh/h]	532	108	768	835	1530	131
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.18	0.22	0.27	0.17	0.32	0.08
Intersection LOS	E					
Intersection V/C	0.908					

Intersection Level Of Service Report
Intersection 11: Western Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.813

Intersection Setup

Name	Western Ave			Western Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Western Ave			Western Ave			190th St			190th St		
Base Volume Input [veh/h]	141	1145	173	168	1502	558	168	741	437	365	984	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	141	1145	173	168	1502	558	168	741	437	365	984	128
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	35	286	43	42	376	140	42	185	109	91	246	32
Total Analysis Volume [veh/h]	141	1145	173	168	1502	558	168	741	437	365	984	128
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	8	7	4	0
Auxiliary Signal Groups			6,7			2,3			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.24	0.00	0.06	0.31	0.29	0.06	0.15	0.22	0.13	0.23	0.23
Intersection LOS	D											
Intersection V/C	0.813											

Intersection Level Of Service Report
Intersection 12: Crenshaw Place at Project Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Base Volume Input [veh/h]	100	0	0	43	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	0	0	43	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	0	0	11	0	0
Total Analysis Volume [veh/h]	100	0	0	43	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.41	0.00	9.24	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Crenshaw Place at Project Driveway 5

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Base Volume Input [veh/h]	100	0	0	43	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	100	0	0	43	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	25	0	0	11	0	0
Total Analysis Volume [veh/h]	100	0	0	43	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.41	0.00	9.24	8.77
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		9.00	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Project Driveway 3 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Project Dwy 3		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Dwy 3		190th St		190th St	
Base Volume Input [veh/h]	0	0	0	1581	1665	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1581	1665	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	395	416	0
Total Analysis Volume [veh/h]	0	0	0	1581	1665	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	60.75	18.44	24.52	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	39.59		0.00		0.00	
Approach LOS	E		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 15: Project Driveway 2 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Project Dwy 1		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 1		190th St		190th St	
Base Volume Input [veh/h]	0	0	0	1581	1665	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1581	1665	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	395	416	0
Total Analysis Volume [veh/h]	0	0	0	1581	1665	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	45.79	18.44	24.52	0.00	0.00	0.00
Movement LOS	E	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	32.12		0.00		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 1: Crenshaw Boulevard at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.074

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Base Volume Input [veh/h]	83	1181	1042	76	1015	180	118	430	41	501	550	253
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	1181	1042	76	1015	180	118	430	41	501	550	253
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	295	261	19	254	45	30	108	10	125	138	63
Total Analysis Volume [veh/h]	83	1181	1042	76	1015	180	118	430	41	501	550	253
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	6	6	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			4,6									
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.37	0.48	0.05	0.25	0.25	0.07	0.15	0.15	0.17	0.30	0.30
Intersection LOS	F											
Intersection V/C	1.074											

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.959

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐⇐		⇐⇐⇐	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	787	60	875	669	132	525
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	787	60	875	669	132	525
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	197	15	219	167	33	131
Total Analysis Volume [veh/h]	787	60	875	669	132	525
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.29	0.48	0.48	0.08	0.16
Intersection LOS	E					
Intersection V/C	0.959					

Intersection Level Of Service Report
Intersection 3: Crenshaw Blvd at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.024

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	121	2043	1455	125	208	918
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	2043	1455	125	208	918
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	511	364	31	52	230
Total Analysis Volume [veh/h]	121	2043	1455	125	208	918
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.43	0.33	0.33	0.13	0.50
Intersection LOS	F					
Intersection V/C	1.024					

Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.893

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1524	585	54	1028	605	210
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1524	585	54	1028	605	210
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	381	146	14	257	151	53
Total Analysis Volume [veh/h]	1524	585	54	1028	605	210
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.48	0.16	0.03	0.21	0.21	0.28
Intersection LOS	D					
Intersection V/C	0.893					

Intersection Level Of Service Report
Intersection 5: Crenshaw Boulevard at Crenshaw Place

Control Type:	Two-way stop	Delay (sec / veh):	42.6
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.240

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Base Volume Input [veh/h]	1992	7	30	2282	0	6
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1992	7	30	2282	0	6
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	498	2	8	571	0	2
Total Analysis Volume [veh/h]	1992	7	30	2282	0	6
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0





Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.24	0.02	0.00	0.03
d_M, Delay for Movement [s/veh]	0.00	0.00	42.59	0.00	179.05	22.86
Movement LOS	A	A	E	A	F	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.88	0.00	0.09	0.09
95th-Percentile Queue Length [ft/ln]	0.00	0.00	22.01	0.00	2.22	2.22
d_A, Approach Delay [s/veh]	0.00		0.55		22.86	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.33					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 6: Crenshaw Boulevard at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.965

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Base Volume Input [veh/h]	129	1675	286	141	1729	366	231	1497	81	200	1102	107
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	1675	286	141	1729	366	231	1497	81	200	1102	107
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	419	72	35	432	92	58	374	20	50	276	27
Total Analysis Volume [veh/h]	129	1675	286	141	1729	366	231	1497	81	200	1102	107
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.35	0.11	0.09	0.36	0.15	0.08	0.33	0.33	0.07	0.34	0.07
Intersection LOS	E											
Intersection V/C	0.965											

Intersection Level Of Service Report
Intersection 7: Crenshaw Place at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.035

Intersection Setup

Name	Crenshaw Pl		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Crenshaw Pl		190th St		190th St	
Base Volume Input [veh/h]	0	49	8	1931	1389	86
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	49	8	1931	1389	86
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	12	2	483	347	22
Total Analysis Volume [veh/h]	0	49	8	1931	1389	86
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.16	0.03	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	59.61	18.81	21.27	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.56	0.56	0.11	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	13.88	13.88	2.70	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.81		0.09		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.32					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Project Driveway 1 at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.548

Intersection Setup

Name	Project Dwy		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Project Dwy		190th St		190th St	
Base Volume Input [veh/h]	35	69	4	1943	1374	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	35	69	4	1943	1374	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	9	17	1	486	344	1
Total Analysis Volume [veh/h]	35	69	4	1943	1374	3
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.04	0.00	0.40	0.29	0.29
Intersection LOS	A					
Intersection V/C	0.548					

Intersection Level Of Service Report
Intersection 9: Van Ness Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.540

Intersection Setup

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Base Volume Input [veh/h]	0	0	0	0	0	0	0	1940	0	0	1407	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	0	0	0	0	1940	0	0	1407	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	0	0	0	0	485	0	0	352	0
Total Analysis Volume [veh/h]	0	0	0	0	0	0	0	1940	0	0	1407	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.40	0.00	0.00	0.44	0.00
Intersection LOS	A											
Intersection V/C	0.540											

Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.777

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	637	11	608	1496	1157	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	637	11	608	1496	1157	109
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	159	3	152	374	289	27
Total Analysis Volume [veh/h]	637	11	608	1496	1157	109
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.23	0.21	0.31	0.24	0.07
Intersection LOS	C					
Intersection V/C	0.777					

Intersection Level Of Service Report
Intersection 11: Western Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.793

Intersection Setup

Name	Western Ave			Western Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Western Ave			Western Ave			190th St			190th St		
Base Volume Input [veh/h]	113	1340	216	137	1150	403	395	1260	516	238	762	311
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	113	1340	216	137	1150	403	395	1260	516	238	762	311
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	28	335	54	34	288	101	99	315	129	60	191	78
Total Analysis Volume [veh/h]	113	1340	216	137	1150	403	395	1260	516	238	762	311
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	8	7	4	0
Auxiliary Signal Groups			6,7			2,3			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.28	0.05	0.05	0.24	0.11	0.14	0.26	0.28	0.08	0.22	0.22
Intersection LOS	C											
Intersection V/C	0.793											

Intersection Level Of Service Report
Intersection 12: Crenshaw Place at Project Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Base Volume Input [veh/h]	94	0	0	49	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	0	0	49	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	0	0	12	0	0
Total Analysis Volume [veh/h]	94	0	0	49	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.40	0.00	9.24	8.74
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Crenshaw Place at Project Driveway 5

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.001

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↩		↪		↔	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Base Volume Input [veh/h]	94	0	0	49	0	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	94	0	0	49	0	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	24	0	0	12	0	0
Total Analysis Volume [veh/h]	94	0	0	49	0	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.40	0.00	9.24	8.74
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	0.00		0.00		8.99	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Project Driveway 3 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name	Project Dwy 3		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Dwy 3		190th St		190th St	
Base Volume Input [veh/h]	0	0	0	1940	1407	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1940	1407	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	485	352	0
Total Analysis Volume [veh/h]	0	0	0	1940	1407	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	53.28	16.05	19.53	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	34.67		0.00		0.00	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 15: Project Driveway 2 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	0.0
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.019

Intersection Setup

Name	Project Dwy 1		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 1		190th St		190th St	
Base Volume Input [veh/h]	0	0	0	1940	1407	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	0	0	1940	1407	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	0	0	485	352	0
Total Analysis Volume [veh/h]	0	0	0	1940	1407	0
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	33.42	16.05	19.53	0.00	0.00	0.00
Movement LOS	D	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	24.74		0.00		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.00					
Intersection LOS	A					

APPENDIX C-III

**EXISTING WITH AMBIENT GROWTH (YEAR 2024)
WITH PROJECT TRAFFIC CONDITIONS**

Intersection Level Of Service Report
Intersection 1: Crenshaw Boulevard at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.903

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇌⇌⇌			⇌⇌⇌			⇌⇌			⇌⇌⇌		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Base Volume Input [veh/h]	66	1005	531	12	1270	282	184	317	114	500	620	193
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	1005	531	12	1270	282	184	317	114	500	620	193
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	251	133	3	318	71	46	79	29	125	155	48
Total Analysis Volume [veh/h]	66	1005	531	12	1270	282	184	317	114	500	620	193
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	6	6	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			4,6									
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.31	0.16	0.01	0.32	0.32	0.12	0.13	0.13	0.17	0.30	0.30
Intersection LOS	E											
Intersection V/C	0.903											

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.711

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	617	16	450	425	189	712
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	617	16	450	425	189	712
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	4	113	106	47	178
Total Analysis Volume [veh/h]	617	16	450	425	189	712
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.21	0.22	0.27	0.27	0.12	0.22
Intersection LOS	C					
Intersection V/C	0.711					

Intersection Level Of Service Report
Intersection 3: Crenshaw Blvd at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.075

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	608	1461	1471	434	74	925
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	608	1461	1471	434	74	925
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	152	365	368	109	19	231
Total Analysis Volume [veh/h]	608	1461	1471	434	74	925
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.38	0.30	0.40	0.40	0.05	0.20
Intersection LOS	F					
Intersection V/C	1.075					

Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.894

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1059	377	33	1243	1087	187
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1059	377	33	1243	1087	187
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	265	94	8	311	272	47
Total Analysis Volume [veh/h]	1059	377	33	1243	1087	187
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.33	0.00	0.02	0.26	0.38	0.44
Intersection LOS	D					
Intersection V/C	0.894					

Intersection Level Of Service Report
Intersection 5: Crenshaw Boulevard at Crenshaw Place

Control Type:	Two-way stop	Delay (sec / veh):	347.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.179

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Base Volume Input [veh/h]	2028	9	63	2296	2	8
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2028	9	63	2296	2	8
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	507	2	16	574	1	2
Total Analysis Volume [veh/h]	2028	9	63	2296	2	8
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.53	0.02	0.18	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	64.41	0.00	347.07	43.56
Movement LOS	A	A	F	A	F	E
95th-Percentile Queue Length [veh/ln]	0.00	0.00	2.47	0.00	0.72	0.72
95th-Percentile Queue Length [ft/ln]	0.00	0.00	61.76	0.00	18.03	18.03
d_A, Approach Delay [s/veh]	0.00		1.72		104.26	
Approach LOS	A		A		F	
d_I, Intersection Delay [s/veh]	1.16					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 6: Crenshaw Boulevard at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.052

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Base Volume Input [veh/h]	123	1619	301	158	1787	381	393	1205	70	291	1172	108
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	123	1619	301	158	1787	381	393	1205	70	291	1172	108
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	31	405	75	40	447	95	98	301	18	73	293	27
Total Analysis Volume [veh/h]	123	1619	301	158	1787	381	393	1205	70	291	1172	108
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.34	0.09	0.10	0.37	0.10	0.14	0.27	0.27	0.10	0.37	0.07
Intersection LOS	F											
Intersection V/C	1.052											

Intersection Level Of Service Report
Intersection 7: Crenshaw Place at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	118.1
Analysis Method:	HCM 6th Edition	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.470

Intersection Setup

Name	Crenshaw Pl		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Crenshaw Pl		190th St		190th St	
Base Volume Input [veh/h]	26	20	28	1683	1554	147
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	20	28	1683	1554	147
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	5	7	421	389	37
Total Analysis Volume [veh/h]	26	20	28	1683	1554	147
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.47	0.07	0.16	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	118.05	18.26	29.13	0.00	0.00	0.00
Movement LOS	F	C	D	A	A	A
95th-Percentile Queue Length [veh/ln]	1.79	0.22	0.55	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	44.69	5.49	13.70	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	74.66		0.48		0.00	
Approach LOS	F		A		A	
d_I, Intersection Delay [s/veh]	1.23					
Intersection LOS	F					

Intersection Level Of Service Report
Intersection 8: Project Driveway 1 at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.554

Intersection Setup

Name	Project Dwy		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Project Dwy		190th St		190th St	
Base Volume Input [veh/h]	26	11	85	1559	1780	67
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	26	11	85	1559	1780	67
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	7	3	21	390	445	17
Total Analysis Volume [veh/h]	26	11	85	1559	1780	67
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.01	0.05	0.32	0.38	0.38
Intersection LOS	A					
Intersection V/C	0.554					

Intersection Level Of Service Report
Intersection 9: Van Ness Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.654

Intersection Setup

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Base Volume Input [veh/h]	6	0	0	0	0	5	1	1601	1	0	1756	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	6	0	0	0	0	5	1	1601	1	0	1756	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	2	0	0	0	0	1	0	400	0	0	439	0
Total Analysis Volume [veh/h]	6	0	0	0	0	5	1	1601	1	0	1756	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.55	0.00
Intersection LOS	B											
Intersection V/C	0.654											

Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.932

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵↵↵↵		↵↵↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	532	115	781	844	1614	131
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	532	115	781	844	1614	131
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	133	29	195	211	404	33
Total Analysis Volume [veh/h]	532	115	781	844	1614	131
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.18	0.22	0.27	0.18	0.34	0.08
Intersection LOS	E					
Intersection V/C	0.932					

Intersection Level Of Service Report
Intersection 11: Western Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.829

Intersection Setup

Name	Western Ave			Western Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Western Ave			Western Ave			190th St			190th St		
Base Volume Input [veh/h]	158	1145	173	168	1502	615	169	743	442	365	993	128
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	158	1145	173	168	1502	615	169	743	442	365	993	128
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	40	286	43	42	376	154	42	186	111	91	248	32
Total Analysis Volume [veh/h]	158	1145	173	168	1502	615	169	743	442	365	993	128
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	8	7	4	0
Auxiliary Signal Groups			6,7			2,3			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.24	0.00	0.06	0.31	0.33	0.06	0.15	0.22	0.13	0.23	0.23
Intersection LOS	D											
Intersection V/C	0.829											

Intersection Level Of Service Report
Intersection 12: Crenshaw Place at Project Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	8.8
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.011

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Base Volume Input [veh/h]	103	72	0	43	0	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	103	72	0	43	0	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	18	0	11	0	3
Total Analysis Volume [veh/h]	103	72	0	43	0	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.57	0.00	9.29	8.82
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.03	0.03
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	0.80	0.80
d_A, Approach Delay [s/veh]	0.00		0.00		8.82	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.39					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Crenshaw Place at Project Driveway 5

Control Type:	Two-way stop	Delay (sec / veh):	9.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.004

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Base Volume Input [veh/h]	175	0	11	43	3	3
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	175	0	11	43	3	3
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	44	0	3	11	1	1
Total Analysis Volume [veh/h]	175	0	11	43	3	3
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.01	0.00	0.00	0.00
d_M, Delay for Movement [s/veh]	0.00	0.00	7.59	0.00	9.88	9.18
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.02	0.02	0.02	0.02
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.59	0.59	0.57	0.57
d_A, Approach Delay [s/veh]	0.00		1.55		9.53	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.60					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Project Driveway 3 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	27.5
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.064

Intersection Setup

Name	Project Dwy 3		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Dwy 3		190th St		190th St	
Base Volume Input [veh/h]	0	3	11	1614	1721	11
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	11	1614	1721	11
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	3	404	430	3
Total Analysis Volume [veh/h]	0	3	11	1614	1721	11
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.06	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	72.50	19.31	27.53	0.00	0.00	0.00
Movement LOS	F	C	D	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.20	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.89	0.89	5.11	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.31		0.19		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 15: Project Driveway 2 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	27.9
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.065

Intersection Setup

Name	Project Dwy 1		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 1		190th St		190th St	
Base Volume Input [veh/h]	0	3	11	1603	1729	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	3	11	1603	1729	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	1	3	401	432	4
Total Analysis Volume [veh/h]	0	3	11	1603	1729	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.01	0.07	0.02	0.02	0.00
d_M, Delay for Movement [s/veh]	50.55	19.45	27.90	0.00	0.00	0.00
Movement LOS	F	C	D	A	A	A
95th-Percentile Queue Length [veh/ln]	0.04	0.04	0.21	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.90	0.90	5.19	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	19.45		0.19		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.11					
Intersection LOS	D					

Intersection Level Of Service Report
Intersection 1: Crenshaw Boulevard at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.103

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	0	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Base Volume Input [veh/h]	83	1202	1088	76	1024	180	118	430	41	501	550	253
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	1202	1088	76	1024	180	118	430	41	501	550	253
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	301	272	19	256	45	30	108	10	125	138	63
Total Analysis Volume [veh/h]	83	1202	1088	76	1024	180	118	430	41	501	550	253
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	6	6	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			4,6									
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.38	0.51	0.05	0.25	0.25	0.07	0.15	0.15	0.17	0.30	0.30
Intersection LOS	F											
Intersection V/C	1.103											

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.973

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐⇐		⇐⇐⇐	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	787	60	885	705	132	525
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	787	60	885	705	132	525
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	197	15	221	176	33	131
Total Analysis Volume [veh/h]	787	60	885	705	132	525
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.27	0.29	0.50	0.50	0.08	0.16
Intersection LOS	E					
Intersection V/C	0.973					

Intersection Level Of Service Report
Intersection 3: Crenshaw Blvd at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.045

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	121	2110	1464	125	208	929
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	2110	1464	125	208	929
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	528	366	31	52	232
Total Analysis Volume [veh/h]	121	2110	1464	125	208	929
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.44	0.33	0.33	0.13	0.51
Intersection LOS	F					
Intersection V/C	1.045					

Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.901

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1529	585	54	1035	624	210
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1529	585	54	1035	624	210
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	382	146	14	259	156	53
Total Analysis Volume [veh/h]	1529	585	54	1035	624	210
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.48	0.15	0.03	0.22	0.22	0.29
Intersection LOS	E					
Intersection V/C	0.901					

Intersection Level Of Service Report
Intersection 5: Crenshaw Boulevard at Crenshaw Place

Control Type:	Two-way stop	Delay (sec / veh):	44.8
Analysis Method:	HCM 6th Edition	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.275

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		Crenshaw Pl	
Base Volume Input [veh/h]	2002	7	34	2298	0	16
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	2002	7	34	2298	0	16
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	501	2	9	575	0	4
Total Analysis Volume [veh/h]	2002	7	34	2298	0	16
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0





Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.02	0.00	0.27	0.02	0.00	0.08
d_M, Delay for Movement [s/veh]	0.00	0.00	44.77	0.00	194.32	23.94
Movement LOS	A	A	E	A	F	C
95th-Percentile Queue Length [veh/ln]	0.00	0.00	1.04	0.00	0.25	0.25
95th-Percentile Queue Length [ft/ln]	0.00	0.00	26.01	0.00	6.25	6.25
d_A, Approach Delay [s/veh]	0.00		0.65		23.94	
Approach LOS	A		A		C	
d_I, Intersection Delay [s/veh]	0.44					
Intersection LOS	E					

Intersection Level Of Service Report
Intersection 6: Crenshaw Boulevard at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	E
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.974

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	0	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			190th St			190th St		
Base Volume Input [veh/h]	129	1675	293	157	1729	366	231	1501	81	219	1111	117
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	129	1675	293	157	1729	366	231	1501	81	219	1111	117
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	32	419	73	39	432	92	58	375	20	55	278	29
Total Analysis Volume [veh/h]	129	1675	293	157	1729	366	231	1501	81	219	1111	117
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups			6,7			2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.35	0.11	0.10	0.36	0.15	0.08	0.33	0.33	0.08	0.35	0.07
Intersection LOS	E											
Intersection V/C	0.974											

**Intersection Level Of Service Report
Intersection 7: Crenshaw Place at 190th Street**

Control Type:	Two-way stop	Delay (sec / veh):	23.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.103

Intersection Setup

Name	Crenshaw Pl		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵		↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Crenshaw Pl		190th St		190th St	
Base Volume Input [veh/h]	0	59	22	1945	1416	123
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	59	22	1945	1416	123
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	15	6	486	354	31
Total Analysis Volume [veh/h]	0	59	22	1945	1416	123
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane			
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.18	0.10	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	62.69	18.59	23.83	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.66	0.34	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	0.00	16.40	8.51	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	18.59		0.27		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.45					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 8: Project Driveway 1 at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.580

Intersection Setup

Name	Project Dwy		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		Yes	

Volumes

Name	Project Dwy		190th St		190th St	
Base Volume Input [veh/h]	121	86	11	1943	1410	12
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	86	11	1943	1410	12
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	22	3	486	353	3
Total Analysis Volume [veh/h]	121	86	11	1943	1410	12
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.08	0.05	0.01	0.40	0.30	0.30
Intersection LOS	A					
Intersection V/C	0.580					

Intersection Level Of Service Report
Intersection 9: Van Ness Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.557

Intersection Setup

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	⇐⇐⇐			⇐⇐⇐			⇐⇐⇐			⇐⇐⇐		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			No			Yes		

Volumes

Name	Van Ness Ave			Van Ness Ave			190th St			190th St		
Base Volume Input [veh/h]	3	0	0	0	0	2	5	2015	7	0	1448	0
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	3	0	0	0	0	2	5	2015	7	0	1448	0
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	1	0	0	0	0	1	1	504	2	0	362	0
Total Analysis Volume [veh/h]	3	0	0	0	0	2	5	2015	7	0	1448	0
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Permiss	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss	Protecte	Permiss	Permiss
Signal Group	1	6	0	5	2	2	3	8	0	7	4	0
Auxiliary Signal Groups						2,3						
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.45	0.00
Intersection LOS	A											
Intersection V/C	0.557											

Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.802

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	↵↵		↵↵↵↵		↵↵↵	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	637	15	652	1526	1194	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	637	15	652	1526	1194	109
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	159	4	163	382	299	27
Total Analysis Volume [veh/h]	637	15	652	1526	1194	109
Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.22	0.23	0.23	0.32	0.25	0.07
Intersection LOS	D					
Intersection V/C	0.802					

Intersection Level Of Service Report
Intersection 11: Western Avenue at 190th Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.801

Intersection Setup

Name	Western Ave			Western Ave			190th St			190th St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration	[Diagram]			[Diagram]			[Diagram]			[Diagram]		
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	1	1	0	1	1	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	Yes			Yes			Yes			Yes		

Volumes

Name	Western Ave			Western Ave			190th St			190th St		
Base Volume Input [veh/h]	120	1340	216	137	1150	429	400	1269	533	238	766	311
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	1340	216	137	1150	429	400	1269	533	238	766	311
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	335	54	34	288	107	100	317	133	60	192	78
Total Analysis Volume [veh/h]	120	1340	216	137	1150	429	400	1269	533	238	766	311
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Overlap	Protecte	Permiss	Permiss
Signal Group	1	6	6	5	2	2	3	8	8	7	4	0
Auxiliary Signal Groups			6,7			2,3			1,8			
Lead / Lag	Lead	-	-	Lead	-	-	Lead	-	-	Lead	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.28	0.05	0.05	0.24	0.13	0.14	0.26	0.29	0.08	0.22	0.22
Intersection LOS	D											
Intersection V/C	0.801											

Intersection Level Of Service Report
Intersection 12: Crenshaw Place at Project Driveway 4

Control Type:	Two-way stop	Delay (sec / veh):	8.9
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.040

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Dwy 4	
Base Volume Input [veh/h]	104	41	0	49	0	38
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	104	41	0	49	0	38
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	26	10	0	12	0	10
Total Analysis Volume [veh/h]	104	41	0	49	0	38
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.00	0.04
d_M, Delay for Movement [s/veh]	0.00	0.00	7.50	0.00	9.45	8.94
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.00	0.00	0.12	0.12
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.00	0.00	3.12	3.12
d_A, Approach Delay [s/veh]	0.00		0.00		8.94	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	1.47					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 13: Crenshaw Place at Project Driveway 5

Control Type:	Two-way stop	Delay (sec / veh):	9.7
Analysis Method:	HCM 6th Edition	Level Of Service:	A
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.013

Intersection Setup

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	0	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw PI		Crenshaw PI		Project Driveway 5	
Base Volume Input [veh/h]	145	0	3	49	10	10
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	145	0	3	49	10	10
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	36	0	1	12	3	3
Total Analysis Volume [veh/h]	145	0	3	49	10	10
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Free	Free	Stop
Flared Lane			No
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance			No
Number of Storage Spaces in Median	0	0	0




Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.00	0.00	0.00	0.01	0.01
d_M, Delay for Movement [s/veh]	0.00	0.00	7.51	0.00	9.68	9.09
Movement LOS	A	A	A	A	A	A
95th-Percentile Queue Length [veh/ln]	0.00	0.00	0.01	0.01	0.07	0.07
95th-Percentile Queue Length [ft/ln]	0.00	0.00	0.16	0.16	1.83	1.83
d_A, Approach Delay [s/veh]	0.00		0.43		9.39	
Approach LOS	A		A		A	
d_I, Intersection Delay [s/veh]	0.97					
Intersection LOS	A					

Intersection Level Of Service Report
Intersection 14: Project Driveway 3 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	20.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Project Dwy 3		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		Yes		Yes	

Volumes

Name	Project Dwy 3		190th St		190th St	
Base Volume Input [veh/h]	0	10	4	1951	1462	4
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	4	1951	1462	4
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	1	488	366	1
Total Analysis Volume [veh/h]	0	10	4	1951	1462	4
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	No		
Number of Storage Spaces in Median	0	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.03	0.02	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	58.99	16.94	20.81	0.00	0.00	0.00
Movement LOS	F	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.48	2.48	1.32	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.94		0.04		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	C					

Intersection Level Of Service Report
Intersection 15: Project Driveway 2 at 190th Street

Control Type:	Two-way stop	Delay (sec / veh):	20.7
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.017

Intersection Setup

Name	Project Dwy 1		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration						
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	0	1	0	0	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Crosswalk	Yes		No		No	

Volumes

Name	Project Dwy 1		190th St		190th St	
Base Volume Input [veh/h]	0	10	4	1947	1456	5
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	0	10	4	1947	1456	5
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	0	3	1	487	364	1
Total Analysis Volume [veh/h]	0	10	4	1947	1456	5
Pedestrian Volume [ped/h]	0		0		0	

Intersection Settings

Priority Scheme	Stop	Free	Free
Flared Lane	No		
Storage Area [veh]	0	0	0
Two-Stage Gap Acceptance	Yes		
Number of Storage Spaces in Median	2	0	0

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.00	0.03	0.02	0.02	0.01	0.00
d_M, Delay for Movement [s/veh]	35.98	16.89	20.72	0.00	0.00	0.00
Movement LOS	E	C	C	A	A	A
95th-Percentile Queue Length [veh/ln]	0.10	0.10	0.05	0.00	0.00	0.00
95th-Percentile Queue Length [ft/ln]	2.47	2.47	1.31	0.00	0.00	0.00
d_A, Approach Delay [s/veh]	16.89		0.04		0.00	
Approach LOS	C		A		A	
d_I, Intersection Delay [s/veh]	0.07					
Intersection LOS	C					





APPENDIX C-IV

**EXISTING WITH AMBIENT GROWTH (YEAR 2024)
WITH PROJECT TRAFFIC CONDITIONS WITH
IMPROVEMENTS**

Intersection Level Of Service Report
Intersection 1: Crenshaw Boulevard at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.859

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Base Volume Input [veh/h]	66	1005	531	12	1270	282	184	317	114	500	620	193
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	66	1005	531	12	1270	282	184	317	114	500	620	193
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	17	251	133	3	318	71	46	79	29	125	155	48
Total Analysis Volume [veh/h]	66	1005	531	12	1270	282	184	317	114	500	620	193
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	6	6	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			6									
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.04	0.31	0.33	0.01	0.32	0.32	0.12	0.13	0.13	0.17	0.26	0.13
Intersection LOS	D											
Intersection V/C	0.859											

Intersection Level Of Service Report
Intersection 1: Crenshaw Boulevard at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	-
Analysis Method:	ICU 1	Level Of Service:	F
Analysis Period:	15 minutes	Volume to Capacity (v/c):	1.044

Intersection Setup

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Approach	Northbound			Southbound			Eastbound			Westbound		
Lane Configuration												
Turning Movement	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	1	0	0	1	0	1	1	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00			30.00			30.00			30.00		
Grade [%]	0.00			0.00			0.00			0.00		
Crosswalk	No			Yes			Yes			Yes		

Volumes

Name	Crenshaw Blvd			Crenshaw Blvd			182nd St			182nd St		
Base Volume Input [veh/h]	83	1202	1088	76	1024	180	118	430	41	501	550	253
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0	0	0	0	0	0	0
Total Hourly Volume [veh/h]	83	1202	1088	76	1024	180	118	430	41	501	550	253
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	21	301	272	19	256	45	30	108	10	125	138	63
Total Analysis Volume [veh/h]	83	1202	1088	76	1024	180	118	430	41	501	550	253
Pedestrian Volume [ped/h]	0			0			0			0		
Bicycle Volume [bicycles/h]	0			0			0			0		

Intersection Settings

Cycle Length [s]	100
Lost time [s]	10.00

Phasing & Timing

Control Type	Permiss	Permiss	Overlap	Permiss	Permiss	Permiss	Split	Split	Split	Split	Split	Split
Signal Group	0	6	6	0	2	0	0	8	0	0	4	0
Auxiliary Signal Groups			4,6									
Lead / Lag	-	-	-	-	-	-	-	-	-	-	-	-

Movement, Approach, & Intersection Results

V/C, Movement V/C Ratio	0.05	0.38	0.51	0.05	0.25	0.25	0.07	0.15	0.15	0.17	0.24	0.18
Intersection LOS	F											
Intersection V/C	1.044											

APPENDIX D

CALTRANS INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

APPENDIX D-1

EXISTING TRAFFIC CONDITIONS

4123 2555 W. 190th Warehouse, Torrance

Vistro File: N:\...\4123 Caltrans.vistro

Scenario 1 AM Ex

Report File: N:\...\1AM Ex.pdf

7/26/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	I-405 NB Ramps at 182nd Street	Signalized	HCM 6th Edition	NB Right	0.511	15.4	B
3	Crenshaw Boulevard at I-405 SB Ramps	Signalized	HCM 6th Edition	SB Right	0.814	41.2	D
4	Western Avenue at I-405 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.760	20.3	C
10	I-405 SB Ramps at 190th St	Signalized	HCM 6th Edition	SB Right	0.806	25.1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	15.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.511

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐⇐		⇐⇐⇐	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	611	16	442	411	187	705
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	611	16	442	411	187	705
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	153	4	111	103	47	176
Total Analysis Volume [veh/h]	611	16	442	411	187	705
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	55	0	35	0	0	35
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	18	0	14	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	63	63	63	63
g / C, Green / Cycle	0.21	0.21	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.23	0.27	0.29	0.20
s, saturation flow rate [veh/h]	1781	1770	1870	1598	647	3560
c, Capacity [veh/h]	369	367	1315	1124	441	2504
d1, Uniform Delay [s]	34.20	34.20	5.11	5.38	12.34	4.92
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.56	5.61	0.66	0.98	2.97	0.28
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.85	0.32	0.38	0.42	0.28
d, Delay for Lane Group [s/veh]	39.76	39.81	5.77	6.36	15.31	5.20
Lane Group LOS	D	D	A	A	B	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.01	6.98	2.74	2.94	2.51	2.09
50th-Percentile Queue Length [ft/ln]	175.33	174.47	68.56	73.51	62.76	52.23
95th-Percentile Queue Length [veh/ln]	11.36	11.31	4.94	5.29	4.52	3.76
95th-Percentile Queue Length [ft/ln]	283.90	282.78	123.42	132.31	112.97	94.01

Movement, Approach, & Intersection Results

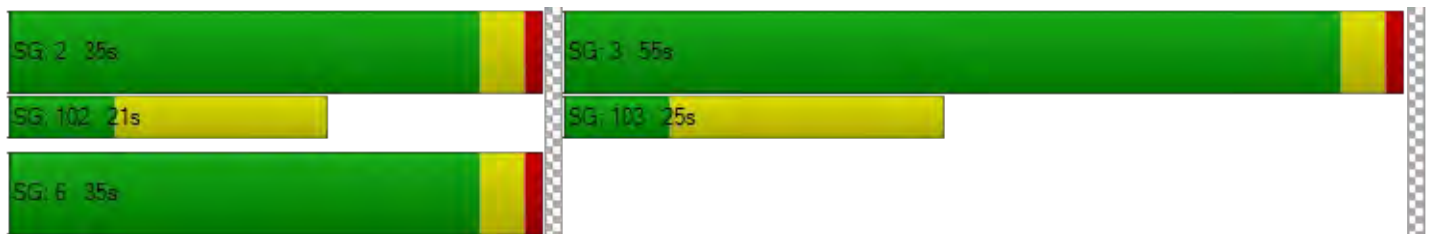
d_M, Delay for Movement [s/veh]	39.78	39.81	5.79	6.36	15.31	5.20
Movement LOS	D	D	A	A	B	A
d_A, Approach Delay [s/veh]	39.78		6.06		7.32	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	15.45					
Intersection LOS	B					
Intersection V/C	0.511					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.59	0.00	34.59
I_p,int, Pedestrian LOS Score for Intersection	2.604	0.000	2.563
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1136	690	690
d_b, Bicycle Delay [s]	8.39	19.26	19.26
I_b,int, Bicycle LOS Score for Intersection	2.594	2.263	2.296
Bicycle LOS	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Crenshaw Boulevard at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	41.2
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.814

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	602	1428	1436	429	73	887
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	602	1428	1436	429	73	887
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	151	357	359	107	18	222
Total Analysis Volume [veh/h]	602	1428	1436	429	73	887
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	30	30	30	0	30	30
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	40	83	43	0	22	22
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	11	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	36	79	39	39	18	58
g / C, Green / Cycle	0.34	0.75	0.37	0.37	0.17	0.55
(v / s)_i Volume / Saturation Flow Rate	0.34	0.28	0.35	0.37	0.04	0.56
s, saturation flow rate [veh/h]	1781	5094	3560	1667	1781	1589
c, Capacity [veh/h]	610	3830	1322	619	306	878
d1, Uniform Delay [s]	34.27	4.49	31.90	33.01	37.54	23.48
k, delay calibration	0.45	0.50	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	31.36	0.28	14.15	37.36	0.40	32.79
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.99	0.37	0.94	1.00	0.24	1.01
d, Delay for Lane Group [s/veh]	65.63	4.77	46.04	70.37	37.93	56.28
Lane Group LOS	E	A	D	F	D	F
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	20.13	2.97	17.36	21.62	1.65	27.96
50th-Percentile Queue Length [ft/ln]	503.13	74.31	433.92	540.59	41.33	699.12
95th-Percentile Queue Length [veh/ln]	27.48	5.35	24.19	29.35	2.98	36.94
95th-Percentile Queue Length [ft/ln]	687.06	133.77	604.73	733.74	74.39	923.46

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	65.63	4.77	49.31	70.37	37.93	56.28
Movement LOS	E	A	D	E	D	F
d_A, Approach Delay [s/veh]	22.82		54.15		54.88	
Approach LOS	C		D		D	
d_I, Intersection Delay [s/veh]	41.19					
Intersection LOS	D					
Intersection V/C	0.814					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	42.07
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.595
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1505	743	343
d_b, Bicycle Delay [s]	3.22	20.74	36.04
I_b,int, Bicycle LOS Score for Intersection	2.676	2.585	1.560
Bicycle LOS	B	B	A

Sequence




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



Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	20.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.760

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1047	373	33	1216	1032	185
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1047	373	33	1216	1032	185
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	262	93	8	304	258	46
Total Analysis Volume [veh/h]	1047	373	33	1216	1032	185
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	5	5	5	5	0
Maximum Green [s]	30	30	30	30	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	22	22	9	31	59	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	7	7	0	0	7	0
Pedestrian Clearance [s]	11	11	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	39	79	46	46	36	36
g / C, Green / Cycle	0.43	0.88	0.51	0.51	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.29	0.23	0.05	0.24	0.34	0.35
s, saturation flow rate [veh/h]	3560	1589	673	5094	1781	1718
c, Capacity [veh/h]	1530	1397	330	2581	720	695
d1, Uniform Delay [s]	20.73	0.87	13.98	14.39	24.25	24.72
k, delay calibration	0.50	0.50	0.50	0.50	0.14	0.15
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.50	0.47	0.61	0.62	3.60	5.17
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.68	0.27	0.10	0.47	0.84	0.88
d, Delay for Lane Group [s/veh]	23.24	1.33	14.58	15.01	27.85	29.89
Lane Group LOS	C	A	B	B	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	8.95	0.25	0.37	5.18	11.82	12.31
50th-Percentile Queue Length [ft/ln]	223.84	6.18	9.33	129.48	295.56	307.87
95th-Percentile Queue Length [veh/ln]	13.86	0.45	0.67	8.91	17.46	18.07
95th-Percentile Queue Length [ft/ln]	346.52	11.13	16.79	222.78	436.54	451.75

Movement, Approach, & Intersection Results

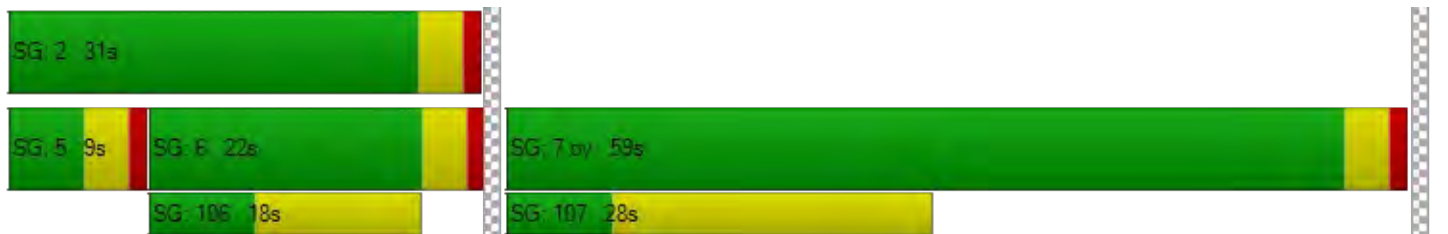
d_M, Delay for Movement [s/veh]	23.24	1.33	14.58	15.01	28.69	29.89
Movement LOS	C	A	B	B	C	C
d_A, Approach Delay [s/veh]	17.48		15.00		28.87	
Approach LOS	B		B		C	
d_I, Intersection Delay [s/veh]	20.25					
Intersection LOS	C					
Intersection V/C	0.760					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	34.68	34.68
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.856	2.488
Crosswalk LOS	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	600	1222
d_b, Bicycle Delay [s]	28.81	22.06	6.81
I_b,int, Bicycle LOS Score for Intersection	2.731	2.247	3.568
Bicycle LOS	B	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	25.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.806

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐ ⇐		⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	526	107	760	826	1514	130
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	526	107	760	826	1514	130
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	132	27	190	207	379	33
Total Analysis Volume [veh/h]	526	107	760	826	1514	130
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	29	0	36	61	25	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	23	63	36	36
g / C, Green / Cycle	0.21	0.21	0.25	0.70	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.22	0.16	0.30	0.08
s, saturation flow rate [veh/h]	1781	1710	3459	5094	5094	1589
c, Capacity [veh/h]	374	359	880	3571	2048	639
d1, Uniform Delay [s]	34.30	34.32	32.07	4.80	22.91	17.53
k, delay calibration	0.12	0.12	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.26	6.71	2.68	0.15	2.44	0.72
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.86	0.86	0.23	0.74	0.20
d, Delay for Lane Group [s/veh]	40.56	41.03	34.75	4.96	25.35	18.25
Lane Group LOS	D	D	C	A	C	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.29	7.07	8.00	1.56	9.12	1.83
50th-Percentile Queue Length [ft/ln]	182.31	176.85	200.09	38.95	228.08	45.87
95th-Percentile Queue Length [veh/ln]	11.72	11.44	12.64	2.80	14.08	3.30
95th-Percentile Queue Length [ft/ln]	293.03	285.89	316.08	70.11	351.92	82.57

Movement, Approach, & Intersection Results

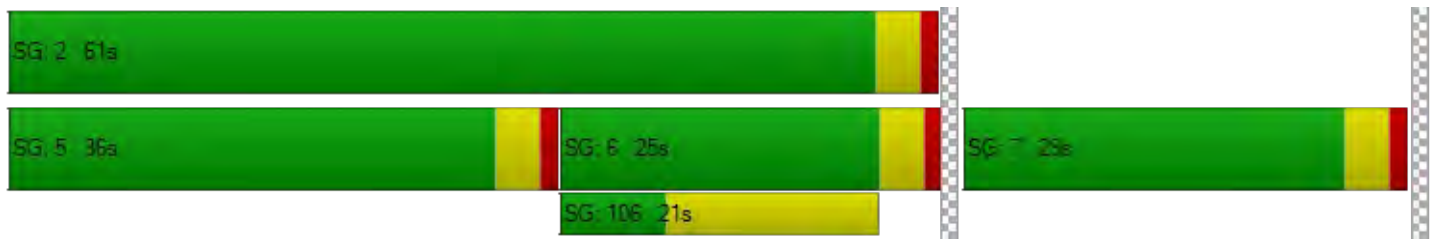
d_M, Delay for Movement [s/veh]	40.74	41.03	34.75	4.96	25.35	18.25
Movement LOS	D	D	C	A	C	B
d_A, Approach Delay [s/veh]	40.79		19.23		24.79	
Approach LOS	D		B		C	
d_I, Intersection Delay [s/veh]	25.13					
Intersection LOS	C					
Intersection V/C	0.806					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.68	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.502	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	555	1266	467
d_b, Bicycle Delay [s]	23.48	6.06	26.46
I_b,int, Bicycle LOS Score for Intersection	2.604	2.432	2.464
Bicycle LOS	B	B	B

Sequence

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



4123 2555 W. 190th Warehouse, Torrance

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Scenario 2 PM Ex

Report File: N:\...\PM Ex.pdf

7/26/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	I-405 NB Ramps at 182nd Street	Signalized	HCM 6th Edition	WB Left	0.779	20.9	C
3	Crenshaw Boulevard at I-405 SB Ramps	Signalized	HCM 6th Edition	SB Right	0.639	28.9	C
4	Western Avenue at I-405 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.777	17.1	B
10	I-405 SB Ramps at 190th St	Signalized	HCM 6th Edition	SB Right	0.668	20.1	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	20.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.779

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇑⇐		⇐⇑⇑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	779	59	866	662	131	520
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	779	59	866	662	131	520
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	195	15	217	166	33	130
Total Analysis Volume [veh/h]	779	59	866	662	131	520
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	65	0	25	0	0	25
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	18	0	14	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	57	57	57	57
g / C, Green / Cycle	0.27	0.27	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.24	0.24	0.41	0.47	0.38	0.15
s, saturation flow rate [veh/h]	1781	1751	1870	1622	341	3560
c, Capacity [veh/h]	486	477	1194	1035	181	2273
d1, Uniform Delay [s]	31.11	31.19	9.94	11.11	34.72	6.88
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.81	5.18	2.64	4.71	22.21	0.23
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.87	0.64	0.74	0.72	0.23
d, Delay for Lane Group [s/veh]	35.92	36.37	12.57	15.82	56.93	7.12
Lane Group LOS	D	D	B	B	E	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.06	9.05	8.84	10.26	4.01	1.95
50th-Percentile Queue Length [ft/ln]	226.49	226.24	220.89	256.38	100.24	48.76
95th-Percentile Queue Length [veh/ln]	14.00	13.98	13.71	15.51	7.22	3.51
95th-Percentile Queue Length [ft/ln]	349.90	349.58	342.77	387.67	180.43	87.77

Movement, Approach, & Intersection Results

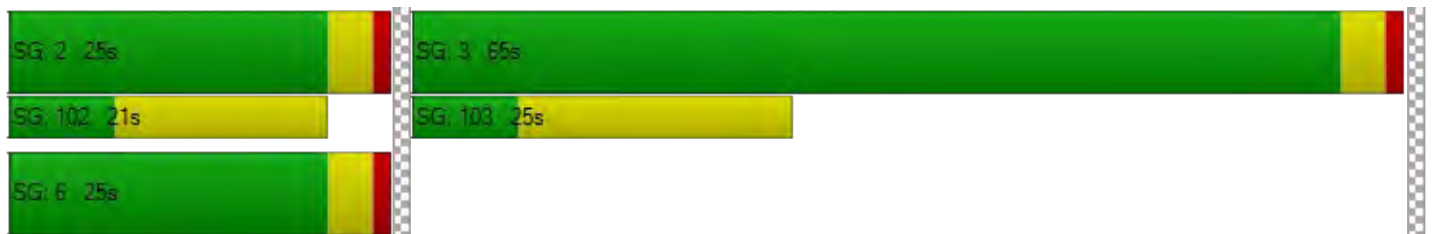
d_M, Delay for Movement [s/veh]	36.13	36.37	12.96	15.82	56.93	7.12
Movement LOS	D	D	B	B	E	A
d_A, Approach Delay [s/veh]	36.15		14.20		17.14	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	20.93					
Intersection LOS	C					
Intersection V/C	0.779					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.63	0.00	34.63
I_p,int, Pedestrian LOS Score for Intersection	2.656	0.000	2.607
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1357	467	467
d_b, Bicycle Delay [s]	4.65	26.41	26.41
I_b,int, Bicycle LOS Score for Intersection	2.942	2.820	2.097
Bicycle LOS	C	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Crenshaw Boulevard at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	28.9
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.639

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	120	2022	1440	124	206	908
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	120	2022	1440	124	206	908
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	506	360	31	52	227
Total Analysis Volume [veh/h]	120	2022	1440	124	206	908
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	30	30	30	0	30	30
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	66	34	0	29	29
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	11	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	28	62	30	30	25	57
g / C, Green / Cycle	0.29	0.65	0.32	0.32	0.26	0.60
(v / s)_i Volume / Saturation Flow Rate	0.07	0.40	0.29	0.29	0.12	0.57
s, saturation flow rate [veh/h]	1781	5094	3560	1795	1781	1589
c, Capacity [veh/h]	522	3324	1129	569	469	952
d1, Uniform Delay [s]	25.44	9.51	31.33	31.23	29.16	17.85
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.84	13.74	21.86	0.65	20.00
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.61	0.92	0.92	0.44	0.95
d, Delay for Lane Group [s/veh]	25.67	10.35	45.08	53.08	29.81	37.85
Lane Group LOS	C	B	D	D	C	D
Critical Lane Group	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.06	7.28	13.31	14.57	3.94	21.63
50th-Percentile Queue Length [ft/ln]	51.55	182.06	332.71	364.28	98.56	540.80
95th-Percentile Queue Length [veh/ln]	3.71	11.71	19.29	20.83	7.10	29.26
95th-Percentile Queue Length [ft/ln]	92.80	292.70	482.28	520.78	177.40	731.49

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.67	10.35	47.29	53.08	29.81	37.85
Movement LOS	C	B	D	D	C	D
d_A, Approach Delay [s/veh]	11.21		47.75		36.36	
Approach LOS	B		D		D	
d_I, Intersection Delay [s/veh]	28.88					
Intersection LOS	C					
Intersection V/C	0.639					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	37.14
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.384
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1305	631	526
d_b, Bicycle Delay [s]	5.74	22.24	25.80
I_b,int, Bicycle LOS Score for Intersection	2.738	2.420	1.560
Bicycle LOS	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	17.1
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.777

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	r		r		rT	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1508	579	53	1017	599	208
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1508	579	53	1017	599	208
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	377	145	13	254	150	52
Total Analysis Volume [veh/h]	1508	579	53	1017	599	208
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	5	5	5	5	0
Maximum Green [s]	30	30	30	30	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	22	22	9	31	59	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	7	7	0	0	7	0
Pedestrian Clearance [s]	11	11	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	48	78	56	56	26	26
g / C, Green / Cycle	0.53	0.87	0.62	0.62	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.42	0.36	0.11	0.20	0.23	0.24
s, saturation flow rate [veh/h]	3560	1589	496	5094	1781	1675
c, Capacity [veh/h]	1900	1382	305	3158	518	488
d1, Uniform Delay [s]	16.99	1.21	13.25	8.12	29.41	29.64
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.51	0.94	1.24	0.27	2.78	3.33
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.79	0.42	0.17	0.32	0.79	0.81
d, Delay for Lane Group [s/veh]	20.50	2.15	14.49	8.39	32.18	32.96
Lane Group LOS	C	A	B	A	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	12.39	0.70	0.47	2.88	8.33	8.16
50th-Percentile Queue Length [ft/ln]	309.63	17.48	11.65	72.02	208.15	203.92
95th-Percentile Queue Length [veh/ln]	18.16	1.26	0.84	5.19	13.06	12.84
95th-Percentile Queue Length [ft/ln]	453.92	31.46	20.98	129.63	326.45	321.01

Movement, Approach, & Intersection Results

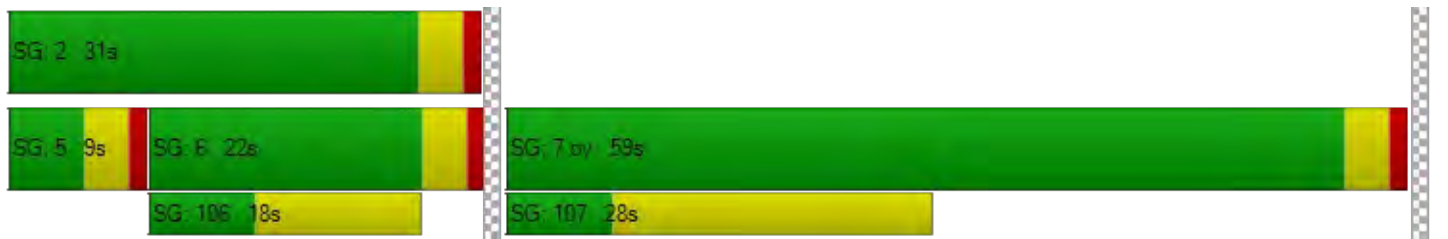
d_M, Delay for Movement [s/veh]	20.50	2.15	14.49	8.39	32.43	32.96
Movement LOS	C	A	B	A	C	C
d_A, Approach Delay [s/veh]	15.41		8.69		32.57	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	17.09					
Intersection LOS	B					
Intersection V/C	0.777					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	34.68	34.68
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.905	2.449
Crosswalk LOS	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	600	1222
d_b, Bicycle Delay [s]	28.81	22.06	6.81
I_b,int, Bicycle LOS Score for Intersection	3.281	2.148	2.891
Bicycle LOS	C	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	20.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.668

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	630	11	602	1480	1145	108
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	630	11	602	1480	1145	108
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	158	3	151	370	286	27
Total Analysis Volume [veh/h]	630	11	602	1480	1145	108
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	33	0	32	57	25	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19	63	40	40
g / C, Green / Cycle	0.21	0.21	0.21	0.70	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.17	0.29	0.22	0.07
s, saturation flow rate [veh/h]	1781	1774	3459	5094	5094	1589
c, Capacity [veh/h]	376	374	714	3566	2288	714
d1, Uniform Delay [s]	34.18	34.19	34.33	5.71	17.62	14.66
k, delay calibration	0.11	0.11	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.86	5.90	2.81	0.36	0.79	0.45
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.85	0.84	0.42	0.50	0.15
d, Delay for Lane Group [s/veh]	40.04	40.09	37.14	6.07	18.41	15.10
Lane Group LOS	D	D	D	A	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.21	7.19	6.46	3.33	5.52	1.35
50th-Percentile Queue Length [ft/ln]	180.29	179.74	161.53	83.13	138.09	33.75
95th-Percentile Queue Length [veh/ln]	11.62	11.59	10.63	5.99	9.38	2.43
95th-Percentile Queue Length [ft/ln]	290.39	289.68	265.75	149.63	234.45	60.74

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.07	40.09	37.14	6.07	18.41	15.10
Movement LOS	D	D	D	A	B	B
d_A, Approach Delay [s/veh]	40.07		15.05		18.12	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	20.05					
Intersection LOS	C					
Intersection V/C	0.668					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.68	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.460	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	644	1177	467
d_b, Bicycle Delay [s]	20.68	7.61	26.46
I_b,int, Bicycle LOS Score for Intersection	2.617	2.705	2.249
Bicycle LOS	B	B	B

Sequence

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



APPENDIX D-II

**EXISTING WITH AMBIENT GROWTH (YEAR 2024)
TRAFFIC CONDITIONS**

4123 2555 W. 190th Warehouse, Torrance

Vistro File: N:\...\4123 Caltrans.vistro

Scenario 3 AM E+A

Report File: N:\...\AM E+A.pdf

7/26/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	I-405 NB Ramps at 182nd Street	Signalized	HCM 6th Edition	NB Right	0.519	15.5	B
3	Crenshaw Boulevard at I-405 SB Ramps	Signalized	HCM 6th Edition	SB Right	0.825	42.8	D
4	Western Avenue at I-405 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.768	20.5	C
10	I-405 SB Ramps at 190th St	Signalized	HCM 6th Edition	SB Right	0.815	25.4	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.519

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐⇐		⇐⇐⇐	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	617	16	447	415	189	712
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	617	16	447	415	189	712
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	4	112	104	47	178
Total Analysis Volume [veh/h]	617	16	447	415	189	712
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	55	0	35	0	0	35
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	18	0	14	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	63	63	63	63
g / C, Green / Cycle	0.21	0.21	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.23	0.27	0.29	0.20
s, saturation flow rate [veh/h]	1781	1770	1870	1598	641	3560
c, Capacity [veh/h]	372	370	1312	1121	435	2498
d1, Uniform Delay [s]	34.12	34.12	5.19	5.46	12.65	4.99
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.55	5.60	0.67	1.00	3.13	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.85	0.33	0.38	0.43	0.29
d, Delay for Lane Group [s/veh]	39.67	39.72	5.86	6.46	15.78	5.28
Lane Group LOS	D	D	A	A	B	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.07	7.04	2.81	3.01	2.59	2.14
50th-Percentile Queue Length [ft/ln]	176.87	176.02	70.15	75.26	64.77	53.38
95th-Percentile Queue Length [veh/ln]	11.44	11.39	5.05	5.42	4.66	3.84
95th-Percentile Queue Length [ft/ln]	285.92	284.81	126.28	135.47	116.58	96.08

Movement, Approach, & Intersection Results

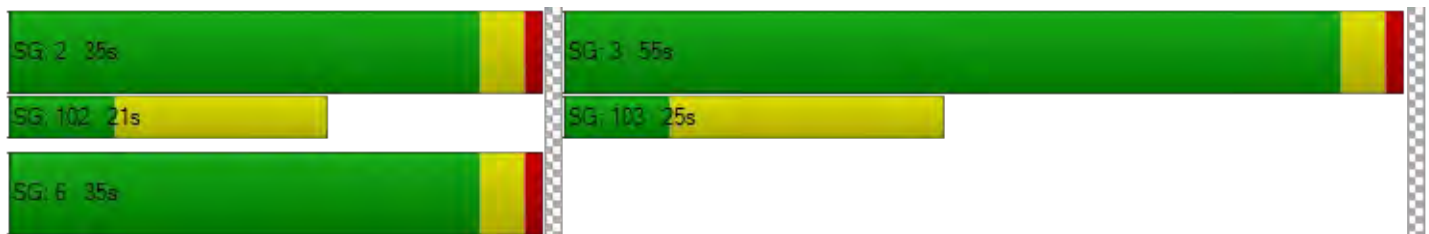
d_M, Delay for Movement [s/veh]	39.69	39.72	5.88	6.46	15.78	5.28
Movement LOS	D	D	A	A	B	A
d_A, Approach Delay [s/veh]	39.69		6.16		7.48	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	15.52					
Intersection LOS	B					
Intersection V/C	0.519					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.59	0.00	34.59
I_p,int, Pedestrian LOS Score for Intersection	2.610	0.000	2.565
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1136	690	690
d_b, Bicycle Delay [s]	8.39	19.26	19.26
I_b,int, Bicycle LOS Score for Intersection	2.604	2.271	2.303
Bicycle LOS	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Crenshaw Boulevard at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	42.8
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.825

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	608	1443	1451	434	74	896
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	608	1443	1451	434	74	896
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	152	361	363	109	19	224
Total Analysis Volume [veh/h]	608	1443	1451	434	74	896
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	30	30	30	0	30	30
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	40	83	43	0	22	22
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	11	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	36	79	39	39	18	58
g / C, Green / Cycle	0.34	0.75	0.37	0.37	0.17	0.55
(v / s)_i Volume / Saturation Flow Rate	0.34	0.28	0.35	0.38	0.04	0.56
s, saturation flow rate [veh/h]	1781	5094	3560	1667	1781	1589
c, Capacity [veh/h]	610	3830	1322	619	306	878
d1, Uniform Delay [s]	34.44	4.51	32.08	33.01	37.56	23.48
k, delay calibration	0.46	0.50	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	33.90	0.28	15.51	40.15	0.40	35.50
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	1.00	0.38	0.95	1.02	0.24	1.02
d, Delay for Lane Group [s/veh]	68.34	4.79	47.59	73.16	37.96	58.99
Lane Group LOS	E	A	D	F	D	F
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	20.78	3.02	17.85	22.10	1.68	28.63
50th-Percentile Queue Length [ft/ln]	519.48	75.41	446.28	552.56	41.92	715.65
95th-Percentile Queue Length [veh/ln]	28.26	5.43	24.78	30.14	3.02	38.02
95th-Percentile Queue Length [ft/ln]	706.38	135.74	619.51	753.60	75.46	950.62

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	68.34	4.79	51.01	73.16	37.96	58.99
Movement LOS	E	A	D	E	D	F
d_A, Approach Delay [s/veh]	23.63		56.11		57.38	
Approach LOS	C		E		E	
d_I, Intersection Delay [s/veh]	42.78					
Intersection LOS	D					
Intersection V/C	0.825					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	42.07
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.601
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1505	743	343
d_b, Bicycle Delay [s]	3.22	20.74	36.04
I_b,int, Bicycle LOS Score for Intersection	2.688	2.596	1.560
Bicycle LOS	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	20.5
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.768

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	r		r		rT	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1058	377	33	1229	1043	187
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1058	377	33	1229	1043	187
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	265	94	8	307	261	47
Total Analysis Volume [veh/h]	1058	377	33	1229	1043	187
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	5	5	5	5	0
Maximum Green [s]	30	30	30	30	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	22	22	9	31	59	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	7	7	0	0	7	0
Pedestrian Clearance [s]	11	11	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	38	79	45	45	37	37
g / C, Green / Cycle	0.43	0.88	0.50	0.50	0.41	0.41
(v / s)_i Volume / Saturation Flow Rate	0.30	0.24	0.05	0.24	0.35	0.36
s, saturation flow rate [veh/h]	3560	1589	669	5094	1781	1718
c, Capacity [veh/h]	1516	1397	324	2561	727	702
d1, Uniform Delay [s]	21.12	0.87	14.28	14.67	24.07	24.54
k, delay calibration	0.50	0.50	0.50	0.50	0.14	0.16
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	2.69	0.48	0.63	0.65	3.70	5.30
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.70	0.27	0.10	0.48	0.85	0.88
d, Delay for Lane Group [s/veh]	23.81	1.34	14.91	15.32	27.76	29.84
Lane Group LOS	C	A	B	B	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.19	0.25	0.38	5.31	11.94	12.44
50th-Percentile Queue Length [ft/ln]	229.70	6.27	9.44	132.72	298.42	311.07
95th-Percentile Queue Length [veh/ln]	14.16	0.45	0.68	9.09	17.60	18.23
95th-Percentile Queue Length [ft/ln]	353.98	11.29	17.00	227.19	440.07	455.69

Movement, Approach, & Intersection Results

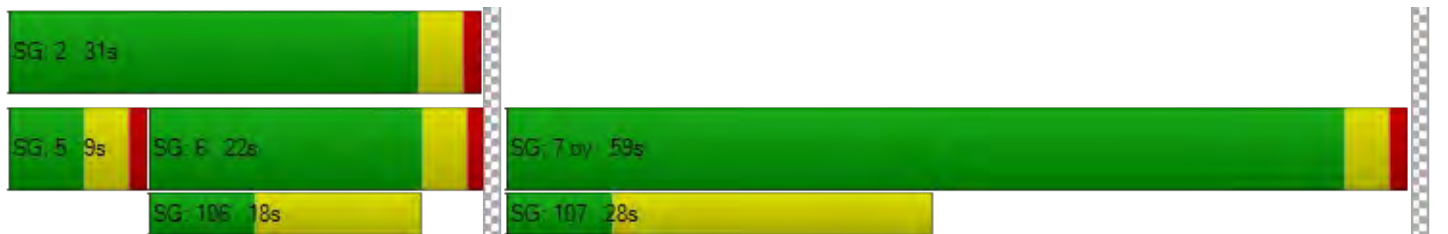
d_M, Delay for Movement [s/veh]	23.81	1.34	14.91	15.32	28.61	29.84
Movement LOS	C	A	B	B	C	C
d_A, Approach Delay [s/veh]	17.90		15.31		28.80	
Approach LOS	B		B		C	
d_I, Intersection Delay [s/veh]	20.48					
Intersection LOS	C					
Intersection V/C	0.768					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	34.68	34.68
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.860	2.494
Crosswalk LOS	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	600	1222
d_b, Bicycle Delay [s]	28.81	22.06	6.81
I_b,int, Bicycle LOS Score for Intersection	2.743	2.254	3.589
Bicycle LOS	B	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	25.4
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.815

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇐⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	532	108	768	835	1530	131
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	532	108	768	835	1530	131
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	133	27	192	209	383	33
Total Analysis Volume [veh/h]	532	108	768	835	1530	131
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	29	0	36	61	25	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	23	63	36	36
g / C, Green / Cycle	0.21	0.21	0.26	0.70	0.40	0.40
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.22	0.16	0.30	0.08
s, saturation flow rate [veh/h]	1781	1710	3459	5094	5094	1589
c, Capacity [veh/h]	378	363	888	3561	2026	632
d1, Uniform Delay [s]	34.21	34.24	31.97	4.88	23.34	17.79
k, delay calibration	0.12	0.12	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.48	6.97	2.68	0.15	2.67	0.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.87	0.86	0.23	0.76	0.21
d, Delay for Lane Group [s/veh]	40.69	41.20	34.65	5.03	26.01	18.54
Lane Group LOS	D	D	C	A	C	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.39	7.18	8.08	1.59	9.37	1.87
50th-Percentile Queue Length [ft/ln]	184.76	179.38	202.07	39.87	234.26	46.68
95th-Percentile Queue Length [veh/ln]	11.85	11.57	12.75	2.87	14.39	3.36
95th-Percentile Queue Length [ft/ln]	296.22	289.20	318.63	71.77	359.76	84.03

Movement, Approach, & Intersection Results

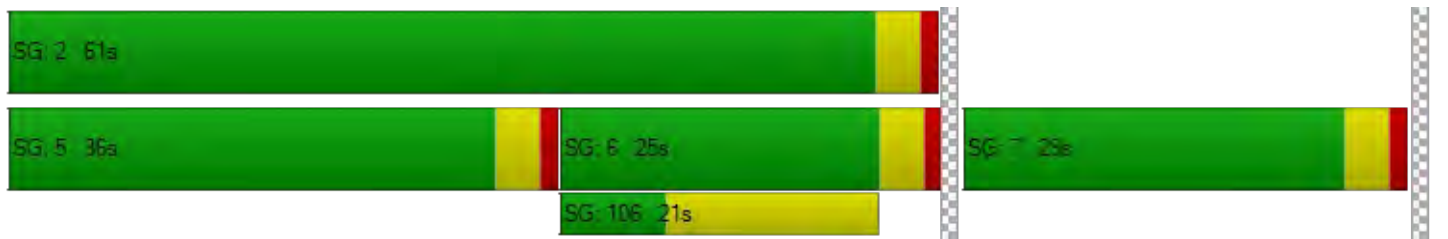
d_M, Delay for Movement [s/veh]	40.89	41.20	34.65	5.03	26.01	18.54
Movement LOS	D	D	C	A	C	B
d_A, Approach Delay [s/veh]	40.94		19.22		25.42	
Approach LOS	D		B		C	
d_I, Intersection Delay [s/veh]	25.42					
Intersection LOS	C					
Intersection V/C	0.815					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.68	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.506	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	555	1266	467
d_b, Bicycle Delay [s]	23.48	6.06	26.46
I_b,int, Bicycle LOS Score for Intersection	2.616	2.441	2.473
Bicycle LOS	B	B	B

Sequence

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



4123 2555 W. 190th Warehouse, Torrance

Vistro File: N:\...\4123 Caltrans.vistro

Scenario 4 PM E+A

Report File: N:\...\PM E+A.pdf

7/26/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	I-405 NB Ramps at 182nd Street	Signalized	HCM 6th Edition	WB Left	0.787	21.3	C
3	Crenshaw Boulevard at I-405 SB Ramps	Signalized	HCM 6th Edition	SB Right	0.650	29.8	C
4	Western Avenue at I-405 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.785	17.4	B
10	I-405 SB Ramps at 190th St	Signalized	HCM 6th Edition	SB Right	0.675	20.2	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	21.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.787

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇑⇐		⇐⇑⇑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	787	60	875	669	132	525
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	787	60	875	669	132	525
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	197	15	219	167	33	131
Total Analysis Volume [veh/h]	787	60	875	669	132	525
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	65	0	25	0	0	25
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	18	0	14	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	57	57	57	57
g / C, Green / Cycle	0.28	0.28	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.24	0.24	0.41	0.48	0.39	0.15
s, saturation flow rate [veh/h]	1781	1751	1870	1622	335	3560
c, Capacity [veh/h]	490	482	1188	1031	175	2263
d1, Uniform Delay [s]	30.98	31.07	10.16	11.39	35.69	7.00
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.78	5.16	2.76	4.99	25.37	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.87	0.65	0.75	0.75	0.23
d, Delay for Lane Group [s/veh]	35.76	36.23	12.92	16.37	61.06	7.24
Lane Group LOS	D	D	B	B	E	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.14	9.14	9.10	10.61	4.15	1.99
50th-Percentile Queue Length [ft/ln]	228.49	228.43	227.61	265.22	103.82	49.85
95th-Percentile Queue Length [veh/ln]	14.10	14.09	14.05	15.95	7.48	3.59
95th-Percentile Queue Length [ft/ln]	352.45	352.36	351.32	398.76	186.88	89.74

Movement, Approach, & Intersection Results

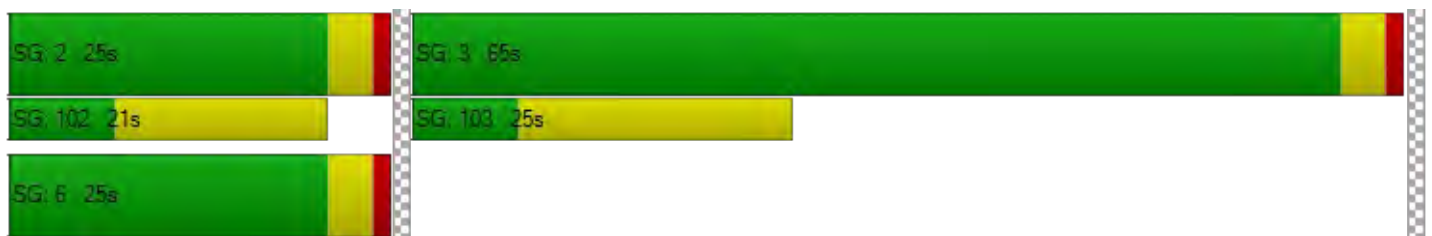
d_M, Delay for Movement [s/veh]	35.97	36.23	13.33	16.37	61.06	7.24
Movement LOS	D	D	B	B	E	A
d_A, Approach Delay [s/veh]	35.99		14.65		18.05	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	21.31					
Intersection LOS	C					
Intersection V/C	0.787					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.63	0.00	34.63
I_p,int, Pedestrian LOS Score for Intersection	2.663	0.000	2.610
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1357	467	467
d_b, Bicycle Delay [s]	4.65	26.41	26.41
I_b,int, Bicycle LOS Score for Intersection	2.957	2.833	2.102
Bicycle LOS	C	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Crenshaw Boulevard at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	29.8
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.650

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	121	2043	1455	125	208	918
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	2043	1455	125	208	918
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	511	364	31	52	230
Total Analysis Volume [veh/h]	121	2043	1455	125	208	918
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	95
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	30	30	30	0	30	30
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	32	66	34	0	29	29
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	11	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	95	95	95	95	95	95
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	28	62	30	30	25	57
g / C, Green / Cycle	0.29	0.65	0.32	0.32	0.26	0.60
(v / s)_i Volume / Saturation Flow Rate	0.07	0.40	0.30	0.29	0.12	0.58
s, saturation flow rate [veh/h]	1781	5094	3560	1795	1781	1589
c, Capacity [veh/h]	523	3324	1128	569	469	952
d1, Uniform Delay [s]	25.44	9.58	31.49	31.39	29.20	18.09
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.22	0.86	14.97	23.33	0.66	21.70
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.61	0.93	0.93	0.44	0.96
d, Delay for Lane Group [s/veh]	25.66	10.44	46.46	54.71	29.86	39.79
Lane Group LOS	C	B	D	D	C	D
Critical Lane Group	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.08	7.41	13.67	14.97	3.99	22.49
50th-Percentile Queue Length [ft/ln]	51.99	185.28	341.67	374.19	99.65	562.32
95th-Percentile Queue Length [veh/ln]	3.74	11.88	19.73	21.31	7.18	30.27
95th-Percentile Queue Length [ft/ln]	93.58	296.89	493.24	532.81	179.38	756.77

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	25.66	10.44	48.74	54.71	29.86	39.79
Movement LOS	C	B	D	D	C	D
d_A, Approach Delay [s/veh]	11.29		49.21		37.95	
Approach LOS	B		D		D	
d_I, Intersection Delay [s/veh]	29.76					
Intersection LOS	C					
Intersection V/C	0.650					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	37.14
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.388
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1305	631	526
d_b, Bicycle Delay [s]	5.74	22.24	25.80
I_b,int, Bicycle LOS Score for Intersection	2.750	2.429	1.560
Bicycle LOS	B	B	A

Sequence




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



Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	17.4
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.785

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration						
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1524	585	54	1028	605	210
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1524	585	54	1028	605	210
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	381	146	14	257	151	53
Total Analysis Volume [veh/h]	1524	585	54	1028	605	210
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	5	5	5	5	0
Maximum Green [s]	30	30	30	30	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	22	22	9	31	59	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	7	7	0	0	7	0
Pedestrian Clearance [s]	11	11	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	48	78	56	56	26	26
g / C, Green / Cycle	0.53	0.87	0.62	0.62	0.29	0.29
(v / s)_i Volume / Saturation Flow Rate	0.43	0.37	0.11	0.20	0.23	0.24
s, saturation flow rate [veh/h]	3560	1589	492	5094	1781	1675
c, Capacity [veh/h]	1889	1381	300	3144	524	492
d1, Uniform Delay [s]	17.36	1.23	13.73	8.27	29.25	29.49
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.82	0.95	1.31	0.28	2.74	3.31
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.81	0.42	0.18	0.33	0.79	0.81
d, Delay for Lane Group [s/veh]	21.17	2.18	15.04	8.54	32.00	32.80
Lane Group LOS	C	A	B	A	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	12.78	0.72	0.48	2.95	8.38	8.23
50th-Percentile Queue Length [ft/ln]	319.48	18.00	12.04	73.77	209.55	205.71
95th-Percentile Queue Length [veh/ln]	18.64	1.30	0.87	5.31	13.13	12.93
95th-Percentile Queue Length [ft/ln]	466.04	32.39	21.67	132.79	328.25	323.32

Movement, Approach, & Intersection Results

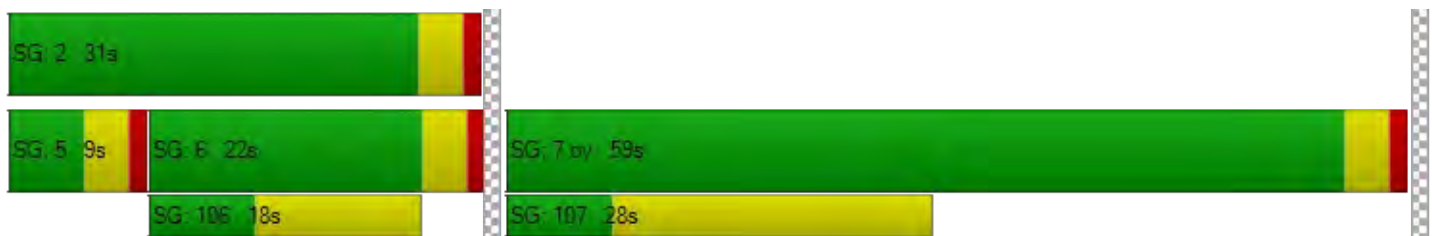
d_M, Delay for Movement [s/veh]	21.17	2.18	15.04	8.54	32.25	32.80
Movement LOS	C	A	B	A	C	C
d_A, Approach Delay [s/veh]	15.91		8.87		32.39	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	17.36					
Intersection LOS	B					
Intersection V/C	0.785					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	34.68	34.68
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.910	2.455
Crosswalk LOS	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	600	1222
d_b, Bicycle Delay [s]	28.81	22.06	6.81
I_b,int, Bicycle LOS Score for Intersection	3.300	2.155	2.904
Bicycle LOS	C	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	20.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.675

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐ ⇐		⇐ ⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	637	11	608	1496	1157	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	637	11	608	1496	1157	109
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	159	3	152	374	289	27
Total Analysis Volume [veh/h]	637	11	608	1496	1157	109
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	33	0	32	57	25	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	19	63	40	40
g / C, Green / Cycle	0.21	0.21	0.21	0.70	0.45	0.45
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.18	0.29	0.23	0.07
s, saturation flow rate [veh/h]	1781	1774	3459	5094	5094	1589
c, Capacity [veh/h]	379	378	720	3556	2269	708
d1, Uniform Delay [s]	34.09	34.10	34.25	5.81	17.92	14.87
k, delay calibration	0.12	0.12	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.06	6.11	2.82	0.37	0.82	0.46
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.86	0.84	0.42	0.51	0.15
d, Delay for Lane Group [s/veh]	40.16	40.21	37.06	6.18	18.74	15.33
Lane Group LOS	D	D	D	A	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.31	7.29	6.52	3.41	5.65	1.38
50th-Percentile Queue Length [ft/ln]	182.68	182.14	163.06	85.30	141.23	34.38
95th-Percentile Queue Length [veh/ln]	11.74	11.71	10.71	6.14	9.55	2.48
95th-Percentile Queue Length [ft/ln]	293.51	292.81	267.78	153.54	238.68	61.88

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.18	40.21	37.06	6.18	18.74	15.33
Movement LOS	D	D	D	A	B	B
d_A, Approach Delay [s/veh]	40.18		15.10		18.44	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	20.20					
Intersection LOS	C					
Intersection V/C	0.675					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.68	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.463	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	644	1177	467
d_b, Bicycle Delay [s]	20.68	7.61	26.46
I_b,int, Bicycle LOS Score for Intersection	2.629	2.717	2.256
Bicycle LOS	B	B	B

Sequence

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



APPENDIX D-III

**EXISTING WITH AMBIENT GROWTH (YEAR 2024)
WITH PROJECT TRAFFIC CONDITIONS**

4123 2555 W. 190th Warehouse, Torrance

Vistro File: N:\...\4123 Caltrans.vistro

Scenario 5 AM E+A+P

Report File: N:\...\AM E+A+P.pdf

7/26/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	I-405 NB Ramps at 182nd Street	Signalized	HCM 6th Edition	NB Right	0.523	15.5	B
3	Crenshaw Boulevard at I-405 SB Ramps	Signalized	HCM 6th Edition	SB Right	0.871	43.4	D
4	Western Avenue at I-405 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.783	21.1	C
10	I-405 SB Ramps at 190th St	Signalized	HCM 6th Edition	SB Right	0.841	26.3	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	15.5
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.523

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇑⇐		⇐⇑⇑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	617	16	450	425	189	712
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	617	16	450	425	189	712
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	154	4	113	106	47	178
Total Analysis Volume [veh/h]	617	16	450	425	189	712
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	55	0	35	0	0	35
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	18	0	14	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	63	63	63	63
g / C, Green / Cycle	0.21	0.21	0.70	0.70	0.70	0.70
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.23	0.27	0.30	0.20
s, saturation flow rate [veh/h]	1781	1770	1870	1596	633	3560
c, Capacity [veh/h]	372	370	1312	1120	430	2498
d1, Uniform Delay [s]	34.12	34.12	5.21	5.50	12.86	4.99
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	5.55	5.60	0.68	1.03	3.25	0.29
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.85	0.33	0.39	0.44	0.29
d, Delay for Lane Group [s/veh]	39.67	39.72	5.90	6.52	16.11	5.28
Lane Group LOS	D	D	A	A	B	A
Critical Lane Group	No	Yes	No	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.07	7.04	2.86	3.08	2.63	2.14
50th-Percentile Queue Length [ft/ln]	176.87	176.02	71.55	76.91	65.71	53.38
95th-Percentile Queue Length [veh/ln]	11.44	11.39	5.15	5.54	4.73	3.84
95th-Percentile Queue Length [ft/ln]	285.92	284.81	128.80	138.43	118.28	96.08

Movement, Approach, & Intersection Results

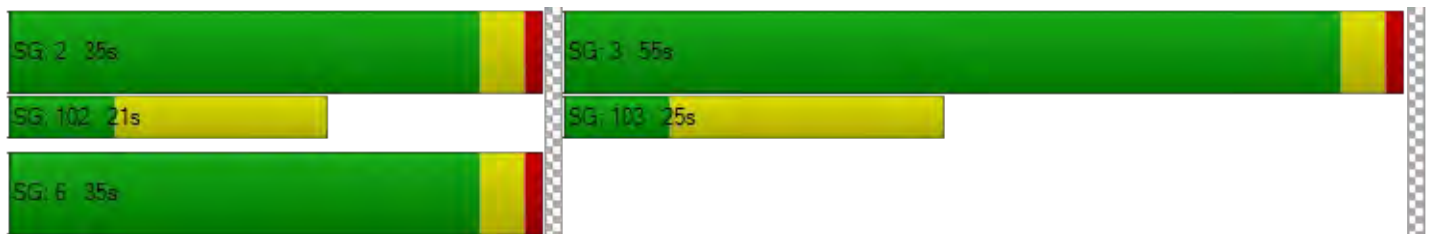
d_M, Delay for Movement [s/veh]	39.69	39.72	5.91	6.52	16.11	5.28
Movement LOS	D	D	A	A	B	A
d_A, Approach Delay [s/veh]	39.69		6.21		7.55	
Approach LOS	D		A		A	
d_I, Intersection Delay [s/veh]	15.51					
Intersection LOS	B					
Intersection V/C	0.523					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.59	0.00	34.59
I_p,int, Pedestrian LOS Score for Intersection	2.614	0.000	2.566
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1136	690	690
d_b, Bicycle Delay [s]	8.39	19.26	19.26
I_b,int, Bicycle LOS Score for Intersection	2.604	2.281	2.303
Bicycle LOS	B	B	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Crenshaw Boulevard at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	43.4
Analysis Method:	HCM 6th Edition	Level Of Service:	D
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.871

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration	↵		↵		↵↵	
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	608	1461	1471	434	74	925
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	608	1461	1471	434	74	925
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	152	365	368	109	19	231
Total Analysis Volume [veh/h]	608	1461	1471	434	74	925
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	105
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	30	30	30	0	30	30
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	43	85	42	0	20	20
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	11	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	105	105	105	105	105	105
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	38	81	39	39	16	58
g / C, Green / Cycle	0.36	0.77	0.37	0.37	0.15	0.55
(v / s)_i Volume / Saturation Flow Rate	0.34	0.29	0.36	0.38	0.04	0.58
s, saturation flow rate [veh/h]	1781	5094	3560	1669	1781	1589
c, Capacity [veh/h]	646	3927	1318	618	272	880
d1, Uniform Delay [s]	32.40	3.86	32.35	33.05	39.30	23.44
k, delay calibration	0.40	0.50	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	20.38	0.27	17.42	43.43	0.53	44.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.94	0.37	0.96	1.03	0.27	1.05
d, Delay for Lane Group [s/veh]	52.78	4.14	49.77	76.48	39.83	68.21
Lane Group LOS	D	A	D	F	D	F
Critical Lane Group	No	No	No	Yes	No	Yes
50th-Percentile Queue Length [veh/ln]	18.16	2.69	18.46	22.64	1.73	30.93
50th-Percentile Queue Length [ft/ln]	453.89	67.17	461.61	566.02	43.14	773.19
95th-Percentile Queue Length [veh/ln]	25.14	4.84	25.51	31.04	3.11	41.73
95th-Percentile Queue Length [ft/ln]	628.59	120.90	637.79	775.90	77.65	1043.20

Movement, Approach, & Intersection Results

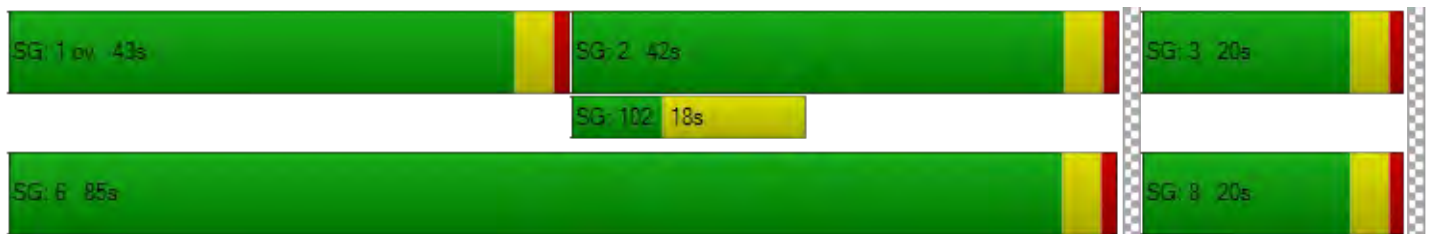
d_M, Delay for Movement [s/veh]	52.78	4.14	53.42	76.48	39.83	68.21
Movement LOS	D	A	D	E	D	F
d_A, Approach Delay [s/veh]	18.43		58.68		66.11	
Approach LOS	B		E		E	
d_I, Intersection Delay [s/veh]	43.42					
Intersection LOS	D					
Intersection V/C	0.871					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	42.07
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.611
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1543	724	305
d_b, Bicycle Delay [s]	2.74	21.37	37.72
I_b,int, Bicycle LOS Score for Intersection	2.698	2.607	1.560
Bicycle LOS	B	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	21.1
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.783

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↔		↔		↔↔	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1059	377	33	1243	1087	187
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1059	377	33	1243	1087	187
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	265	94	8	311	272	47
Total Analysis Volume [veh/h]	1059	377	33	1243	1087	187
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	5	5	5	5	0
Maximum Green [s]	30	30	30	30	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	22	22	9	31	59	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	7	7	0	0	7	0
Pedestrian Clearance [s]	11	11	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	37	79	44	44	38	38
g / C, Green / Cycle	0.41	0.88	0.49	0.49	0.42	0.42
(v / s)_i Volume / Saturation Flow Rate	0.30	0.24	0.05	0.24	0.36	0.37
s, saturation flow rate [veh/h]	3560	1589	672	5094	1781	1720
c, Capacity [veh/h]	1472	1397	314	2497	750	724
d1, Uniform Delay [s]	22.06	0.87	14.99	15.48	23.50	23.97
k, delay calibration	0.50	0.50	0.50	0.50	0.16	0.17
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	3.06	0.48	0.67	0.71	4.07	5.74
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.72	0.27	0.11	0.50	0.85	0.88
d, Delay for Lane Group [s/veh]	25.12	1.34	15.66	16.19	27.57	29.72
Lane Group LOS	C	A	B	B	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	9.50	0.25	0.39	5.57	12.35	12.89
50th-Percentile Queue Length [ft/ln]	237.40	6.27	9.75	139.24	308.76	322.22
95th-Percentile Queue Length [veh/ln]	14.55	0.45	0.70	9.44	18.11	18.78
95th-Percentile Queue Length [ft/ln]	363.74	11.29	17.56	236.00	452.85	469.41

Movement, Approach, & Intersection Results

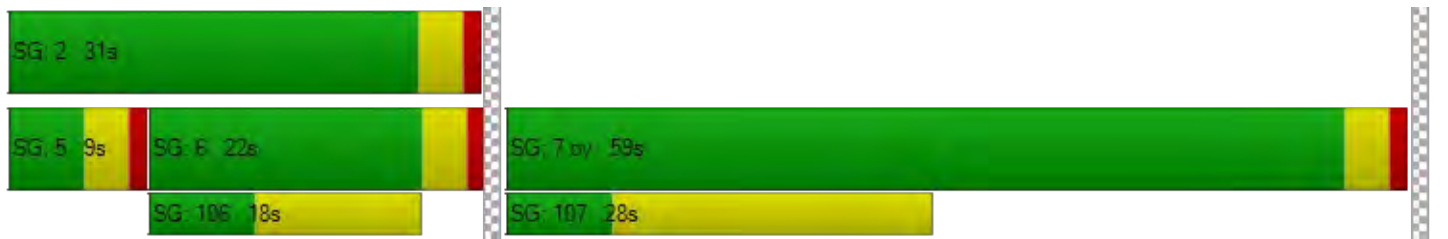
d_M, Delay for Movement [s/veh]	25.12	1.34	15.66	16.19	28.46	29.72
Movement LOS	C	A	B	B	C	C
d_A, Approach Delay [s/veh]	18.88		16.18		28.64	
Approach LOS	B		B		C	
d_I, Intersection Delay [s/veh]	21.14					
Intersection LOS	C					
Intersection V/C	0.783					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	34.68	34.68
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.862	2.507
Crosswalk LOS	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	600	1222
d_b, Bicycle Delay [s]	28.81	22.06	6.81
I_b,int, Bicycle LOS Score for Intersection	2.744	2.261	3.662
Bicycle LOS	B	B	D

Sequence

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



Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	26.3
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.841

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐ ⇐		⇐ ⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	532	115	781	844	1614	131
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	532	115	781	844	1614	131
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	133	29	195	211	404	33
Total Analysis Volume [veh/h]	532	115	781	844	1614	131
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	29	0	36	61	25	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	23	63	35	35
g / C, Green / Cycle	0.21	0.21	0.26	0.70	0.39	0.39
(v / s)_i Volume / Saturation Flow Rate	0.19	0.19	0.23	0.17	0.32	0.08
s, saturation flow rate [veh/h]	1781	1706	3459	5094	5094	1589
c, Capacity [veh/h]	382	366	901	3550	1996	623
d1, Uniform Delay [s]	34.11	34.14	31.80	4.96	24.37	18.14
k, delay calibration	0.12	0.13	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.72	7.26	2.69	0.16	3.65	0.77
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.86	0.87	0.87	0.24	0.81	0.21
d, Delay for Lane Group [s/veh]	40.82	41.41	34.49	5.12	28.02	18.91
Lane Group LOS	D	D	C	A	C	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.50	7.27	8.21	1.63	10.37	1.89
50th-Percentile Queue Length [ft/ln]	187.41	181.84	205.28	40.85	259.31	47.27
95th-Percentile Queue Length [veh/ln]	11.99	11.70	12.91	2.94	15.65	3.40
95th-Percentile Queue Length [ft/ln]	299.67	292.42	322.76	73.54	391.35	85.09

Movement, Approach, & Intersection Results

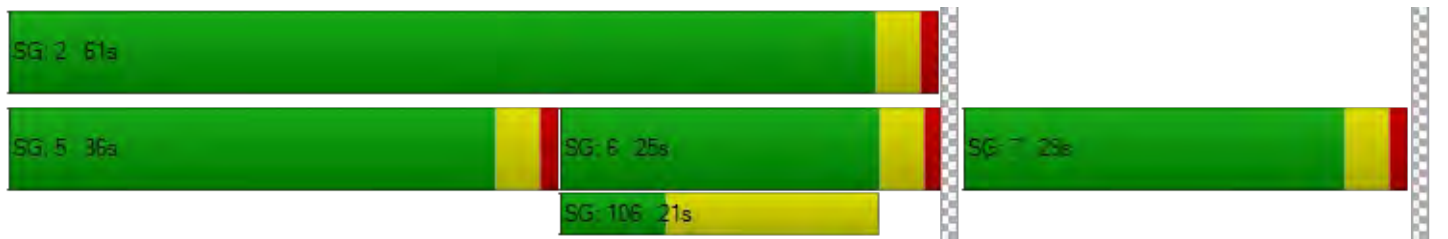
d_M, Delay for Movement [s/veh]	41.05	41.41	34.49	5.12	28.02	18.91
Movement LOS	D	D	C	A	C	B
d_A, Approach Delay [s/veh]	41.11		19.23		27.34	
Approach LOS	D		B		C	
d_I, Intersection Delay [s/veh]	26.28					
Intersection LOS	C					
Intersection V/C	0.841					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.68	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.511	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	555	1266	467
d_b, Bicycle Delay [s]	23.48	6.06	26.46
I_b,int, Bicycle LOS Score for Intersection	2.627	2.453	2.519
Bicycle LOS	B	B	B

Sequence

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



4123 2555 W. 190th Warehouse, Torrance

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Scenario 6 PM E+A+P

Report File: N:\...\PM E+A+P.pdf

7/26/2022

Intersection Analysis Summary

ID	Intersection Name	Control Type	Method	Worst Mvmt	V/C	Delay (s/veh)	LOS
2	I-405 NB Ramps at 182nd Street	Signalized	HCM 6th Edition	WB Left	0.804	22.0	C
3	Crenshaw Boulevard at I-405 SB Ramps	Signalized	HCM 6th Edition	SB Right	0.628	34.2	C
4	Western Avenue at I-405 NB Ramps	Signalized	HCM 6th Edition	WB Right	0.794	17.7	B
10	I-405 SB Ramps at 190th St	Signalized	HCM 6th Edition	SB Right	0.700	20.6	C

V/C, Delay, LOS: For two-way stop, these values are taken from the movement with the worst (highest) delay value. For all other control types, they are taken for the whole intersection.

Intersection Level Of Service Report
Intersection 2: I-405 NB Ramps at 182nd Street

Control Type:	Signalized	Delay (sec / veh):	22.0
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.804

Intersection Setup

Name	I-405 NB Ramps		182nd St		182nd St	
Approach	Northbound		Eastbound		Westbound	
Lane Configuration	⇐⇐		⇑⇐		⇐⇑⇑	
Turning Movement	Left	Right	Thru	Right	Left	Thru
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		Yes	

Volumes

Name	I-405 NB Ramps		182nd St		182nd St	
Base Volume Input [veh/h]	787	60	885	705	132	525
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	787	60	885	705	132	525
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	197	15	221	176	33	131
Total Analysis Volume [veh/h]	787	60	885	705	132	525
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	8.00

Phasing & Timing

Control Type	Split	Split	Permissive	Permissive	Permissive	Permissive
Signal Group	3	0	2	0	0	6
Auxiliary Signal Groups						
Lead / Lag	Lead	-	-	-	-	-
Minimum Green [s]	5	0	5	0	0	5
Maximum Green [s]	30	0	30	0	0	30
Amber [s]	3.0	0.0	3.0	0.0	0.0	3.0
All red [s]	1.0	0.0	1.0	0.0	0.0	1.0
Split [s]	65	0	25	0	0	25
Vehicle Extension [s]	3.0	0.0	3.0	0.0	0.0	3.0
Walk [s]	7	0	7	0	0	0
Pedestrian Clearance [s]	18	0	14	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No		No			No
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	0.0	0.0	2.0
Minimum Recall	No		No			No
Maximum Recall	No		No			No
Pedestrian Recall	No		No			No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	2.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	25	25	57	57	57	57
g / C, Green / Cycle	0.28	0.28	0.64	0.64	0.64	0.64
(v / s)_i Volume / Saturation Flow Rate	0.24	0.24	0.43	0.49	0.41	0.15
s, saturation flow rate [veh/h]	1781	1751	1870	1617	321	3560
c, Capacity [veh/h]	490	482	1188	1028	165	2263
d1, Uniform Delay [s]	30.98	31.07	10.38	11.74	37.34	7.00
k, delay calibration	0.11	0.11	0.50	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.78	5.16	3.00	5.67	32.40	0.24
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.87	0.87	0.67	0.77	0.80	0.23
d, Delay for Lane Group [s/veh]	35.76	36.23	13.38	17.41	69.74	7.24
Lane Group LOS	D	D	B	B	E	A
Critical Lane Group	No	Yes	No	Yes	No	No
50th-Percentile Queue Length [veh/ln]	9.14	9.14	9.61	11.36	4.40	1.99
50th-Percentile Queue Length [ft/ln]	228.49	228.43	240.21	284.11	109.96	49.85
95th-Percentile Queue Length [veh/ln]	14.10	14.09	14.69	16.89	7.84	3.59
95th-Percentile Queue Length [ft/ln]	352.45	352.36	367.30	422.33	195.95	89.74

Movement, Approach, & Intersection Results

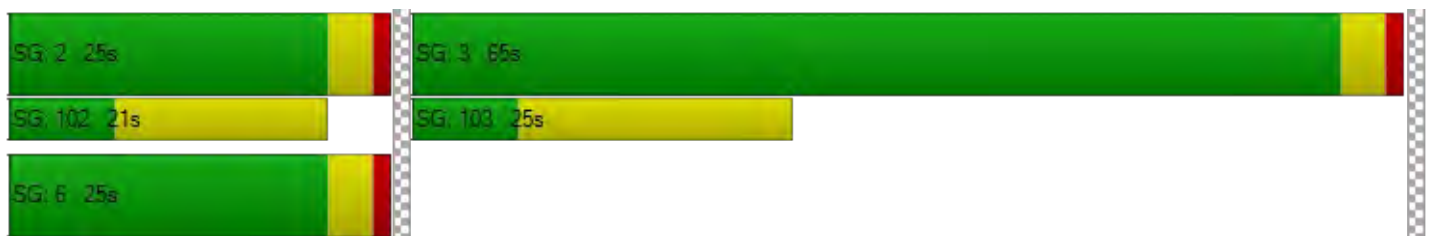
d_M, Delay for Movement [s/veh]	35.97	36.23	13.79	17.41	69.74	7.24
Movement LOS	D	D	B	B	E	A
d_A, Approach Delay [s/veh]	35.99		15.39		19.80	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	21.97					
Intersection LOS	C					
Intersection V/C	0.804					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.63	0.00	34.63
I_p,int, Pedestrian LOS Score for Intersection	2.675	0.000	2.612
Crosswalk LOS	B	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1357	467	467
d_b, Bicycle Delay [s]	4.65	26.41	26.41
I_b,int, Bicycle LOS Score for Intersection	2.957	2.871	2.102
Bicycle LOS	C	C	B

Sequence

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



Intersection Level Of Service Report
Intersection 3: Crenshaw Boulevard at I-405 SB Ramps

Control Type:	Signalized	Delay (sec / veh):	34.2
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.628

Intersection Setup

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Approach	Northbound		Southbound		Eastbound	
Lane Configuration						
Turning Movement	Left	Thru	Thru	Right	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	0	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		No		Yes	

Volumes

Name	Crenshaw Blvd		Crenshaw Blvd		I-405 SB Ramps	
Base Volume Input [veh/h]	121	2110	1464	125	208	929
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	121	2110	1464	125	208	929
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	30	528	366	31	52	232
Total Analysis Volume [veh/h]	121	2110	1464	125	208	929
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	120
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Protected	Permissive	Permissive	Permissive	Split	Overlap
Signal Group	1	6	2	0	3	8
Auxiliary Signal Groups						1,8
Lead / Lag	Lead	-	-	-	Lead	-
Minimum Green [s]	5	5	5	0	5	5
Maximum Green [s]	30	30	30	0	30	30
Amber [s]	3.0	3.0	3.0	0.0	3.0	3.0
All red [s]	1.0	1.0	1.0	0.0	1.0	1.0
Split [s]	40	82	42	0	38	38
Vehicle Extension [s]	3.0	3.0	3.0	0.0	3.0	3.0
Walk [s]	0	0	7	0	0	0
Pedestrian Clearance [s]	0	0	11	0	0	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk		No	No		No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	0.0	2.0	2.0
Minimum Recall	No	No	No		No	No
Maximum Recall	No	No	No		No	No
Pedestrian Recall	No	No	No		No	No
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	C	C	L	R
C, Cycle Length [s]	120	120	120	120	120	120
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	0.00
g_i, Effective Green Time [s]	36	78	38	38	34	74
g / C, Green / Cycle	0.30	0.65	0.32	0.32	0.28	0.62
(v / s)_i Volume / Saturation Flow Rate	0.07	0.41	0.30	0.30	0.12	0.58
s, saturation flow rate [veh/h]	1781	5094	3560	1795	1781	1589
c, Capacity [veh/h]	534	3311	1127	568	505	980
d1, Uniform Delay [s]	31.53	12.55	39.86	39.72	34.87	21.21
k, delay calibration	0.11	0.50	0.50	0.50	0.11	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	0.21	0.95	15.73	24.19	0.54	18.61
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.23	0.64	0.94	0.93	0.41	0.95
d, Delay for Lane Group [s/veh]	31.74	13.50	55.60	63.91	35.41	39.82
Lane Group LOS	C	B	E	E	D	D
Critical Lane Group	No	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	2.69	10.83	17.46	18.76	5.02	27.18
50th-Percentile Queue Length [ft/ln]	67.14	270.84	436.47	469.04	125.51	679.44
95th-Percentile Queue Length [veh/ln]	4.83	16.23	24.31	25.87	8.70	35.73
95th-Percentile Queue Length [ft/ln]	120.85	405.79	607.78	646.63	217.38	893.19

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	31.74	13.50	57.89	63.91	35.41	39.82
Movement LOS	C	B	E	E	D	D
d_A, Approach Delay [s/veh]	14.49		58.37		39.01	
Approach LOS	B		E		D	
d_I, Intersection Delay [s/veh]	34.18					
Intersection LOS	C					
Intersection V/C	0.628					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	0.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	0.00	49.49
I_p,int, Pedestrian LOS Score for Intersection	0.000	0.000	2.403
Crosswalk LOS	F	F	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	1300	634	567
d_b, Bicycle Delay [s]	7.34	28.00	30.80
I_b,int, Bicycle LOS Score for Intersection	2.787	2.434	1.560
Bicycle LOS	C	B	A

Sequence

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



Intersection Level Of Service Report
Intersection 4: Western Avenue at I-405 NB Ramps

Control Type:	Signalized	Delay (sec / veh):	17.7
Analysis Method:	HCM 6th Edition	Level Of Service:	B
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.794

Intersection Setup

Name	Western Ave		Western Ave		I-405 NB Ramps	
Approach	Northbound		Southbound		Westbound	
Lane Configuration	↔		↔		↔↔	
Turning Movement	Thru	Right	Left	Thru	Left	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	0	1	1	0	1	0
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	No		Yes		Yes	

Volumes

Name	Western Ave		Western Ave		I-405 NB Ramps	
Base Volume Input [veh/h]	1529	585	54	1035	624	210
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	1529	585	54	1035	624	210
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	382	146	14	259	156	53
Total Analysis Volume [veh/h]	1529	585	54	1035	624	210
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Overlap	ProtPerm	Permissive	Split	Split
Signal Group	6	6	5	2	7	0
Auxiliary Signal Groups		6,7				
Lead / Lag	-	-	Lead	-	Lead	-
Minimum Green [s]	5	5	5	5	5	0
Maximum Green [s]	30	30	30	30	30	0
Amber [s]	3.0	3.0	3.0	3.0	3.0	0.0
All red [s]	1.0	1.0	1.0	1.0	1.0	0.0
Split [s]	22	22	14	36	54	0
Vehicle Extension [s]	3.0	3.0	3.0	3.0	3.0	0.0
Walk [s]	7	7	0	0	7	0
Pedestrian Clearance [s]	11	11	0	0	21	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	2.0	2.0	2.0	2.0	0.0
Minimum Recall	No	No	No	No	No	
Maximum Recall	No	No	No	No	No	
Pedestrian Recall	No	No	No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	C	R	L	C	L	C
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	0.00	0.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	47	78	55	55	27	27
g / C, Green / Cycle	0.53	0.87	0.61	0.61	0.30	0.30
(v / s)_i Volume / Saturation Flow Rate	0.43	0.37	0.11	0.20	0.24	0.24
s, saturation flow rate [veh/h]	3560	1589	492	5094	1781	1678
c, Capacity [veh/h]	1869	1381	296	3116	533	502
d1, Uniform Delay [s]	17.80	1.23	14.18	8.52	28.99	29.26
k, delay calibration	0.50	0.50	0.50	0.50	0.11	0.11
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	4.12	0.95	1.35	0.29	2.73	3.34
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.82	0.42	0.18	0.33	0.79	0.82
d, Delay for Lane Group [s/veh]	21.92	2.18	15.53	8.80	31.72	32.60
Lane Group LOS	C	A	B	A	C	C
Critical Lane Group	Yes	No	Yes	No	No	Yes
50th-Percentile Queue Length [veh/ln]	13.10	0.72	0.49	3.04	8.53	8.43
50th-Percentile Queue Length [ft/ln]	327.42	18.00	12.27	75.90	213.37	210.64
95th-Percentile Queue Length [veh/ln]	19.03	1.30	0.88	5.46	13.33	13.19
95th-Percentile Queue Length [ft/ln]	475.79	32.39	22.09	136.62	333.15	329.65

Movement, Approach, & Intersection Results

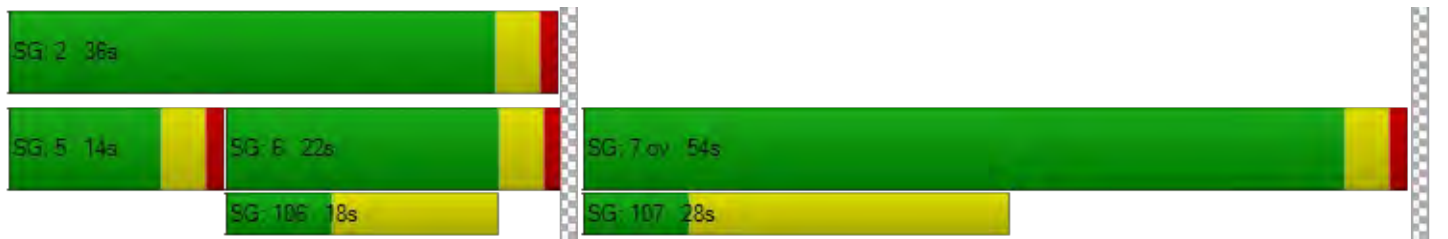
d_M, Delay for Movement [s/veh]	21.92	2.18	15.53	8.80	32.01	32.60
Movement LOS	C	A	B	A	C	C
d_A, Approach Delay [s/veh]	16.46		9.14		32.15	
Approach LOS	B		A		C	
d_I, Intersection Delay [s/veh]	17.73					
Intersection LOS	B					
Intersection V/C	0.794					

Other Modes

g_Walk,mi, Effective Walk Time [s]	0.0	11.0	11.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	0.00	34.68	34.68
I_p,int, Pedestrian LOS Score for Intersection	0.000	2.912	2.461
Crosswalk LOS	F	C	B
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	400	711	1111
d_b, Bicycle Delay [s]	28.81	18.70	8.90
I_b,int, Bicycle LOS Score for Intersection	3.304	2.159	2.936
Bicycle LOS	C	B	C

Sequence

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



Intersection Level Of Service Report
Intersection 10: I-405 SB Ramps at 190th St

Control Type:	Signalized	Delay (sec / veh):	20.6
Analysis Method:	HCM 6th Edition	Level Of Service:	C
Analysis Period:	15 minutes	Volume to Capacity (v/c):	0.700

Intersection Setup

Name	I-405 SB Ramps		190th St		190th St	
Approach	Southbound		Eastbound		Westbound	
Lane Configuration	⇐ ⇐		⇐ ⇐		⇐	
Turning Movement	Left	Right	Left	Thru	Thru	Right
Lane Width [ft]	12.00	12.00	12.00	12.00	12.00	12.00
No. of Lanes in Entry Pocket	1	0	1	0	0	1
Entry Pocket Length [ft]	100.00	100.00	100.00	100.00	100.00	100.00
No. of Lanes in Exit Pocket	0	0	0	0	0	0
Exit Pocket Length [ft]	0.00	0.00	0.00	0.00	0.00	0.00
Speed [mph]	30.00		30.00		30.00	
Grade [%]	0.00		0.00		0.00	
Curb Present	No		No		No	
Crosswalk	Yes		No		No	

Volumes

Name	I-405 SB Ramps		190th St		190th St	
Base Volume Input [veh/h]	637	15	652	1526	1194	109
Base Volume Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Heavy Vehicles Percentage [%]	2.00	2.00	2.00	2.00	2.00	2.00
Growth Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
In-Process Volume [veh/h]	0	0	0	0	0	0
Site-Generated Trips [veh/h]	0	0	0	0	0	0
Diverted Trips [veh/h]	0	0	0	0	0	0
Pass-by Trips [veh/h]	0	0	0	0	0	0
Existing Site Adjustment Volume [veh/h]	0	0	0	0	0	0
Other Volume [veh/h]	0	0	0	0	0	0
Right Turn on Red Volume [veh/h]	0	0	0	0	0	0
Total Hourly Volume [veh/h]	637	15	652	1526	1194	109
Peak Hour Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Other Adjustment Factor	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total 15-Minute Volume [veh/h]	159	4	163	382	299	27
Total Analysis Volume [veh/h]	637	15	652	1526	1194	109
Presence of On-Street Parking	No	No	No	No	No	No
On-Street Parking Maneuver Rate [/h]	0	0	0	0	0	0
Local Bus Stopping Rate [/h]	0	0	0	0	0	0
v_do, Outbound Pedestrian Volume crossing	0		0		0	
v_di, Inbound Pedestrian Volume crossing in	0		0		0	
v_co, Outbound Pedestrian Volume crossing	0		0		0	
v_ci, Inbound Pedestrian Volume crossing mi	0		0		0	
v_ab, Corner Pedestrian Volume [ped/h]	0		0		0	
Bicycle Volume [bicycles/h]	0		0		0	

Intersection Settings

Located in CBD	No
Signal Coordination Group	-
Cycle Length [s]	90
Coordination Type	Time of Day Pattern Coordinated
Actuation Type	Fully actuated
Offset [s]	0.0
Offset Reference	Lead Green - Beginning of First Green
Permissive Mode	SingleBand
Lost time [s]	12.00

Phasing & Timing

Control Type	Permissive	Permissive	Protected	Permissive	Permissive	Permissive
Signal Group	7	0	5	2	6	0
Auxiliary Signal Groups						
Lead / Lag	Lead	-	Lead	-	-	-
Minimum Green [s]	5	0	5	5	5	0
Maximum Green [s]	30	0	30	30	30	0
Amber [s]	3.0	0.0	3.0	3.0	3.0	0.0
All red [s]	1.0	0.0	1.0	1.0	1.0	0.0
Split [s]	34	0	31	56	25	0
Vehicle Extension [s]	3.0	0.0	3.0	3.0	3.0	0.0
Walk [s]	0	0	0	0	7	0
Pedestrian Clearance [s]	0	0	0	0	14	0
Delayed Vehicle Green [s]	0.0	0.0	0.0	0.0	0.0	0.0
Rest In Walk	No			No	No	
I1, Start-Up Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
I2, Clearance Lost Time [s]	2.0	0.0	2.0	2.0	2.0	0.0
Minimum Recall	No		No	No	No	
Maximum Recall	No		No	No	No	
Pedestrian Recall	No		No	No	No	
Detector Location [ft]	0.0	0.0	0.0	0.0	0.0	0.0
Detector Length [ft]	0.0	0.0	0.0	0.0	0.0	0.0
I, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00

Exclusive Pedestrian Phase

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

Lane Group Calculations

Lane Group	L	C	L	C	C	R
C, Cycle Length [s]	90	90	90	90	90	90
L, Total Lost Time per Cycle [s]	4.00	4.00	4.00	4.00	4.00	4.00
l1_p, Permitted Start-Up Lost Time [s]	0.00	0.00	0.00	0.00	0.00	0.00
l2, Clearance Lost Time [s]	2.00	2.00	2.00	2.00	2.00	2.00
g_i, Effective Green Time [s]	19	19	20	63	39	39
g / C, Green / Cycle	0.21	0.21	0.22	0.70	0.43	0.43
(v / s)_i Volume / Saturation Flow Rate	0.18	0.18	0.19	0.30	0.23	0.07
s, saturation flow rate [veh/h]	1781	1771	3459	5094	5094	1589
c, Capacity [veh/h]	382	380	762	3547	2200	686
d1, Uniform Delay [s]	34.00	34.01	33.74	5.92	18.99	15.61
k, delay calibration	0.12	0.12	0.11	0.50	0.50	0.50
l, Upstream Filtering Factor	1.00	1.00	1.00	1.00	1.00	1.00
d2, Incremental Delay [s]	6.11	6.18	2.91	0.38	0.97	0.49
d3, Initial Queue Delay [s]	0.00	0.00	0.00	0.00	0.00	0.00
Rp, platoon ratio	1.00	1.00	1.00	1.00	1.00	1.00
PF, progression factor	1.00	1.00	1.00	1.00	1.00	1.00

Lane Group Results

X, volume / capacity	0.85	0.86	0.86	0.43	0.54	0.16
d, Delay for Lane Group [s/veh]	40.12	40.19	36.65	6.31	19.95	16.10
Lane Group LOS	D	D	D	A	B	B
Critical Lane Group	No	Yes	Yes	No	Yes	No
50th-Percentile Queue Length [veh/ln]	7.36	7.33	6.98	3.54	6.08	1.42
50th-Percentile Queue Length [ft/ln]	183.91	183.19	174.62	88.53	151.99	35.46
95th-Percentile Queue Length [veh/ln]	11.80	11.77	11.32	6.37	10.12	2.55
95th-Percentile Queue Length [ft/ln]	295.12	294.18	282.98	159.35	253.08	63.83

Movement, Approach, & Intersection Results

d_M, Delay for Movement [s/veh]	40.15	40.19	36.65	6.31	19.95	16.10
Movement LOS	D	D	D	A	B	B
d_A, Approach Delay [s/veh]	40.15		15.39		19.63	
Approach LOS	D		B		B	
d_I, Intersection Delay [s/veh]	20.63					
Intersection LOS	C					
Intersection V/C	0.700					

Other Modes

g_Walk,mi, Effective Walk Time [s]	11.0	0.0	0.0
M_corner, Corner Circulation Area [ft ² /ped]	0.00	0.00	0.00
M_CW, Crosswalk Circulation Area [ft ² /ped]	0.00	0.00	0.00
d_p, Pedestrian Delay [s]	34.68	0.00	0.00
I_p,int, Pedestrian LOS Score for Intersection	2.475	0.000	0.000
Crosswalk LOS	B	F	F
s_b, Saturation Flow Rate of the bicycle lane	2000	2000	2000
c_b, Capacity of the bicycle lane [bicycles/h]	666	1155	467
d_b, Bicycle Delay [s]	20.01	8.03	26.46
I_b,int, Bicycle LOS Score for Intersection	2.635	2.758	2.276
Bicycle LOS	B	C	B

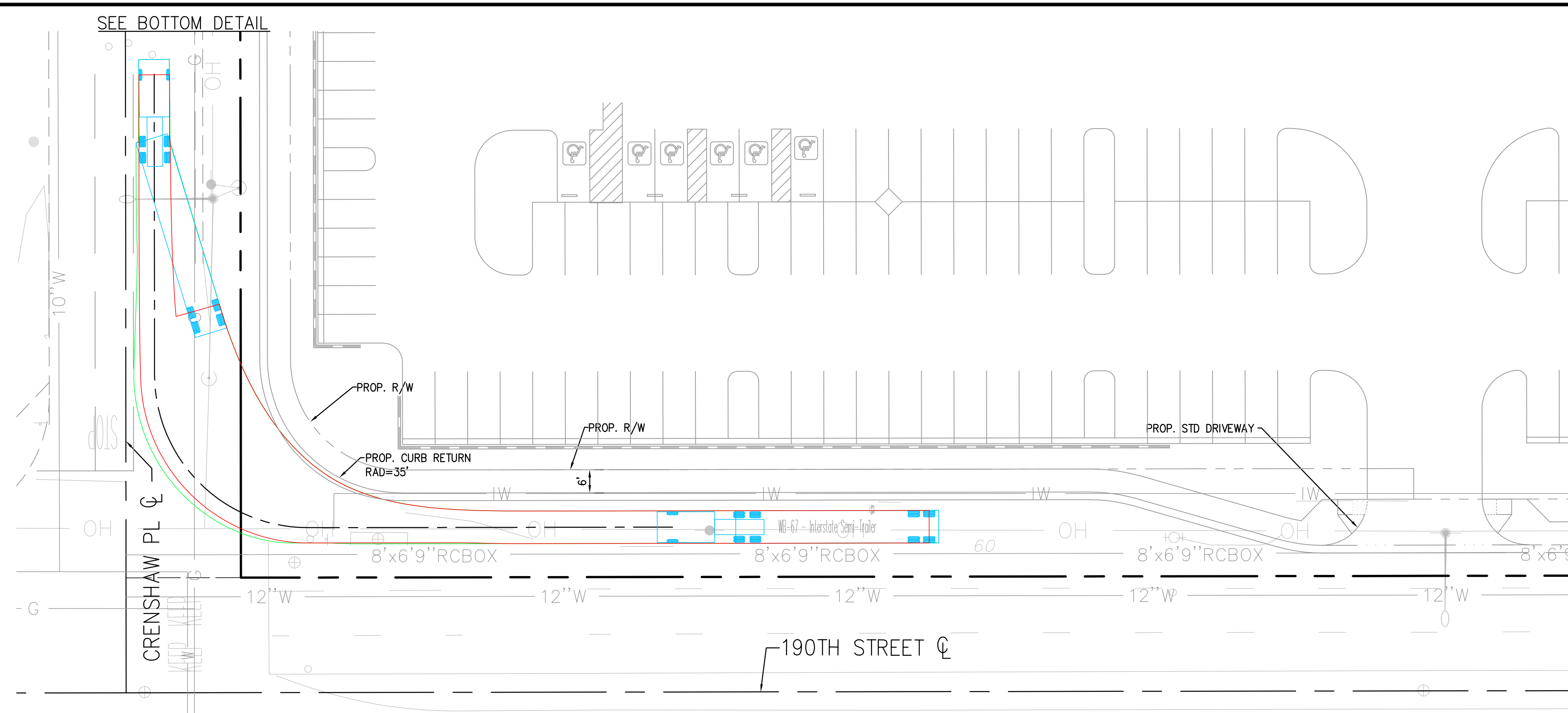
Sequence

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

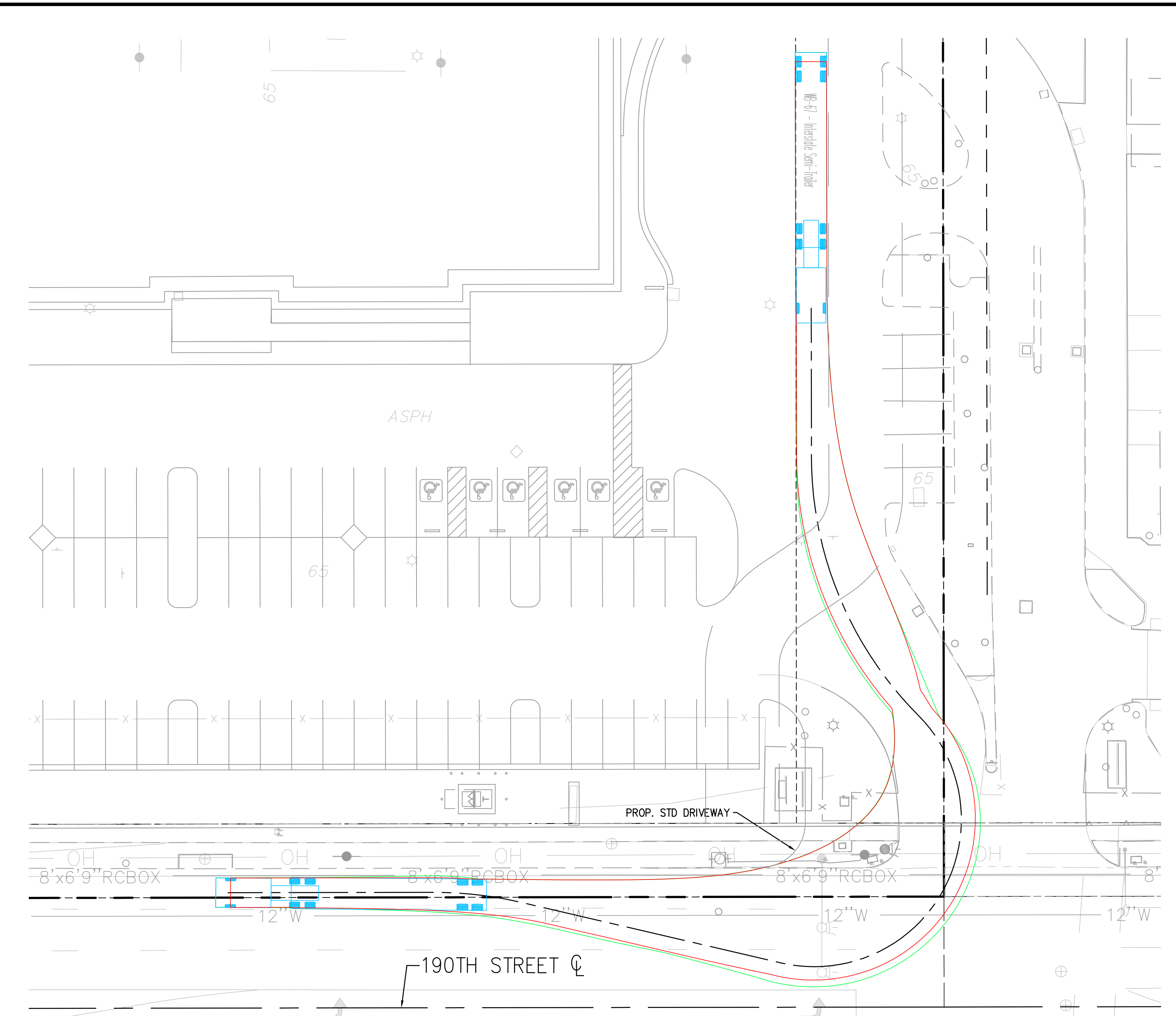


APPENDIX E

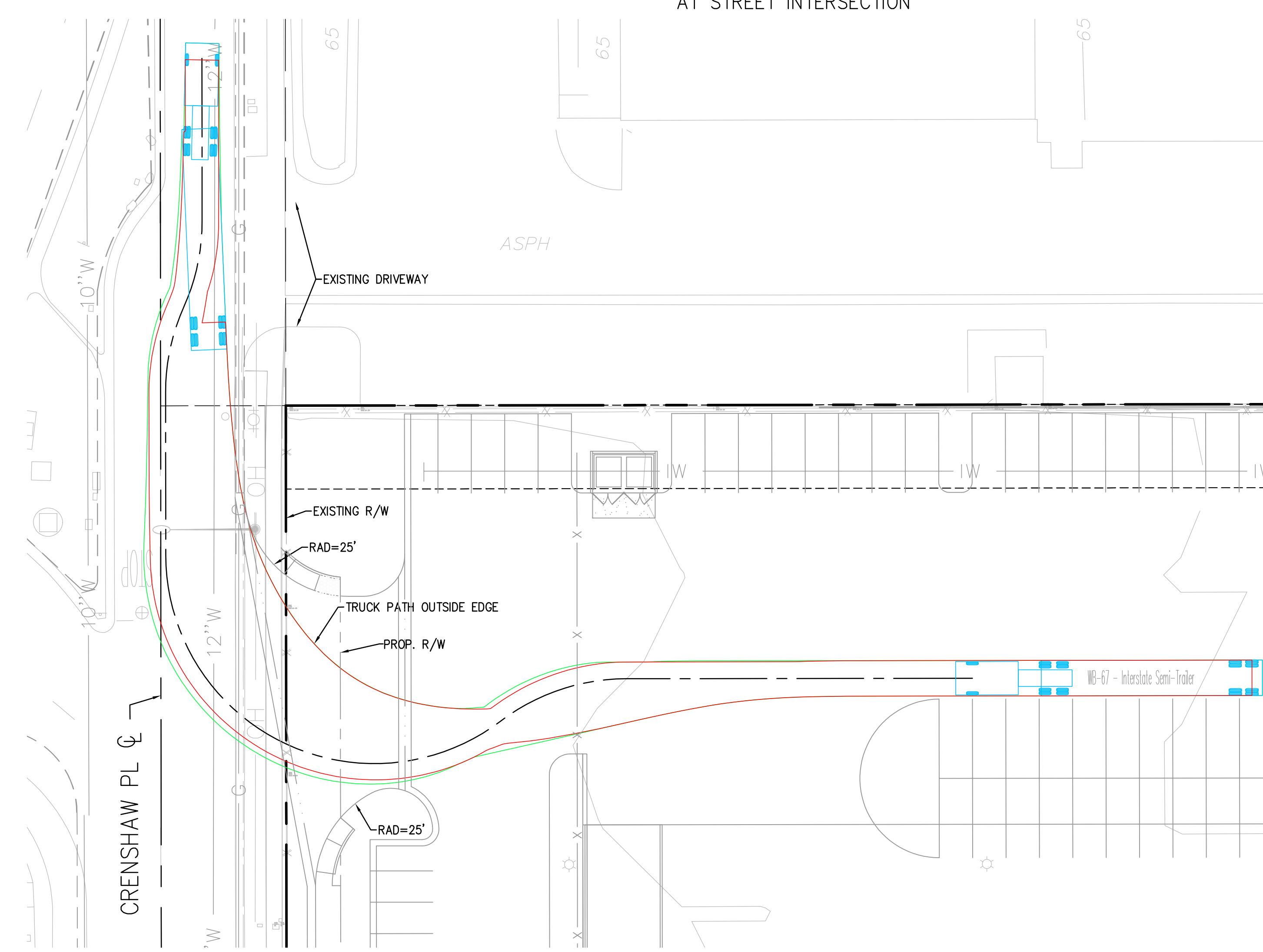
CITY APPROVED TRUCK PATH EXHIBITS PREPARED BY DRC ENGINEERING (DATED 9/27/24)



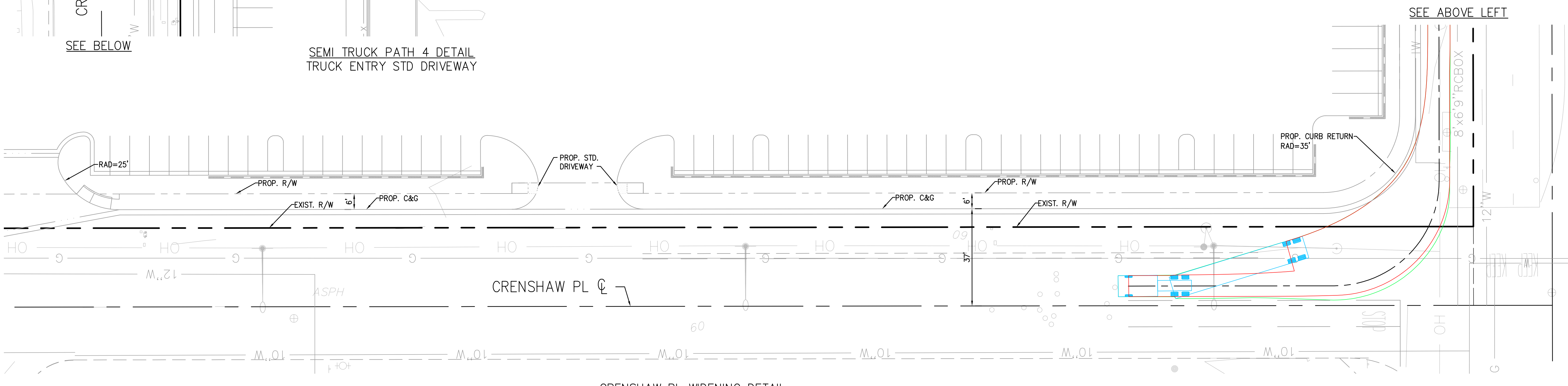
SEMI TRUCK PATH 2 DETAIL
AT STREET INTERSECTION



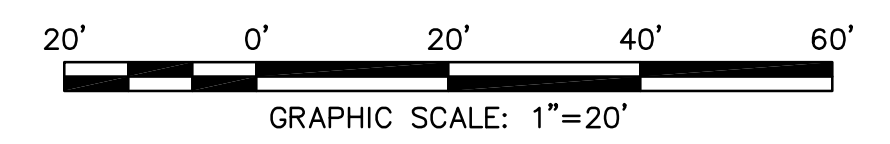
SEMI TRUCK PATH 1 DETAIL
MAIN DRIVEWAY ENTRY



SEMI TRUCK PATH 4 DETAIL
TRUCK ENTRY STD DRIVEWAY



CRENSHAW PL WIDENING DETAIL



NO.:	REVISION:
DATE:	

PROJECT: MANUFACTURING WAREHOUSE
SITE LAYOUT EXHIBIT
TORRANCE, CA
TRUCK PATH EXHIBIT

DRAWING NAME: TRUCK PATH EXHIBIT

ISSUE:	EXHIBIT
DATE:	09/17/2024
CHECKED:	DRC DRAWN: DRC
DRAWING FILE:	19040EXH08
PROJECT NO.:	19-040
SHEET NUMBER:	1
OF	1 SHEETS
SCALE:	20'