1105 Long Beach Boulevard Project

Draft Traffic Study

July, 2018

Prepared by

The **Mobility** Group

1105 Long Beach Boulevard Project

Traffic Study

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1. Introduction

This report documents a traffic impact analysis for the proposed 1105 Long Beach Boulevard Project, located at the south-west corner of Long Beach Boulevard and 12th Street in the City of Long Beach. The location of the Project is shown in Figure 1.1.

1.1 Project Description

The Project Site is currently developed with 4,500 sq. ft. of commercial uses and 12 apartment units. The Proposed Project will comprise approximately 121 apartment units and 5,000 sq. ft. of commercial/retail space. Vehicle access to the Project Site will be provided by two driveways on Waite Court (an alley). Waite Court provides access to 12th Street. It also provides access to Lily Way (also an alley) that provides access to Locust Avenue. The Project site plan is shown in Figure 1.2. On-site parking will include three levels of parking – one at grade and two above grade levels. Up to 151 vehicle parking spaces will be provided. The Project is planned to open in 2021.

1.2 Study Scope

This study was conducted in accordance with the traffic study requirements of the City of Long Beach and the Los Angeles County Congestion Management Program (CMP). The scope and methodology of this analysis was determined in conjunction with City of Long Beach Public Works Department staff.

The analysis addresses the following time periods:

- Weekday AM peak hour
- Weekday PM peak hour

The analysis addresses completion of the Project by 2021, and addresses the following scenarios:

- Existing Conditions
- Existing Conditions With Project
- Existing Conditions With Project With Mitigation (as necessary)
- Future Conditions Year 2021 Without Project
- Future Conditions Year 2021 With Project
- Future Conditions Year With Project With Mitigation (as necessary)

1.3 Organization of this Report

The remainder of this report is organized as follows. Chapter 2 describes the existing transportation conditions in the area of the Project. Chapter 3 provides a description of the proposed Project and its transportation characteristics, including trip generation and distribution of Project trips. Chapter 4 addresses the Existing Plus Project conditions. Chapter 5 addresses future conditions (year 2021) without the Project and sets the future cumulative baseline for analysis of Project impacts. Chapter 6 analyzes potential transportation impacts of the Project, including traffic, transit, and a Congestion Management Program evaluation. Chapter 7 identifies any proposed transportation mitigation measures for the Project.

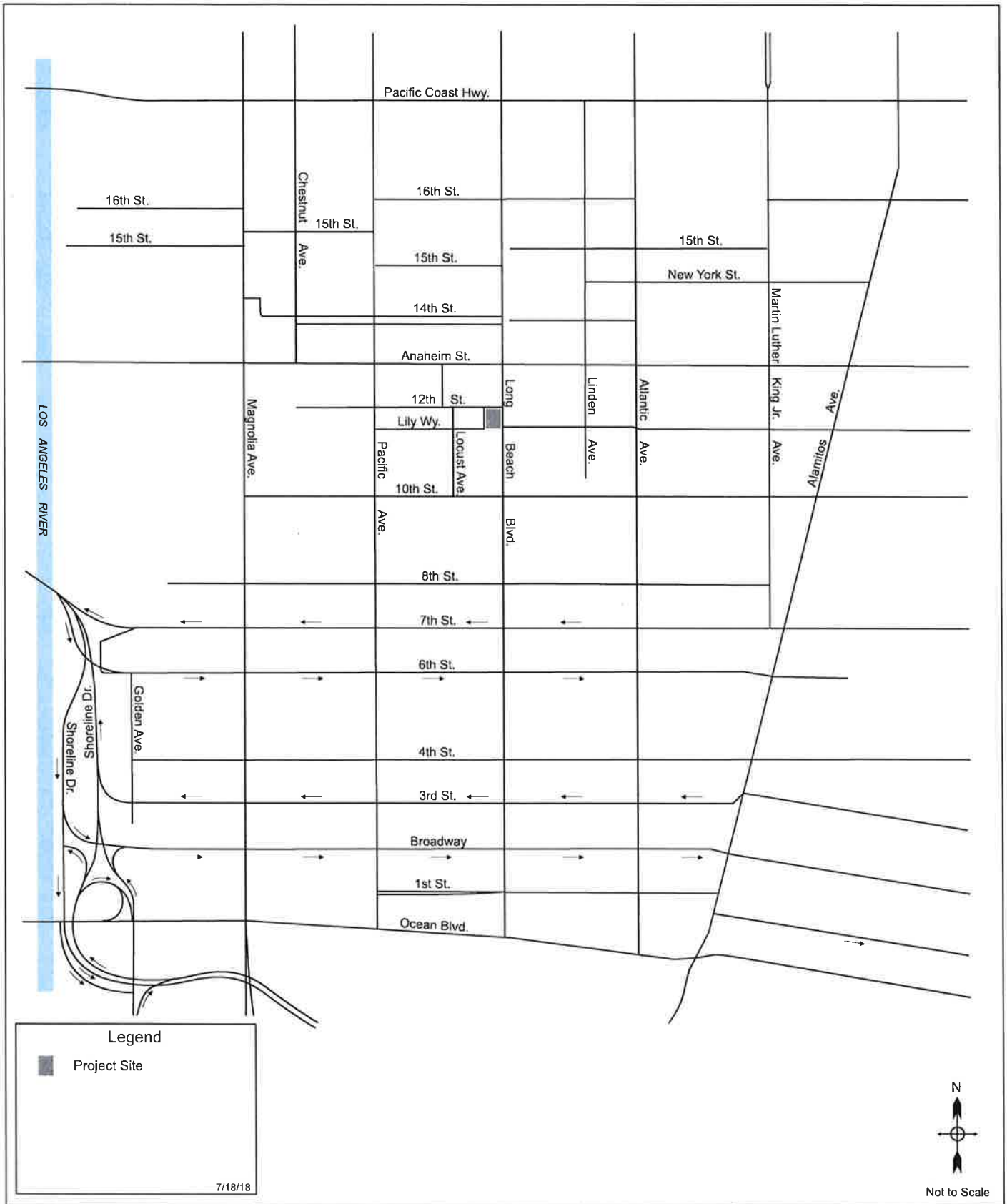

Figure 1.1
Project Location

1105 Long Beach Boulevard Project

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Source: Rockefeller Partners Architects 1/26/18

7/10/18

Figure 1.2
Project Site Plan

1105 Long Beach Boulevard Project

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2. Existing Conditions

2.1 Roadway System

The Project Site is located at the south-west corner of Long Beach Boulevard and 12th Street in Long Beach. Regional access to the site is provided primarily by the Long Beach Freeway (I-710) and the San Diego Freeway (I-405). The Long Beach Freeway runs north-south approximately 1.0 miles west of the Project Site, and the San Diego Freeway runs in an east-west direction approximately 2.5 miles north of the Project Site.

North-South Streets

Long Beach Boulevard: Long Beach Boulevard is a two-way street providing two travel lanes in each direction immediately east of the Project Site. Most intersections near the Project site are signalized. The posted speed limit in the vicinity of the Project site is 30 mph. On street parking is provided with some restrictions. The Metro Blue Line (Long Beach to Los Angeles) surface light rail line operates in a reserved median.

Locust Avenue: Locust Avenue is a two-way street providing one travel lane in each direction one block west of the Project Site. Most intersections near the Project site are unsignalized. The speed limit in the vicinity of the Project site is 25mph. On street parking is provided on both sides of the street.

Pine Avenue: Pine Avenue is a two-way street providing one travel lane in each direction two blocks west of the Project Site. Most intersections near the Project site are signalized. The posted speed limit in the vicinity of the Project site is 30 mph. On-street parking is provided on both sides of the street.

Atlantic Avenue: Atlantic Avenue is a two-way street providing two travel lanes in each direction three blocks east of the Project Site. Most intersections near the Project site are signalized. The speed limit in the vicinity of the Project site is 30 mph. On-street parking is provided on both sides of the street with some restrictions.

East-West Streets

Anaheim Street: Anaheim Street is a two-way street providing two travel lanes in each direction north of the Project Site. Key intersections near the Project site are signalized. Left turns and u-turns are prohibited at Long Beach Boulevard. Westbound left turns are prohibited at Locust Avenue. The posted speed limit in the vicinity of the Project site is 30 mph. In the vicinity of the Project, on-street parking is generally prohibited on both sides of the street.

12th Street: 12th Street is a two-way Street providing one travel lane in each direction immediately north of the Project Site. All of the intersections near the Project site are unsignalized, with the exception of 12th St. and Long Beach Blvd. which is signalized. The speed limit in the vicinity of the Project site is 25 mph. On street parking is provided on both sides of the street.

10th Street: 10th Street is a two-way Street providing one travel lane in each direction one block south of the Project Site. Most intersections near the Project site are signalized. The posted speed limit in the vicinity of the Project site is 30 mph. On street parking is provided with some restrictions.

7th Street: 7th Street is a one-way Street providing three westbound travel lanes south of the Project Site. Key intersections near the Project site are signalized. The posted speed limit in the vicinity of the Project site is 30 mph. On street parking is provided with some restrictions.

2.2 Study Intersections

A total of seven study intersections were identified, in conjunction with City of Long Beach staff, for inclusion in the traffic analysis. The analyzed locations are shown in Figure 2.1 and were identified as locations where the majority of trips associated with the Project would be focused based on the estimated trip distribution for the Project. The intersections identified for analysis are as follows:

1. Pine Street & 10th Street (signal)
2. Long Beach Boulevard & Anaheim Street (signal)
3. Long Beach Boulevard & 10th Street (signal)
4. Long Beach Boulevard & 7th Street (signal)
5. Atlantic Avenue & 10th Street (signal)
6. Locust Avenue & Lily Way (Alley) (stop sign)
7. Waite Court (Alley) & 12th Street (stop sign)

Five of these intersections are signalized and two are unsignalized, as indicated above. The existing lane configurations for these seven intersections are shown in Figure 2.2.

2.3 Existing Intersection Conditions

Existing Traffic Volumes

Recent traffic counts in 2018 were used for the analyzed intersections. Counts were collected during the hours of 7:00 – 10:00 AM for the morning peak period and 3:00 – 6:00 PM for the

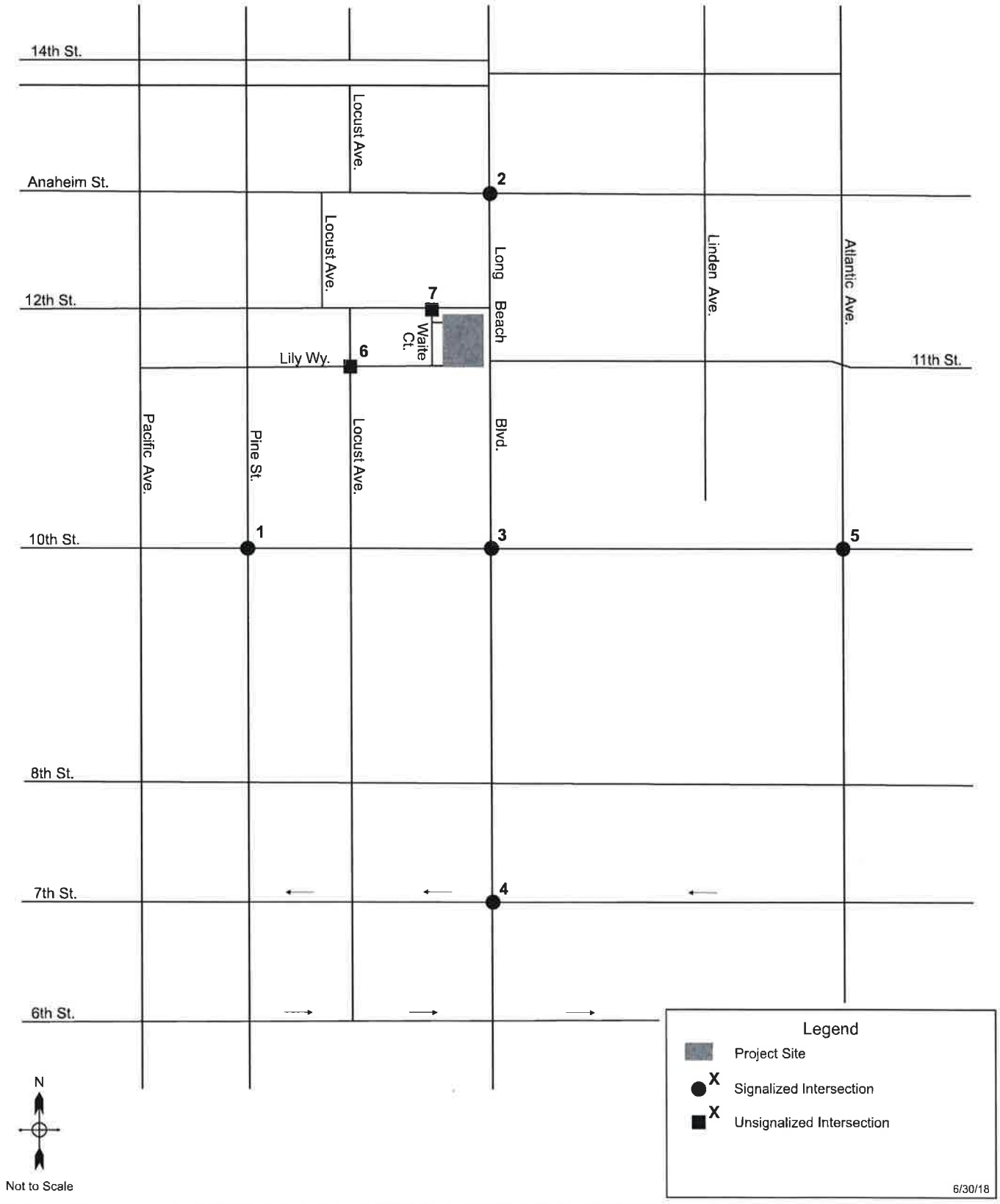

Figure 2.1
Study Intersections (Identified by City for Analysis)

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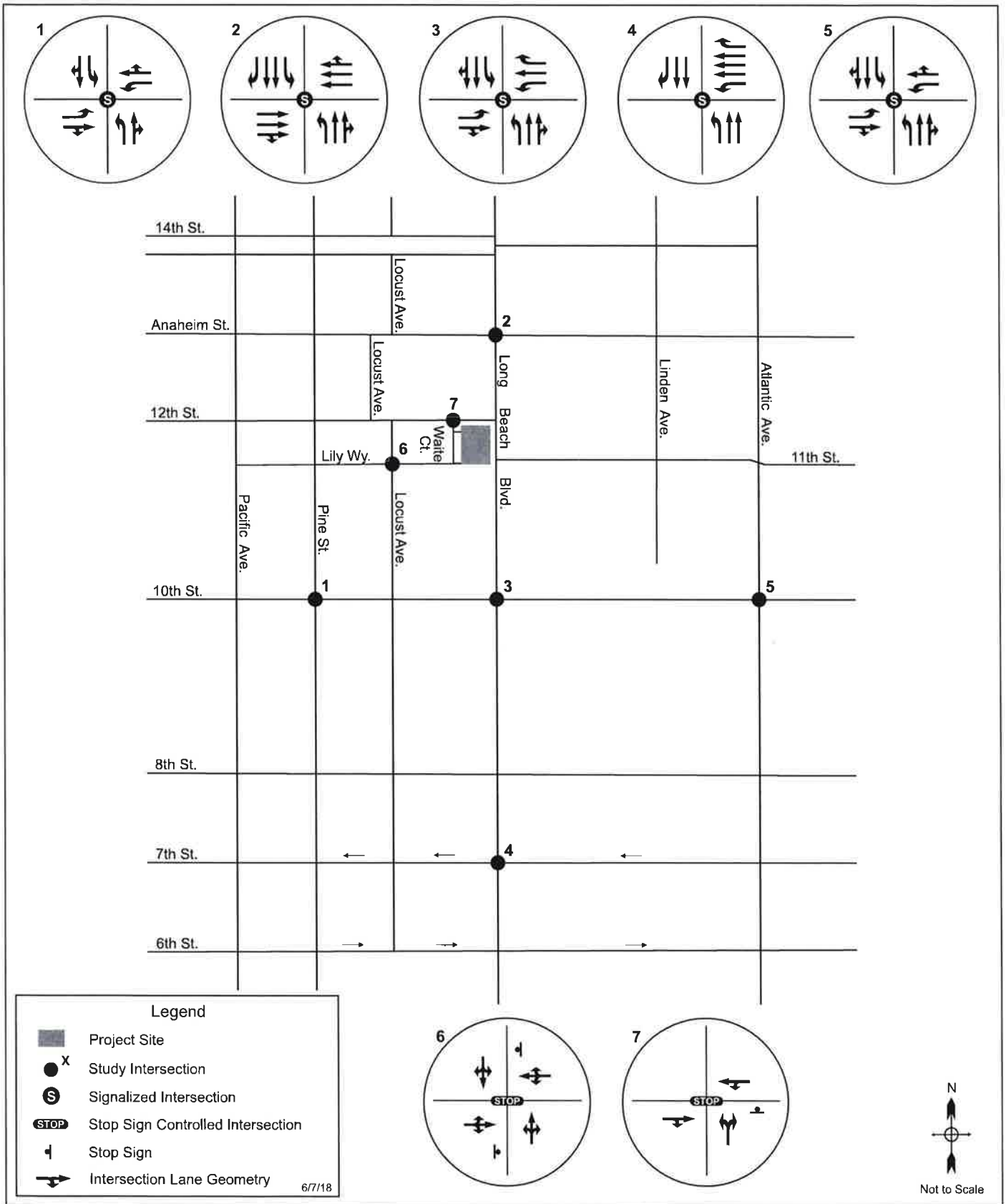

Figure 2.2
Configuration of Analyzed Intersections

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evening peak period, and were conducted when schools were in session and outside of holiday periods. The existing peak hour traffic volumes are illustrated in Figures 2.3 and 2.4 for the AM and PM peak hours respectively[1].

Intersection Analysis - Level of Service Methodology

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F, with each level defined by a range of volume/capacity (V/C) ratios. Table 2.1 defines the ranges of V/C ratios and their corresponding levels of service for signalized intersections. Two study intersections are unsignalized. Levels of service for unsignalized intersections are defined instead by the average delay in seconds per vehicle occurring at the intersection. In contrast to signalized intersections, where all approaches to the intersection must stop at a red light and wait for the next green light, at stop-controlled intersections only the minor street traffic controlled by the stop sign is required to stop (at two-way stop intersections). Through traffic movements on the major street do not stop, and turning movements from the major street must stop only if there is conflicting traffic approaching in the opposite direction. At all-way stop intersections, all approaches have to stop. Table 2.2 defines the ranges of delay and their corresponding levels of service for unsignalized intersections. For unsignalized intersections these parameters are reported for the minor movements only and not for the major street through moves or for the intersection as a whole. Intersections were analyzed in conjunction with City of Long Beach requirements as detailed below.

Signalized Intersections - Intersection Capacity Utilization (ICU) Method

Intersection Level of Service was analyzed at the signalized intersections using the Intersection Capacity Utilization (ICU) method (the City's standard methodology). The ICU method compares the peak hour volume of traffic at an intersection to the traffic volume the intersection is able to carry (the capacity), and defines a volume to capacity (V/C) ratio for the intersection as a whole, which is then related to level of service.

Per the City requirements, ICU calculations use a lane capacity of 1,600 vehicles per hour (vph) for left-turn, through and right-turn lanes, and a dual left-turn capacity of 2,880 vph, and a clearance interval of 0.10.

Unsignalized Intersections – Highway Capacity Manual (HCM) Method

The unsignalized intersections were evaluated following the methodology for analyzing unsignalized intersections as defined in the Highway Capacity Manual. In contrast to signalized intersections, where all approaches to the intersection are controlled, at stop-controlled

[1] Construction activity during the traffic counts prohibited the southbound right turn from Long Beach Boulevard to 12th Street and signed a diversion route via 10th Street. The traffic counts were therefore adjusted by estimating that 25% of the southbound right turns would have turned at 12th Street, and were therefore relocated to the southbound right turn at 12th Street and to the westbound thru move at Waite Court.

Table 2.1 Level of Service Definitions for Signalized Intersections

Level of Service	Description	Volume to Capacity Ratio
A	Excellent operation. All approaches to the intersection appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	<0.600
B	Very good operation. Many drivers begin to feel somewhat restricted within platoons of vehicles. This represents stable flow. An approach to an intersection may occasionally be fully utilized and traffic queues start to form.	0.601 – 0.700
C	Good operation. Occasionally drivers may have to wait for more than 60 seconds, and backups may develop behind turning vehicles. Most drivers feel somewhat restricted.	0.701 – 0.800
D	Fair operation. Cars are sometimes required to wait for more than 60 seconds during short peaks. There is no long-standing traffic queues. This level is typically associated with design practice for peak periods.	0.801 – 0.900
E	Poor operation. Some long-standing vehicular queues develop on critical approaches to intersections. Delays may be up to several minutes.	0.901 – 1.000
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the intersections approach lanes; therefore, volumes carried are not predictable. Potential for stop-and-go type traffic flow.	Over 1.000

intersections only the minor street traffic controlled by the stop sign is required to stop (at two-way stop intersections). Through traffic movements on the major street do not stop, and turning movements from the major street must stop only if there is conflicting traffic approaching in the opposite direction. Level of service is analyzed based on vehicle delay. Table 2-2 illustrates the level of service definitions for unsignalized intersections. For one-way and two-way stop-controlled (minor street stop-controlled) intersections, the worst side street delay is estimated, measured in seconds per vehicle and determines the level of service for that approach.

Table 2.2 Level Of Service Definitions For Unsignalized Intersections

Level of Service	Average Control Delay (seconds/veh)
A	0 to 10
B	>10 to 15
C	>15 to 25
D	>25 to 35
E	>35 to 50
F	> 50

Existing Peak Hour Levels of Service

Table 2.3 summarizes the existing AM and PM peak hour V/C ratios and corresponding levels of service at the analyzed intersections.

AM Peak Hour

All of the studied intersections currently operate at LOS B or better during the AM peak hour.

PM Peak Hour

All of the studied intersections currently operate at LOS B or better during the PM peak hour.

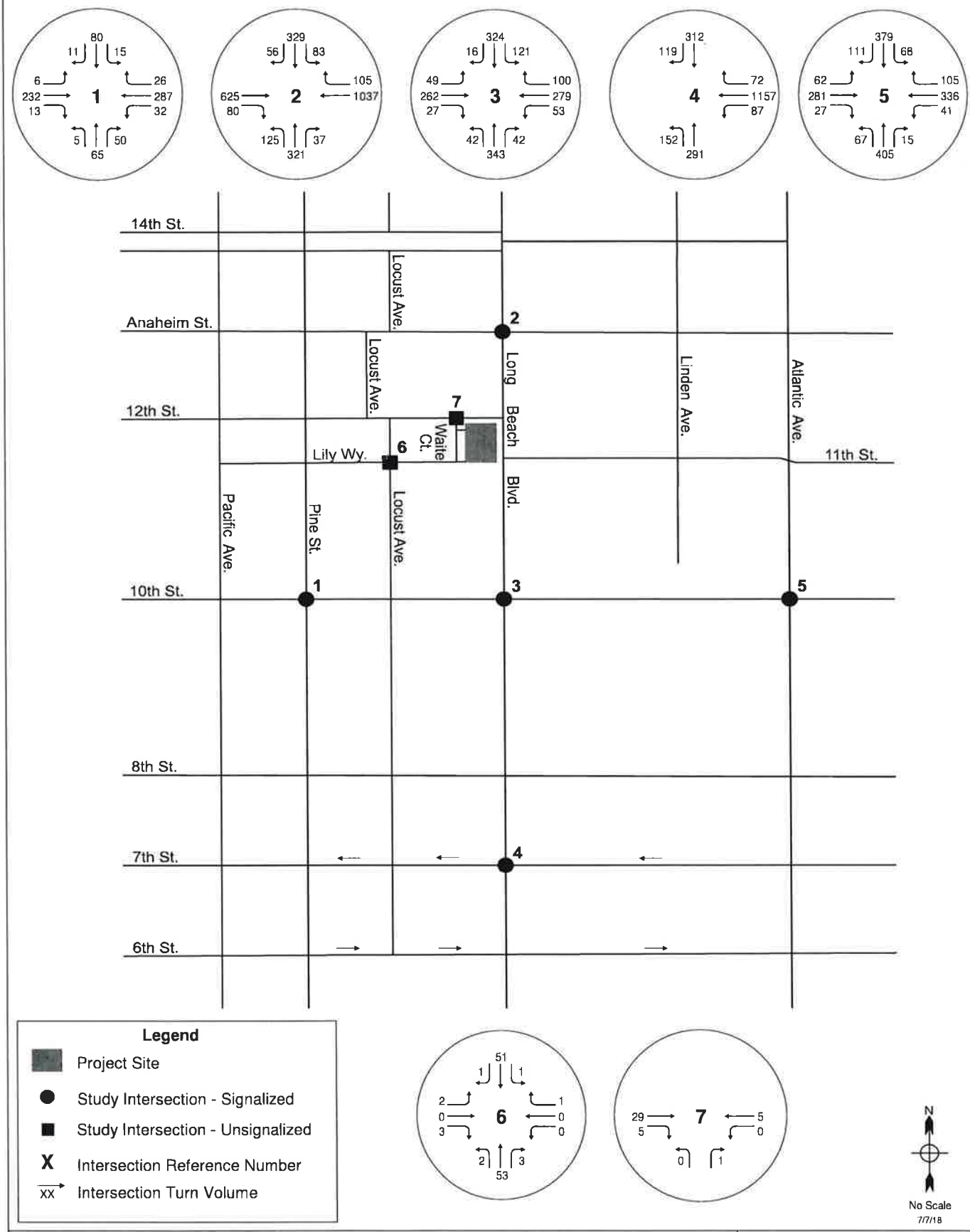

Figure 2.3
Existing Traffic Volumes - AM Peak Hour

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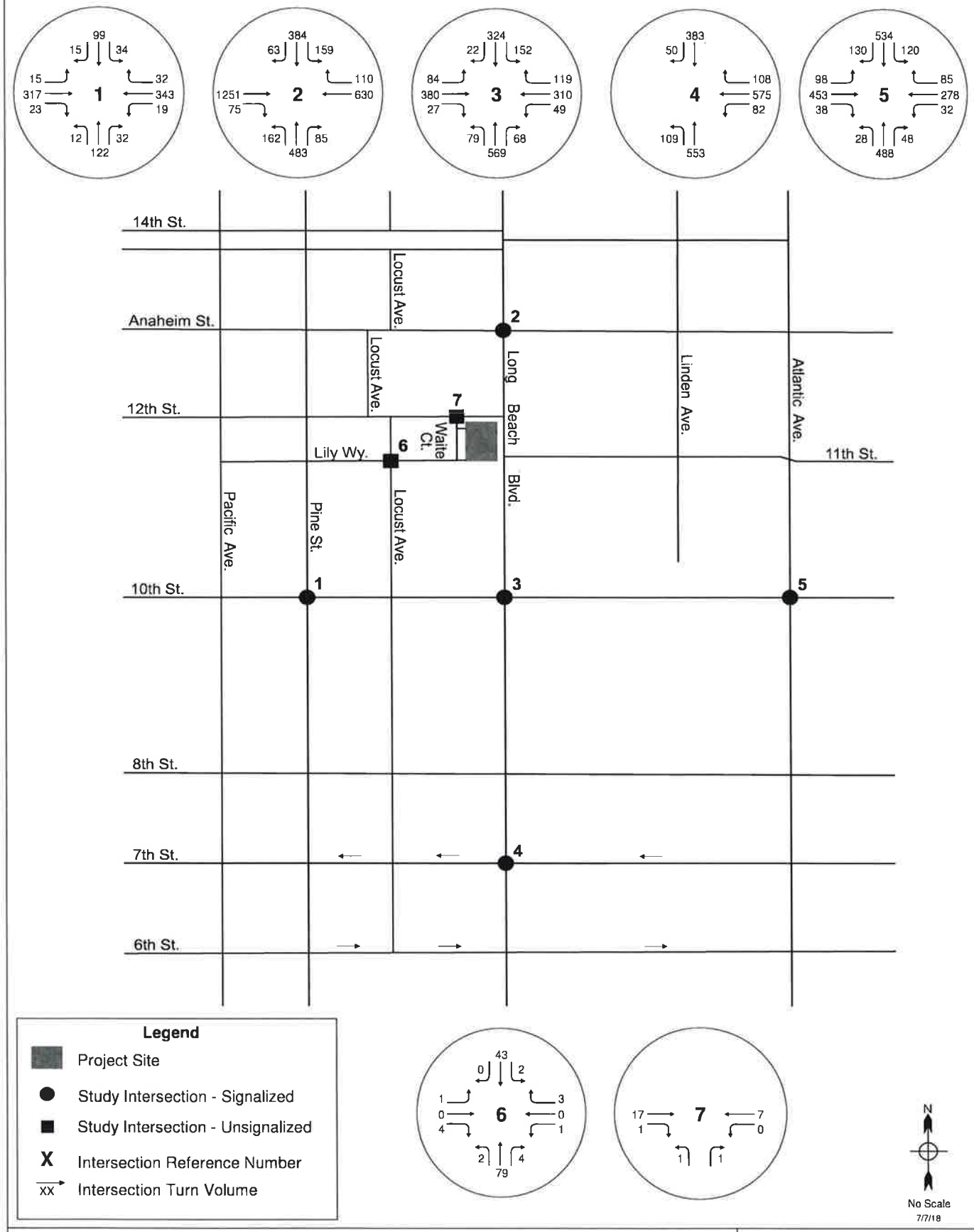

Figure 2.4
Existing Traffic Volumes - PM Peak Hour

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Table 2.3 Existing Conditions - Intersection Level of Service

6/29/2018

No.	Intersection	Intersection Type	Existing Conditions			
			AM Peak Hour		PM Peak Hour	
			V/C (Delay)	LOS	V/C (Delay)	LOS
1	Pine St. & 10th St.	Signalized	0.381	A	0.461	A
2	Long Beach Blvd. & Anaheim St.	Signalized	0.519	A	0.653	B
3	Long Beach Blvd. & 10th St.	Signalized	0.510	A	0.679	B
4	Long Beach Blvd. & 7th St.	Signalized	0.534	A	0.408	A
5	Atlantic Ave. & 10th St.	Signalized	0.609	B	0.669	B
6	Locust Ave. & Lily Way	Unsignalized [1]	(8.8)	A	(8.8)	A
7	Waite Ct. & 12th St.	Unsignalized [1]	(8.4)	A	(8.5)	A

Note:

[1] Unsignalized intersection shows worst case delay (secs) and LOS for controlled approach.

2.4 Existing Transit Service

The Project Site is located on Long Beach Boulevard, directly adjacent to the Metro Blue Line (light rail transit service between Long Beach and Downtown Los Angeles). A pedestrian crosswalk connects the Project Site to the station platform. The Blue Line operates between approximately 4:55 am and 2:25 am northbound and 4:30 am and 3:00 am southbound. It runs at about a 12 minute headway during weekday peak periods.

The Project Site is also located in an area with bus service provided by two local and inter-city transit operators. Within a quarter-mile radius of the Project Site, Metro (Los Angeles County Metropolitan Transportation Authority) operates one bus line, and Long Beach Transit operates four bus lines. Bus lines serving the Project Area are shown in Table 2.4.

Long Beach Bus Service

The City of Long Beach operates four local bus lines in the vicinity of the Project. Route 1 runs on Long Beach Boulevard and operates every 30 minutes during the AM and PM peak periods. Route 45/46 runs on Anaheim Street and operates every 30 minutes during the AM and PM peak periods. Route 51/52 serves Long Beach Boulevard and operates every 12-15 minutes during the AM and PM peak periods. The other local route is Route 81, which runs on 10th Street and operates every 60 minutes during the AM and PM peak periods.

Metro Bus Service

Metro operates one bus line in the vicinity of the Project Site. Line 232 runs between Long Beach and LAX via Long Beach Blvd. near the Project Site, and operates between approximately 3:50 am and 10:00 pm northbound, and 5:45 am and 1:00 am southbound. It runs at about 15-20 minute headway during weekday peak periods.

2.5 Bicycle Facilities

Existing bicycle facilities in the project area comprise a Bicycle Route Class III-B (Sharrows) on Pacific Avenue. There are no bicycle facilities on other streets in the immediate vicinity of the Project.

2.6 Pedestrian Facilities

All streets in the vicinity of the Project Site have pedestrian sidewalks. There are pedestrian crosswalks at all signalized intersections in the vicinity of the Project. These facilities provide for pedestrian circulation between the Project Site and the surrounding areas/neighborhoods. There is also a signalized crosswalk across Long Beach Boulevard directly opposite the Project Site, which provides access to the Anaheim Station on the Metro Blue Line.

Table 2.4 Existing Public Transit Services

5/31/18

Provider, Routes and Service Area	Street	Service Type	Hours of Operation	Average Headway (minutes)			
				AM Peak Hour		PM Peak Hour	
				NB/EB	SB/WB	NB/EB	SB/WB
Metro Rail							
Blue Line - Long Beach - Downtown Los Angeles	Long Beach	Rail	4:55 am - 2:25 am (NB) 4:30 am - 3:00 am (SB)	12	12	12	12
Metro Bus Service							
232 - Long Beach - LAX	Long Beach - Anaheim	Local	3:50 am - 10:00 pm (NB) 5:45 am - 1:00 am (SB)	15	20	20	15
Long Beach Transit							
1 - Long Beach - CSUDH	Long Beach	Local	5:30 am - 9:15 pm (NB) 5:10 am - 11:00 pm (SB)	30	30	30	30
45/46 - CSULB - Santa Fe Ave/Downtown Long Beach	Anaheim	Local	5:10 am - 1:20 am (EB) 4:45 am - 12:25 am (WB)	10	10	10	10
51/52 - Downtown Long Beach - Metro Blue Line Station at Arcadia	Long Beach	Local	4:35 am - 11:45 pm (NB) 5:20 am - 11:20 pm (SB)	12	15	12	15
81 - Downtown Long Beach - CSUDH	10th	Local	6:15 am - 5:15 pm (EB) 7:40 am - 6:45 pm (WB)	60	60	60	60

3. Project Description & Transportation Characteristics

This report section provides a description of, and identifies the transportation characteristics of, the Proposed Project including trip generation totals and trip distribution characteristics.

3.1 Project Description

The Project Site is located at the south-west corner of Long Beach Boulevard and 12th Street in the City of Long Beach. The Project is currently developed with 4,500 sq. ft. of commercial uses and 12 apartment units.

The Proposed Project will comprise approximately 121 apartment units and 5,000 sq. ft. of commercial/retail space (conservatively analyzed as restaurant space). Vehicle access to the Project Site will be provided by two driveways on Waite Court (an alley). Waite Court provides access to 12th Street. It also provides access to Lily Way (also an alley) that provides access to Locust Avenue. The Project site plan is shown in Figure 1.2. On-site parking will include three levels of parking – one at grade and two above grade levels. Up to 151 vehicle parking spaces will be provided. The Project is planned to open in 2021.

Project Trip Generation Estimates

The trip generation estimates for the Project are based on trip rates found in *ITE Trip Generation 10th Edition* (Institute of Transportation Engineers, 2017), and adjustment factors considered appropriate to the type and location of the proposed Project which were developed in conjunction with City of Long Beach. Table 3.1 summarizes the trip generation estimates for the daily, AM peak & PM peak hour periods respectively.

The ITE 10th Edition provides trip rates for multifamily housing. It also lists rates for mid-rise buildings, by type of location – "General Urban/Suburban", "Dense Multi-Use Urban", and "Center City Core". The trip generation rates for "General Urban/Suburban" were determined to be the most appropriate and conservative for application in this Project. However, the trip rates represent suburban locations with little or no transit, walking or bicycling, and the Project is located in an area where transit, walk and bike trips will occur. It is directly adjacent to the Anaheim Station on the Metro Blue Line, and close to five bus routes. Modest adjustments were therefore made for transit and walk/bike rates (5% reduction). In order to provide a conservative analysis, the commercial space was analyzed as restaurant space – which has higher trips rate than general retail uses.

Table 3.1 1105 Long Beach Blvd - Trip Generation Estimates

Daily Trips

Land Use Assumptions		Notes	Source [1] & Code	Quantity	Units	Daily			
							Trip Rate		Total Trips
Existing Uses									
Retail		2,4	ITE 820	4,500	SF		37.75		-170
(Reduction for internal trips) -	0%								0
(Reduction for walk/bike trips) -	0%								0
(Reduction for transit trips) -	5%								9
(Reduction for pass-by trips) -	50%								81
Net Retail									-80
Residential		2,3	ITE 220	12	DUs		0.00		0
(Reduction for internal trips) -	0%								0
(Reduction for walk/bike trips) -	0%								0
(Reduction for transit trips) -	0%								0
Net Residential									0
Total Existing									-80
Proposed Uses									
Residential		5	ITE 221	121	DUs		5.44		658
(Reduction for internal trips) -	0%								0
(Reduction for walk/bike trips) -	0%								0
(Reduction for transit trips) -	5%								-33
Net Residential									625
Restaurant		6	ITE 931	5,000	SF		83.84		419
(Reduction for internal trips) -	0%								0
(Reduction for walk/bike trips) -	0%								0
(Reduction for transit trips) -	5%								-21
(Reduction for pass-by trips) -	10%								-40
Net Restaurant									358
Total Proposed									983
Total Net									903

Table 3.1 1105 Long Beach Blvd - Trip Generation Estimates

AM Peak

Land Use Assumptions		Notes	Source [1] & Code	Quantity	Units	AM Peak Hour					
						Trip Rate			Total Trips		
						In	Out	Total	In	Out	Total
Existing Uses											
Retail		2,4	ITE 820	4,500	SF	0.58	0.36	0.94	-3	-1	-4
(Reduction for internal trips) -	0%								0	0	0
(Reduction for walk/bike trips) -	0%								0	0	0
(Reduction for transit trips) -	5%								0	0	0
(Reduction for pass-by trips) -	50%								2	0	2
Net Retail									-1	-1	-2
Residential		2,3	ITE 220	12	DUs	0.00	0.00	0.00	0	0	0
(Reduction for internal trips) -	0%								0	0	0
(Reduction for walk/bike trips) -	0%								0	0	0
(Reduction for transit trips) -	0%								0	0	0
Net Residential									0	0	0
Total Existing									-1	-1	-2
Proposed Uses											
Residential		5	ITE 221	121	DUs	0.09	0.27	0.36	11	33	44
(Reduction for internal trips) -	0%								0	0	0
(Reduction for walk/bike trips) -	0%								0	0	0
(Reduction for transit trips) -	5%								-1	-1	-2
Net Residential									10	32	42
Restaurant		6	ITE 931	5,000	SF	0.40	0.33	0.73	2	2	4
(Reduction for internal trips) -	0%								0	0	0
(Reduction for walk/bike trips) -	0%								0	0	0
(Reduction for transit trips) -	5%								0	0	0
(Reduction for pass-by trips) -	10%								0	0	0
Net Restaurant									2	2	4
Total Proposed									12	34	46
Total Net									11	33	44

Table 3.1 1105 Long Beach Blvd - Trip Generation Estimates

PM Peak

Land Use Assumptions		Notes	Source [1] & Code	Quantity	Units	PM Peak Hour					
						Trip Rate			Total Trips		
						In	Out	Total	In	Out	Total
Existing Uses											
Retail		2,4	ITE 820	4,500	SF	1.83	1.98	3.81	-8	-9	-17
(Reduction for internal trips) -	0%								0	0	0
(Reduction for walk/bike trips) -	0%								0	0	0
(Reduction for transit trips) -	5%								0	1	1
(Reduction for pass-by trips) -	50%								4	4	8
Net Retail									-4	-4	-8
Residential		2,3	ITE 220	12	DUs	0.00	0.00	0.00	0	0	0
(Reduction for internal trips) -	0%								0	0	0
(Reduction for walk/bike trips) -	0%								0	0	0
(Reduction for transit trips) -	0%								0	0	0
Net Residential									0	0	0
Total Existing									-4	-4	-8
Proposed Uses											
Residential		5	ITE 221	121	DUs	0.27	0.17	0.44	33	20	53
(Reduction for internal trips) -	0%								0	0	0
(Reduction for walk/bike trips) -	0%								0	0	0
(Reduction for transit trips) -	5%								-2	-1	-3
Net Residential									31	19	50
Restaurant		6	ITE 931	5,000	SF	5.23	2.57	7.80	26	13	39
(Reduction for internal trips) -	0%								0	0	0
(Reduction for walk/bike trips) -	0%								0	0	0
(Reduction for transit trips) -	5%								-1	-1	-2
(Reduction for pass-by trips) -	10%								-3	-1	-4
Net Restaurant									22	11	33
Total Proposed									53	30	83
Total Net									49	26	75

Notes:

1. ITE trip rates from Trip Generation, 10th Edition, Institute of Transportation Engineers, Washington, DC, 2017 except otherwise noted.
2. Existing land use quantities from Appraisal Report of 2/9/2017 and information from Client on current operation.
3. For the purposes of a conservative analysis, no existing trip credits are taken for the 12 existing Studio/SRO units.
4. Retail analyzed as ITE 820 - Shopping Center. Used trip rates for General Urban/Suburban.
5. Residential Units analyzed as ITE 221 - Multifamily Housing (Mid Rise). Used trip rates for General Urban/Suburban Location.
6. Restaurant analyzed as ITE 931 - Quality Restaurant. Used trip rates for General Urban/Suburban Location.
   Directional Distribution for AM peak from High-Turnover Restaurant, as non published for Quality Restaurant.

Reductions:

Transit - 5% reduction applied to all land uses to reflect proximity of Anaheim Street Station (roughly 250 feet from Main Pedestrian Entrance to Project). This reduction is smilar to reductions used for transit by the City of Los Angeles, but more conservative.

Pass-by - 50% reduction applied to existing retail and 10% reduction applied to proposed restaurant to reflect considerable traffic volumes on Long Beach Boulevard and the local-serving nature of these land uses. These reductions are the same as reductions used by the City of Los Angeles for pass-by.

Note: Some numbers may not add up perfectly due to rounding.

The demolition of existing uses on the Project Site, would result in a small amount of existing peak hour trips being removed as shown in Table 3.1. As also shown in Table 3.1, the Project would generate net totals of 903 new daily vehicle trips, 44 new AM peak hour vehicle trips and 75 new PM peak hour vehicle trips.

Trip Distribution

The likely distribution of Project trips was identified based on the type of land uses in the Project, the likely destinations of Project residents based on the local and regional distributions of employment and commercial destinations, the likely origins of commercial visitors based on the local distribution of population, existing traffic volumes, and the characteristics of the street system in the area of the Project. The general trip distribution pattern was developed in consultation with the City of Long Beach and the following distribution was assumed:

- 30% of the trips towards the north
- 20% of the trips towards the south
- 30% of the trips towards the east
- 20% of the trips towards the west

The detailed trip distribution percentages are shown in Figure 3.1 for the inbound direction and Figure 3.2 for the outbound. These take account of the left turn and u-turn prohibitions on Anaheim Street.

3.2 Project Traffic Projections

Project traffic was assigned to the roadway network on the basis of the parameters described above. The Proposed Project traffic volumes forecast on the roadway network are shown in Figure 3.3 for the inbound direction, and in Figure 3.4 for the outbound direction.

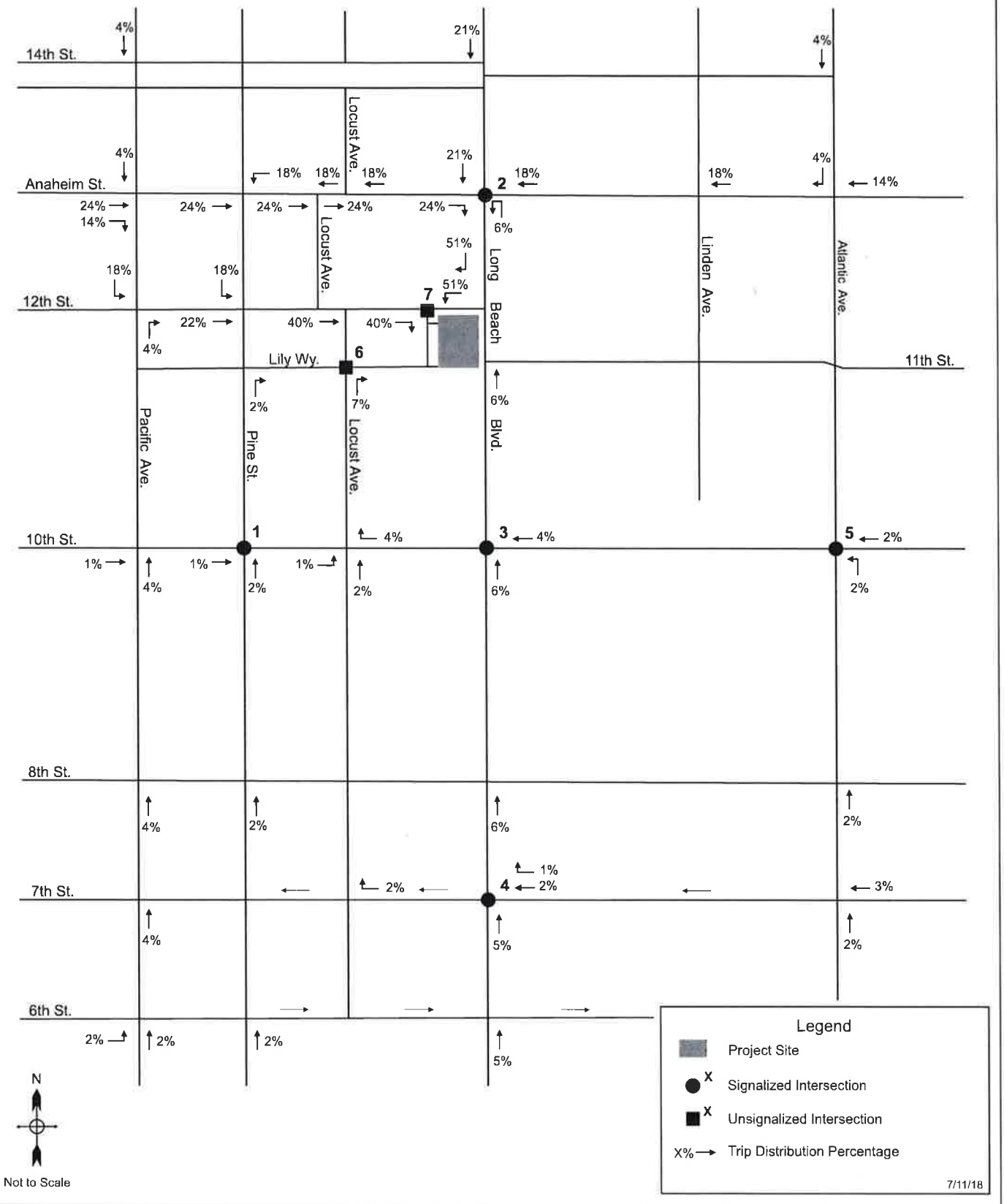

Figure 3.1
Trip Distribution - Inbound

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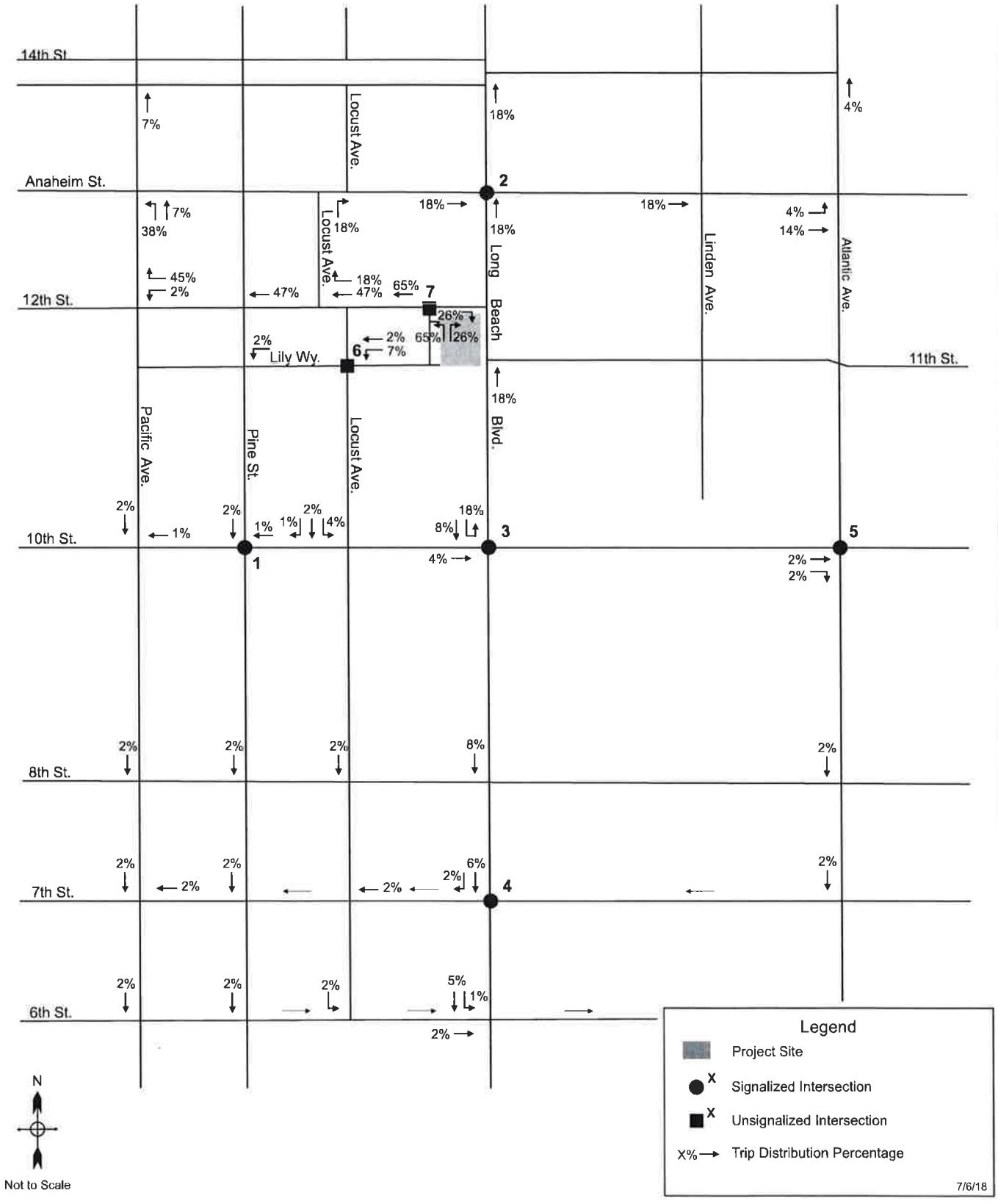

Figure 3.2
Trip Distribution - Outbound

1105 Long Beach Boulevard Project

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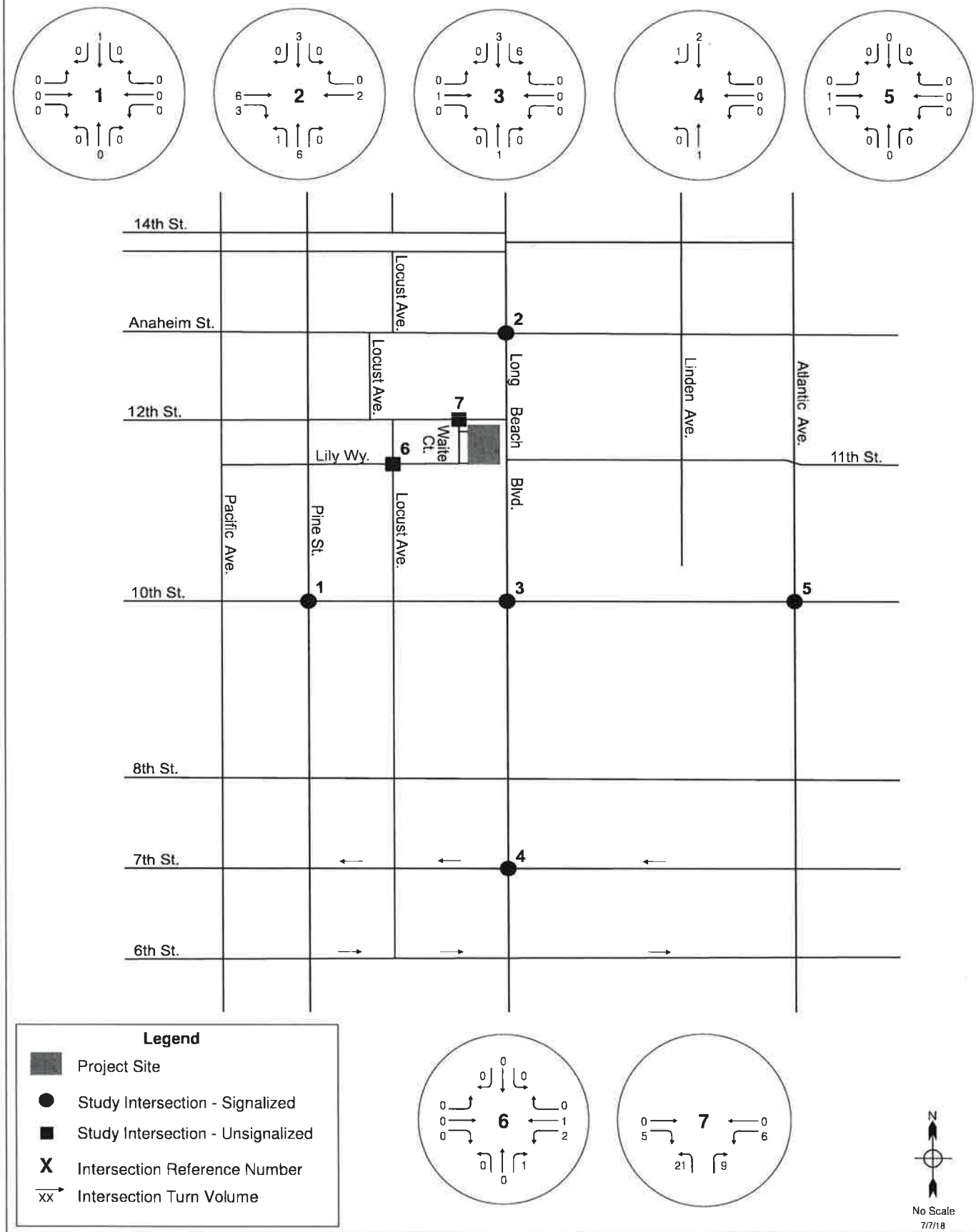

Figure 3.3
Project Only Traffic Volumes - AM Peak Hour

1105 Long Beach Boulevard Project

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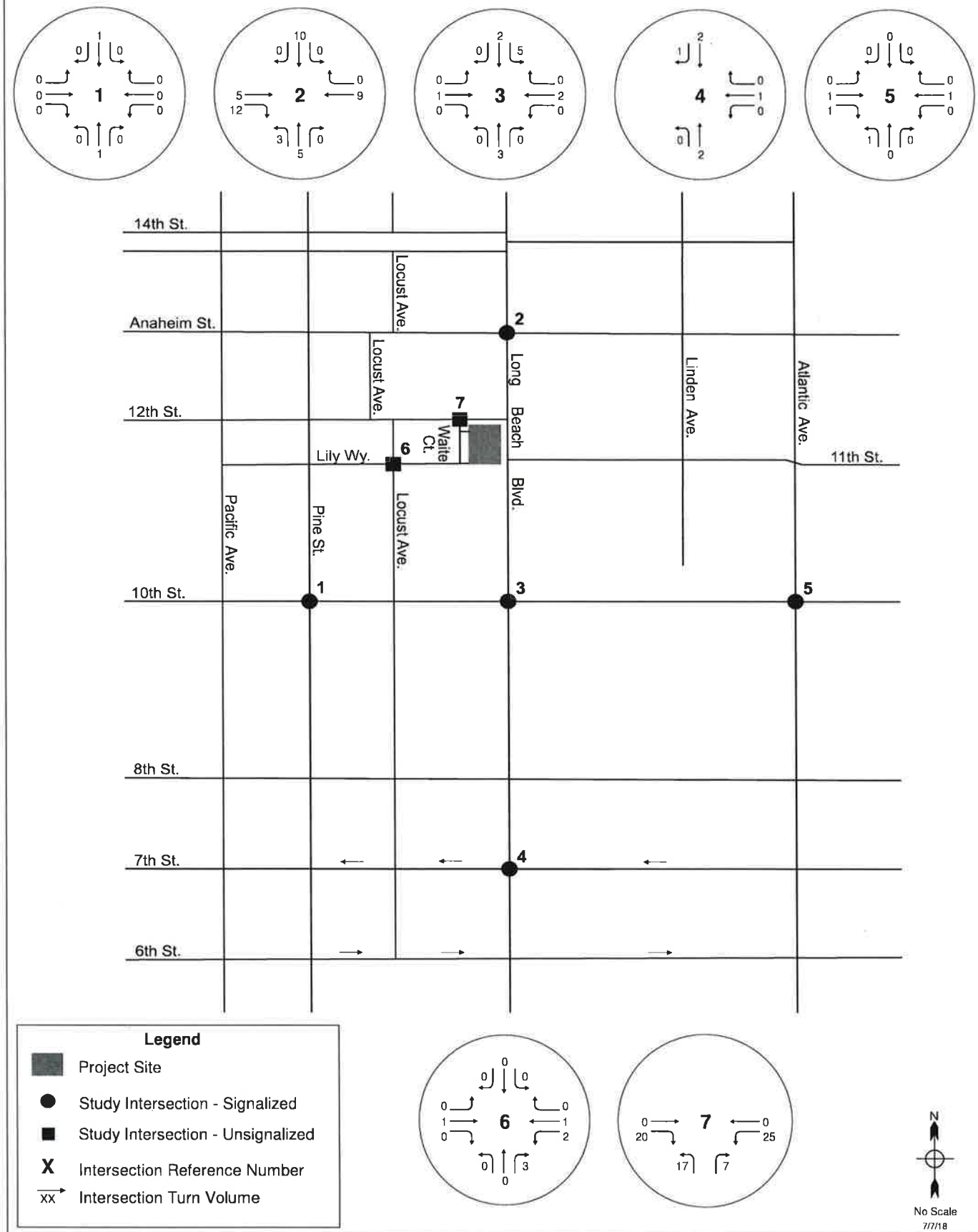

Figure 3.4
Project Only Traffic Volumes - PM Peak Hour

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4. Existing With Project Conditions

This section of the report documents the analysis of potential Project traffic impacts in the study area for the Existing With Project conditions. Project traffic was added to existing traffic volumes and the potential for impacts evaluated. The Existing With Project Conditions peak hour traffic volumes are illustrated in Figures 4.1 and 4.2 for the AM and PM peak hours respectively.

4.1 Project Impacts - Intersections

Significant Impact Thresholds

Significant impact thresholds per the City of Long Beach were used in the impact analysis as follows.

Signalized Intersections: a significant impact would occur at a signalized study intersection when the project-related traffic increases traffic demand at an intersection by 2% of capacity (ICU $\geq$ 0.02), causing or worsening LOS E or F (ICU $\geq$ 0.901).

Unsignalized Intersections: a significant impact would occur at an unsignalized study intersection if the Project causes an intersection operating at LOS D or better to degrade to LOS E or F, and the traffic signal warrant analysis determines that a traffic signal is justified.

Existing With Project Intersection Level of Service

The total Existing With Project conditions peak hour traffic volumes are illustrated in Figures 4.1 and 4.2 for the AM and PM peak hours. Tables 4.1 and 4.2 summarize the level of service for the Existing With Project conditions at the analyzed intersections for the AM and PM peak hours respectively, as well as the increase in V/C ratio at each intersection, and identify if the increase constitutes a significant impact.

AM Peak Hour

The analysis summarized in Table 4.1 indicates that for the AM peak hour, all intersections would continue to operate at LOS B or better, and that all increases in the volume/capacity (V/C) ratios would be less than the threshold for a significant impact to occur.

PM Peak Hour

The analysis summarized in Table 4.2 indicates that for the PM peak hour, all intersections would continue to operate at LOS B or better, and all increases in volume/capacity (V/C) ratios would be less than the threshold for a significant impact to occur.

It is therefore concluded that the Project would not cause any significant impacts in the Existing Plus Project conditions.

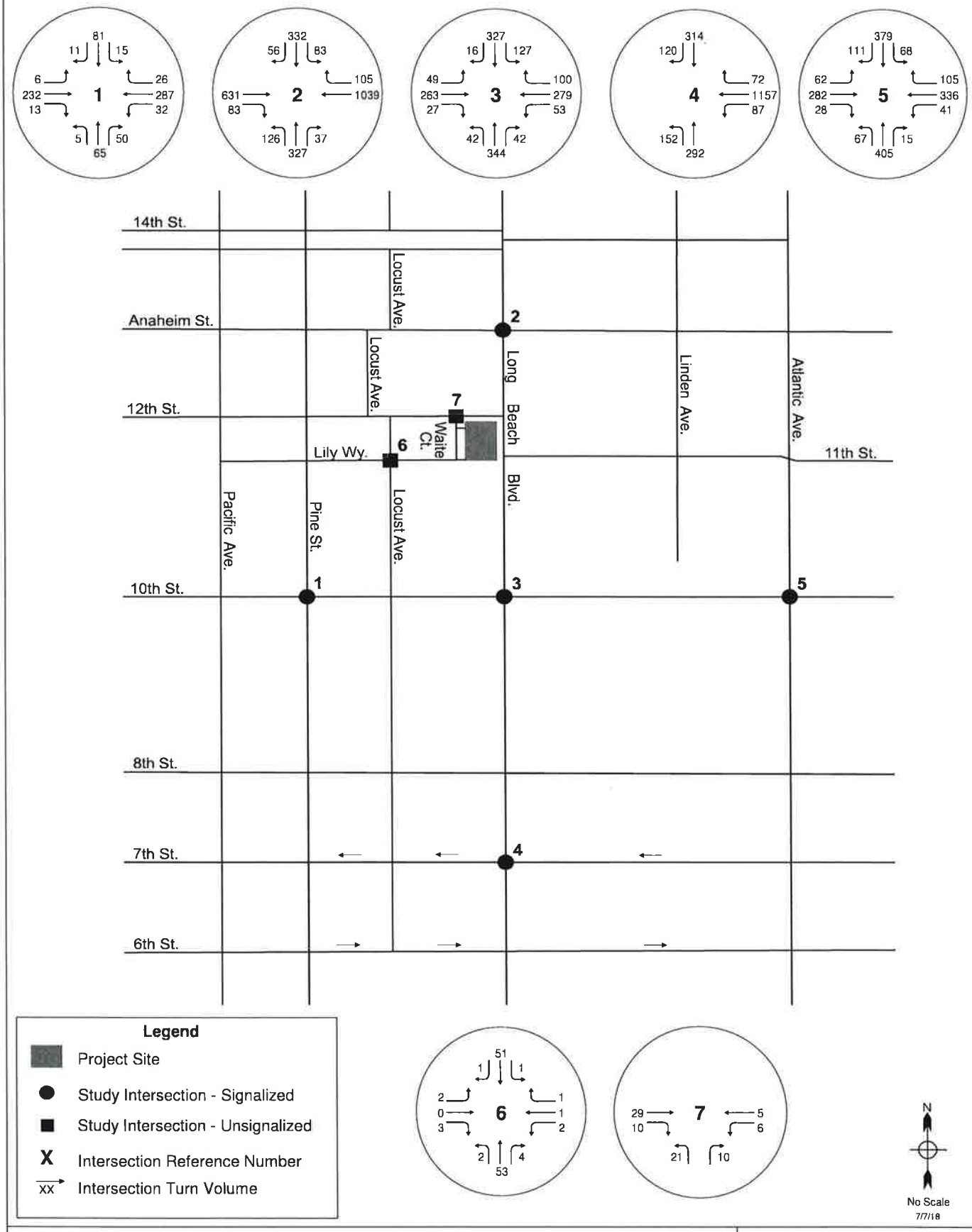

Figure 4.1
Existing With Project Traffic Volumes - AM Peak Hour

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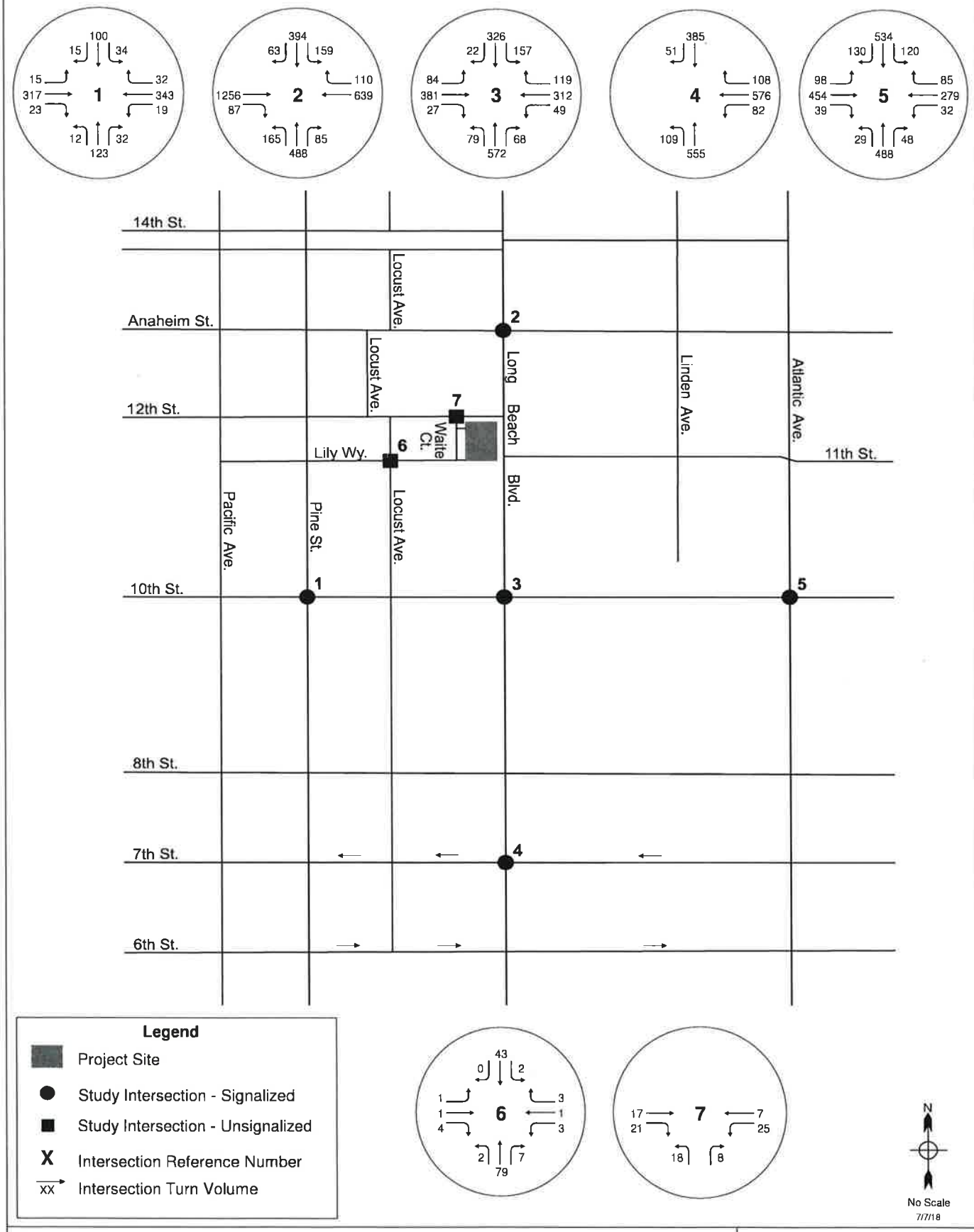

Figure 4.2
Existing With Project Traffic Volumes - PM Peak Hour

1105 Long Beach Boulevard Project

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Table 4.1 Existing With Project Conditions - Intersection Level of Service AM Peak Hour

7/5/2018

No.	Intersection	Intersection Type	Existing Conditions		Existing With Project Conditions		Change in V/C (Delay)	Significant Impact
			V/C or (Delay)	LOS	V/C or (Delay)	LOS		
1	Pine St. & 10th St.	Signalized	0.381	A	0.381	A	0.000	No
2	Long Beach Blvd. & Anaheim St.	Signalized	0.519	A	0.521	A	0.002	No
3	Long Beach Blvd. & 10th St.	Signalized	0.510	A	0.514	A	0.004	No
4	Long Beach Blvd. & 7th St.	Signalized	0.534	A	0.534	A	0.000	No
5	Atlantic Ave. & 10th St.	Signalized	0.609	B	0.609	B	0.000	No
6	Locust Ave. & Lily Way	Unsignalized [1]	(8.8)	A	(9.1)	A	(0.3)	No
7	Waite Ct. & 12th St.	Unsignalized [1]	(8.4)	A	(8.8)	A	(0.4)	No

Note:

[1] Unsignalized intersection shows worst case delay (secs) and LOS for controlled approach.

Table 4.2 Existing With Project Conditions - Intersection Level of Service PM Peak Hour

No.	Intersection	Intersection Type	Existing Conditions		Existing With Project Conditions		Change in V/C (Delay)	Significant Impact
			V/C or (Delay)	LOS	V/C or (Delay)	LOS		
1	Pine St. & 10th St.	Signalized	0.461	A	0.462	A	0.001	No
2	Long Beach Blvd. & Anaheim St.	Signalized	0.653	B	0.658	B	0.005	No
3	Long Beach Blvd. & 10th St.	Signalized	0.679	B	0.684	B	0.005	No
4	Long Beach Blvd. & 7th St.	Signalized	0.408	A	0.408	A	0.000	No
5	Atlantic Ave. & 10th St.	Signalized	0.669	B	0.671	B	0.002	No
6	Locust Ave. & Lily Way	Unsignalized [1]	(8.8)	A	(9.1)	A	(0.3)	No
7	Waite Ct. & 12th St.	Unsignalized [1]	(8.5)	A	(8.9)	A	(0.4)	No

Note:

[1] Unsignalized intersection shows worst case delay (secs) and LOS for controlled approach.

5. Future Cumulative Conditions Without The Project

5.1 Traffic Forecasts

In order to evaluate the potential traffic impacts of the Project, it was necessary to first estimate and then analyze future traffic conditions without the Project. The year selected for this analysis was 2021, which is the expected year of completion of the Project.

Future traffic forecasts were estimated by forecasting two separate components of traffic growth in the study area.

The first component is the ambient growth that represents a general growth in traffic volumes due to minor new developments in the Project Area, and regional growth and development outside the study area. A growth rate of 1.0 percent per year was applied for this ambient traffic growth based on Los Angeles Congestion Management Program[1]. The existing traffic counts were therefore adjusted upward by a total of 1.0 percent a year for three years to represent the ambient growth to the Project completion year.

The second component of future growth relates to specific development projects located in the study area. These developments, called related or cumulative projects, are projects located within an approximately 1.5-mile radius from the Project Site that are currently under construction, have received formal approval, or are under formal planning consideration and potentially could be in place by the year 2021 when the Project will be completed, and that could add traffic growth to the roadways in the study area. The following section of this chapter describes the process of estimating traffic from these related projects.

5.2 Cumulative Projects

A list of proposed related/cumulative development projects that could affect traffic conditions in the Project Area by adding traffic volumes to study area intersections was received from the City of Long Beach. A total of 29 potential development projects were identified, the locations of which are shown in Figure 5.1 and are listed in Table 5.1.

Project Trip Generation and Distribution

Trip generation estimates for the cumulative projects were prepared, as shown in Table 5.1. These were estimated using ITE 10th Edition trip rates. These estimates are considered

[1] The CMP shows an annual growth rate of 0.94% for RSA 20 – Long Beach, in which the Project is located. This was conservatively rounded to 1% for analysis.

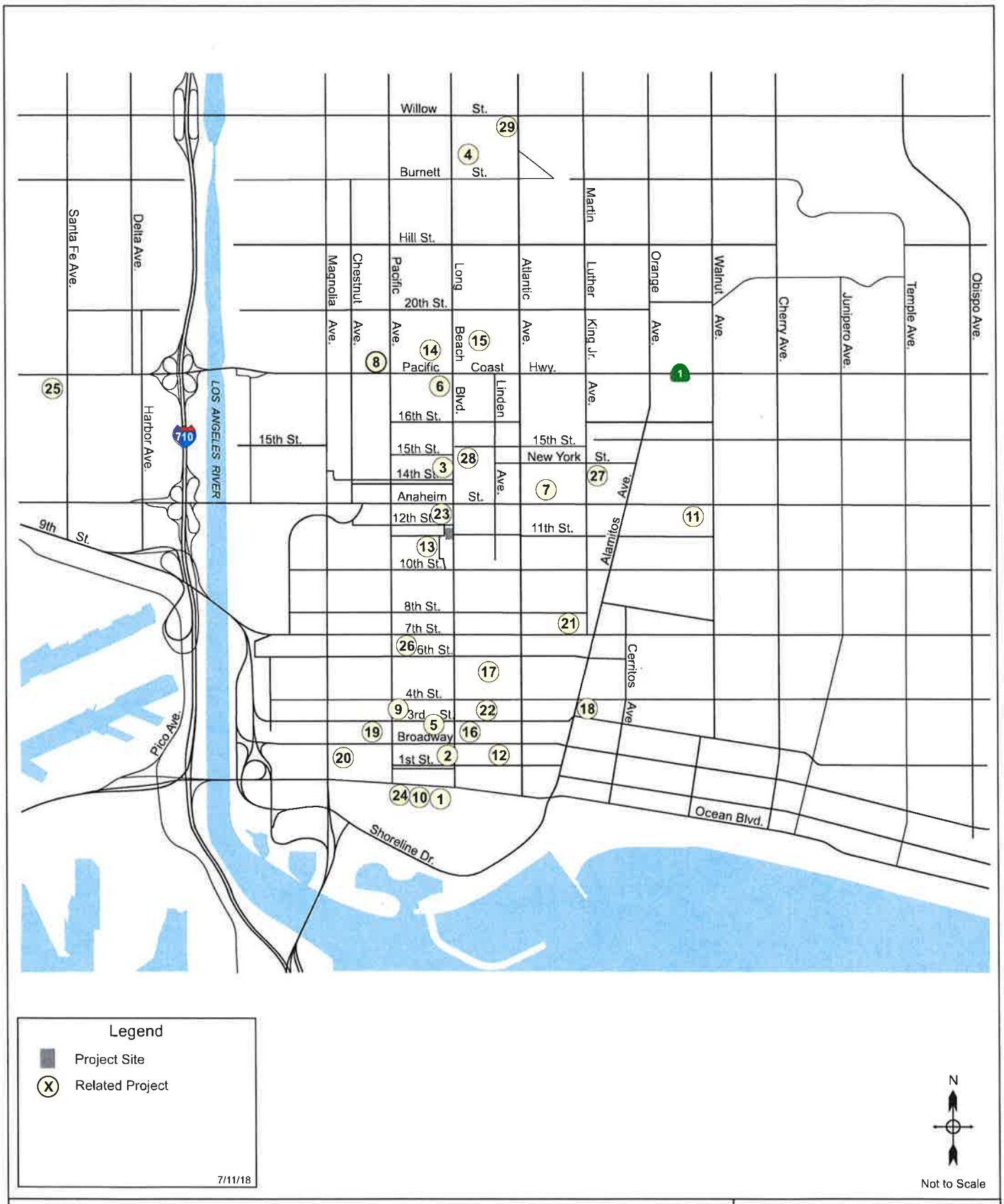

Figure 5.1
Location of Cumulative Projects

1105 Long Beach Boulevard Project

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Table 5.1 Cumulative Projects List and Trip Generation Estimates

5/30/2018

Project #	Address [1]	Project Description [1]		ITE Code	Daily Trips [2]	AM Peak Hour [2]			PM Peak Hour [2]		
						In	Out	Total	In	Out	Total
1	210 E Ocean Boulevard	175 Room	Hotel	ITE 310	1,463	49	33	82	54	51	105
2	125 Long Beach Boulevard	218 DU	Apartments	ITE 220	1,596	24	76	100	76	46	122
		7,292 SF	Retail	ITE 820	275	4	3	7	13	15	28
			Total		1,871	28	79	107	89	61	150
3	1401 Long Beach Boulevard & 217 E 14th Street	142 DU	Appartments	ITE 220	1,039	16	49	65	50	30	80
		4,000 SF	Retail	ITE 820	151	2	2	4	7	8	15
			Total		1,190	18	51	69	57	38	95
4	2400 Long Beach Boulevard	145 DU	Senior Transitional Residential Care Facility	ITE 252	537	10	19	29	20	18	38
5	127 E Broadway	189 DU	Apartments	ITE 220	1,383	21	66	87	66	40	106
		10,000 SF	Retail	ITE 820	378	6	3	9	18	20	38
			Total		1,761	27	69	96	84	60	144
6	1795 Long Beach Boulevard	101 DU	Apartments	ITE 221	549	9	27	36	27	17	44
		4,051 SF	Commercial (retail)	ITE 820	153	2	2	4	7	8	15
			Total		702	11	29	40	34	25	59
7	739 E Anaheim Street	20,120 SF	Grocery Store	ITE 850	2,148	46	31	77	95	91	186
		3,600 SF	Fast Food Restaurant	ITE 934	1,695	74	71	145	61	57	118
			Total		3,843	120	102	222	156	148	304
8	201-245 W PCH	36,000 SF	Commercial (retail)	ITE 820	1,359	21	13	34	66	71	137
		154 DU	Apartments	ITE 221	838	14	41	55	42	26	68
			Total		2,197	35	54	89	108	97	205
9	131 W 3rd Street	366 DU	Apartments	ITE 221	1,991	33	99	132	99	62	161
		18,000 SF	Commercial (retail)	ITE 820	680	10	7	17	33	36	69
			Total		2,671	43	106	149	132	98	230
10	100 E Ocean Boulevard	419 Room	Hotel	ITE 310	3,503	117	80	197	130	121	251

Table 5.1 Cumulative Projects List and Trip Generation Estimates

5/30/2018

Project #	Address [1]	Project Description [1]		ITE Code	Daily Trips [2]	AM Peak Hour [2]			PM Peak Hour [2]		
						In	Out	Total	In	Out	Total
11	1500 E Anaheim Street /	87 DU	Apartments	ITE 221	473	8	23	31	23	15	38
	1205-1209 Walnut Avenue	18,000 SF	Health Clinic	ITE 630	687	52	14	66	17	42	59
			Total		1,160	60	37	97	40	57	97
12	135 Linden Avenue	82 DU	Apartments	ITE 221	446	7	23	30	22	14	36
		4,091 SF	Retail	ITE 820	154	2	2	4	7	9	16
			Total		600	9	25	34	29	23	52
13	1112 Locust Avenue	97 DU	Apartments	ITE 221	528	9	26	35	26	17	43
14	1836-1852 Locust Avenue	3,600 SF	Commercial (retail)	ITE 820	136	2	1	3	7	7	14
		95 DU	Apartments	ITE 221	517	9	25	34	26	16	42
			Total		653	11	26	37	33	23	56
15	1900-1940 Long Beach Boulevard	95 DU	Apartments	ITE 221	517	9	25	34	26	16	42
		12,400 SF	Retail	ITE 820	468	7	5	12	23	24	47
			Total		985	16	30	46	49	40	89
16	3rd Street/Long Beach Boulevard/	392 DU	Apartments	ITE 221	2,132	35	106	141	106	66	172
	Broadway/Alamo Court	32,807 SF	Commercial (retail)	ITE 820	1,238	19	12	31	60	65	125
			Total		3,370	54	118	172	166	131	297
17	425 E 5th Street	15 DU	Apartments	ITE 220	110	2	5	7	5	3	8
18	320 Alamitos Avenue	77 DU	Apartments	ITE 220	564	8	27	35	27	16	43
19	230 W 3rd Street	163 DU	Apartments	ITE 220	1,193	18	57	75	57	34	91
20	500 W Broadway	142 DU	Apartments	ITE 220	1,039	16	49	65	50	30	80
		3,500 SF	Commercial (retail)	ITE 820	132	2	1	3	6	7	13
			Total		1,171	18	50	68	56	37	93
21	825 E 7th Street	19 DU	Apartments	ITE 220	139	2	7	9	7	4	11

Table 5.1 Cumulative Projects List and Trip Generation Estimates

5/30/2018

Project #	Address [1]	Project Description [1]		ITE Code	Daily Trips [2]	AM Peak Hour [2]			PM Peak Hour [2]		
						In	Out	Total	In	Out	Total
22	434 E 4th Street	49 DU	Apartments	ITE 220	359	5	18	23	17	10	27
23	1235 Long Beach Boulevard	160 DU	Senior Housing	ITE 252	592	11	21	32	22	20	42
24	150 W Ocean Boulevard [3]	216 DU	Apartments		1,436	22	89	111	86	48	134
25	1675 Santa Fe Avenue	21,377 SF	Warehousing	ITE 150	37	3	1	4	1	3	4
26	635 Pine Avenue & 636 Pacific Avenue	271 DU	Apartments	ITE 221	1,474	24	74	98	73	46	119
		1,400 SF	Retail	ITE 820	53	1	0	1	3	2	5
			Total		1,527	25	74	99	76	48	124
27	1405 Lewis Avenue [4]	19 Units	Artist Studios	ITE 220	139	2	7	9	7	4	11
28	1400 Long Beach Boulevard	64 DU	Apartments	ITE 220	468	7	22	29	22	14	36
		2,100 SF	Retail	ITE 820	79	1	1	2	4	4	8
			Total		547	8	23	31	26	18	44
29	2515-2545 Atlantic Avenue	154 DU	Senior Living Facility	ITE 252	570	11	20	31	22	18	40
Total					**35,418**	**752**	**1,283**	**2,035**	**1,616**	**1,271**	**2,887**

1. Related projects list from City of Long Beach.
2. Trips estimated using ITE 10th Edition trip rates.
3. Trips from Oceannaire Apartments Traffic Impact Analysis.
4. Used trip rates for low-rise apartments.

Conservative in that they do not account for trip interaction between projects, and they do not in every case account for the possible use of non-auto modes such as transit, walk and bicycling.

Trip distributions of cumulative project trips were estimated based on an understanding of the type of the project, its location, the geographic distribution of population and employment from which project trips may be drawn, and the surrounding roadway and circulation system. It should be noted that because of the large geographic distribution of these projects, that not all of the related project trips would travel through the study area and traverse the study intersections.

Future Cumulative Traffic Forecasts for 2021 Without Project Condition

The trip estimates shown in Table 5.1 were then added to the roadway network and combined with existing volumes and ambient traffic growth to provide forecasts of future baseline traffic conditions in the study area in 2021, for both the AM and PM peak hours, representing the Future Without Project conditions.

The Future Without Project peak hour traffic volumes are illustrated in Figures 5.2 and 5.3 for the AM and PM peak hours respectively.

5.3 Future Cumulative Intersection Conditions Without the Project

Future Cumulative Without Project Intersection Level of Service

The Future Cumulative Without Project traffic forecasts were evaluated to determine the V/C ratio and LOS for the analyzed intersections for both the AM peak hour and the PM peak hour. The results are shown in Table 5.2 and Table 5.3, which summarize the intersection levels of service calculated for the Future Cumulative Without Project conditions, and compares them to existing conditions levels of service.

AM Peak Hour

All studied intersections would operate at LOS B or better during the AM peak hour.

PM Peak Hour

All studied intersections would operate at LOS C or better during the PM peak hour.

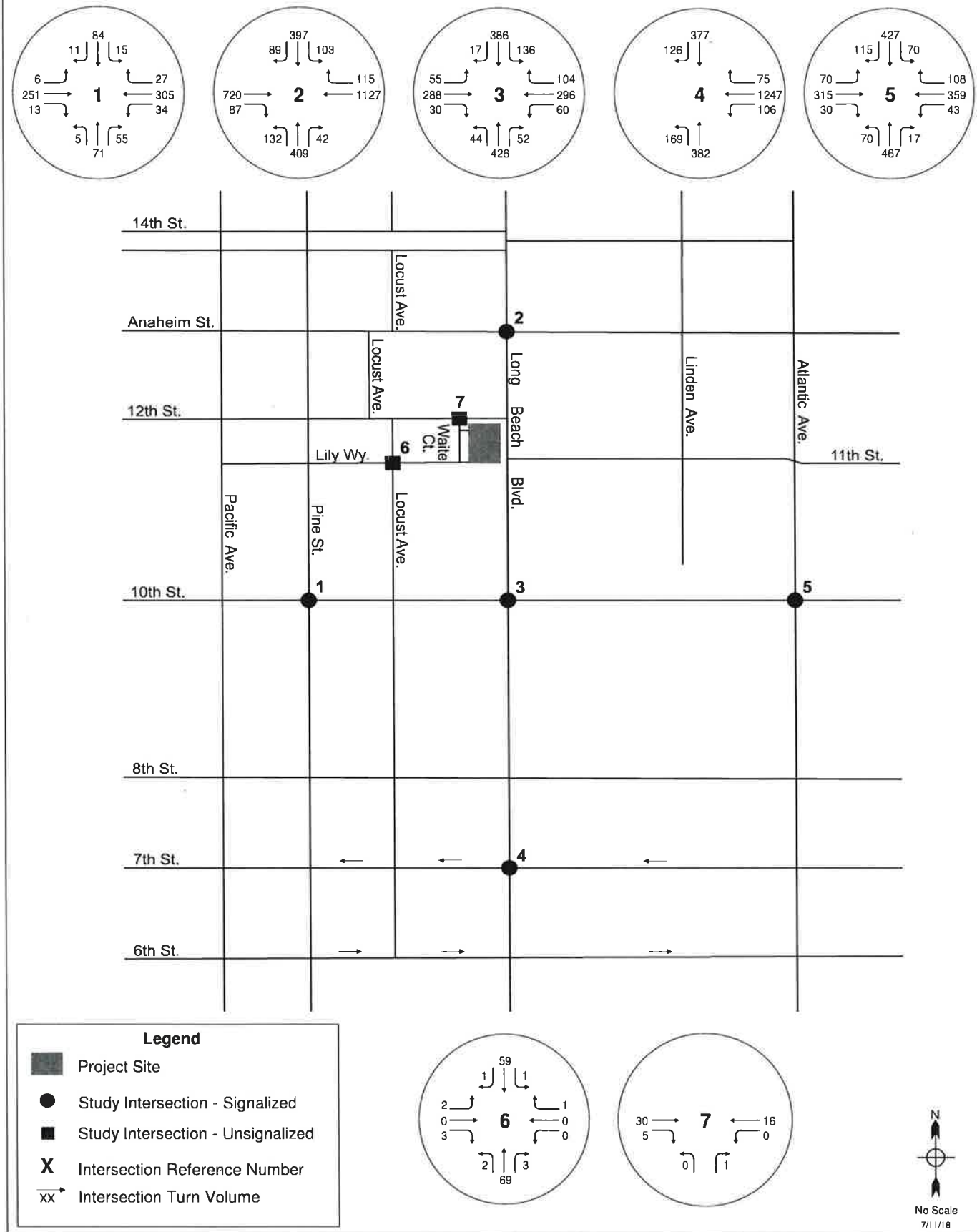

Figure 5.2
Future Cumulative Without Project Traffic Volumes - AM Peak Hour

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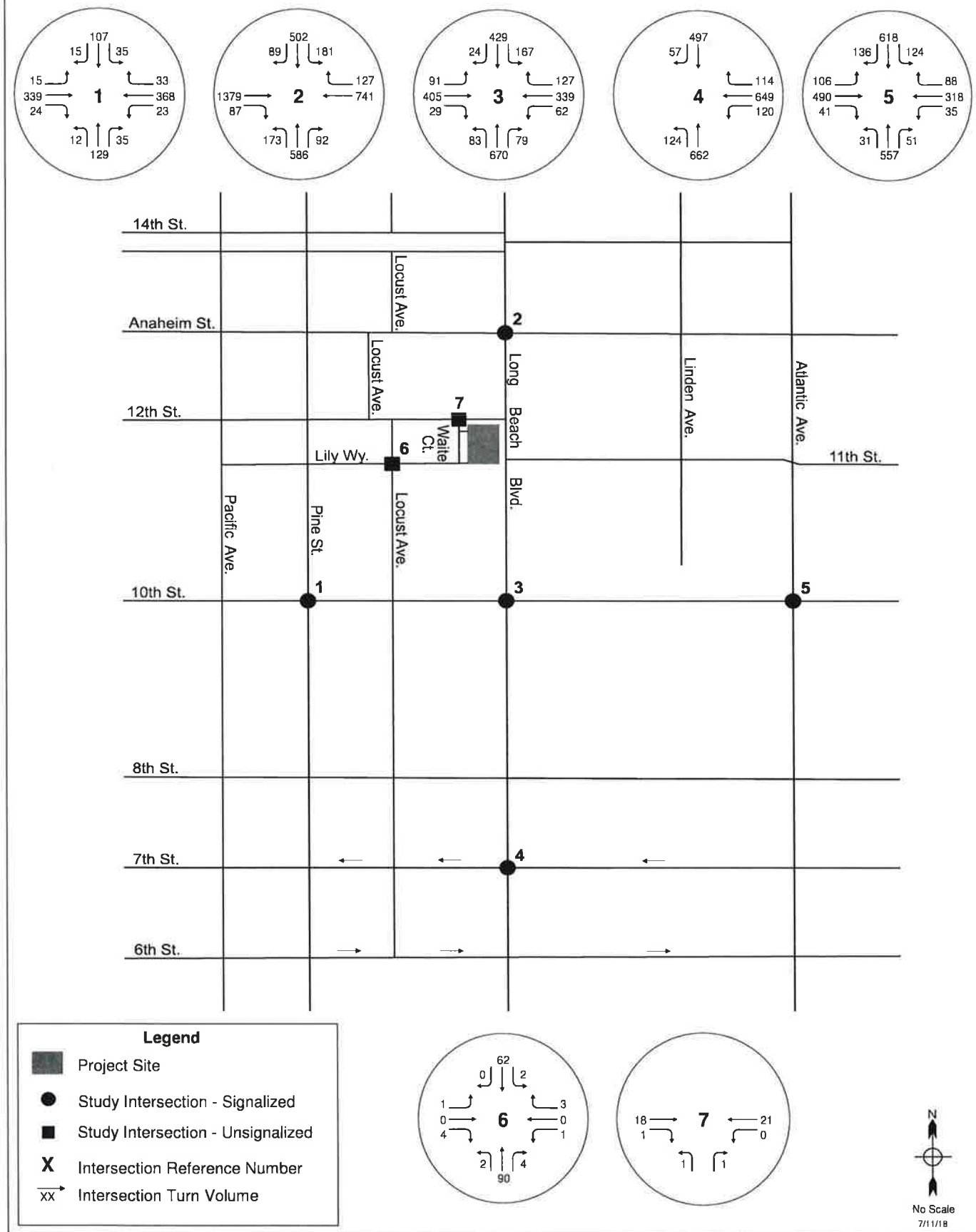

Figure 5.3
Future Cumulative Without Project Traffic Volumes - PM Peak Hour

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Table 5.2 Future Cumulative Without Project Conditions - Intersection Level of Service AM Peak Hour

No.	Intersection	Interscetion Type	Existing Conditions		Future Without Project Conditions	
			V/C or (Delay)	LOS	V/C or (Delay)	LOS
1	Pine St. & 10th St.	Signalized	0.381	A	0.399	A
2	Long Beach Blvd. & Anaheim St.	Signalized	0.519	A	0.565	A
3	Long Beach Blvd. & 10th St.	Signalized	0.510	A	0.570	A
4	Long Beach Blvd. & 7th St.	Signalized	0.534	A	0.583	A
5	Atlantic Ave. & 10th St.	Signalized	0.609	B	0.649	B
6	Locust Ave. & Lily Way	Unsignalized [1]	(8.8)	A	(8.9)	A
7	Waite Ct. & 12th St.	Unsignalized [1]	(8.4)	A	(8.4)	A

Note:

[1] Unsignalized intersection shows worst case delay (secs) and LOS for controlled approach.

Table 5.3 Future Cumulative Without Project Conditions - Intersection Level of Service PM Peak Hour

No.	Intersection	Intersection Type	Existing Conditions		Future Without Project Conditions	
			V/C or (Delay)	LOS	V/C or (Delay)	LOS
1	Pine St. & 10th St.	Signalized	0.461	A	0.485	A
2	Long Beach Blvd. & Anaheim St.	Signalized	0.653	B	0.730	C
3	Long Beach Blvd. & 10th St.	Signalized	0.679	B	0.749	C
4	Long Beach Blvd. & 7th St.	Signalized	0.408	A	0.468	A
5	Atlantic Ave. & 10th St.	Signalized	0.669	B	0.721	C
6	Locust Ave. & Lily Way	Unsignalized [1]	(8.8)	A	(8.9)	A
7	Waite Ct. & 12th St.	Unsignalized [1]	(8.5)	A	(8.5)	A

Note:

[1] Unsignalized intersection shows worst case delay (secs) and LOS for controlled approach.

6. Future Cumulative With Project Conditions

This section of the report documents the analysis of potential Project traffic impacts in the study area for the Future With Project conditions. Traffic generated by the Project was added to the Future Cumulative -Without Project traffic volumes and the potential for impacts evaluated. The total Future Cumulative With Project conditions peak hour traffic volumes are illustrated in Figures 6.1 and 6.2 for the AM and PM peak hours, respectively. These traffic forecasts were then used to evaluate potential Project traffic impacts, as described in the following sections.

6.1 Project Impacts - Intersections

Project Impact Analysis - Future Cumulative With Project Intersection Level of Service

The intersection level of service analysis for the Future Cumulative With Project conditions is summarized in Table 6.1 for the AM peak hour and in Table 6.2 for the PM peak hour. These tables also compare the level of service for Without Project and With Project conditions, show the increase in V/C ratios at each intersection due to the Project, and identify if the increase constitutes a significant impact.

AM Peak Hour

The analysis summarized in Table 6.1 indicates that for the AM peak hour, the Project would not cause a change in the level of service at any intersection, and that the increases in volume/capacity (V/C) ratios would in all cases be less than the threshold for a significant impact to occur. At both of the alley intersections serving the Project (Waite Court at 12th Street, and Lily Way at Locust Avenue) the Project would not appreciably increase vehicle delays and would not change the levels of service (which would remain LOS A).

PM Peak Hour

The analysis summarized in Table 6.2 indicates that for the PM peak hour, the Project would not cause a change in the level of service at any intersection, and that the increases in volume/capacity (V/C) ratios would in all cases be less than the threshold for a significant impact to occur. At both of the alley intersections serving the Project (Waite Court at 12th Street, and Lily Way at Locust Avenue) the Project would not appreciably increase vehicle delays and would not change the levels of service (which would remain LOS A).

6.2 CMP Analysis

When a CMP analysis is needed, the CMP methodology requires that the Traffic Study analyze traffic conditions at all CMP arterial monitoring intersections where the Project will add 50 or

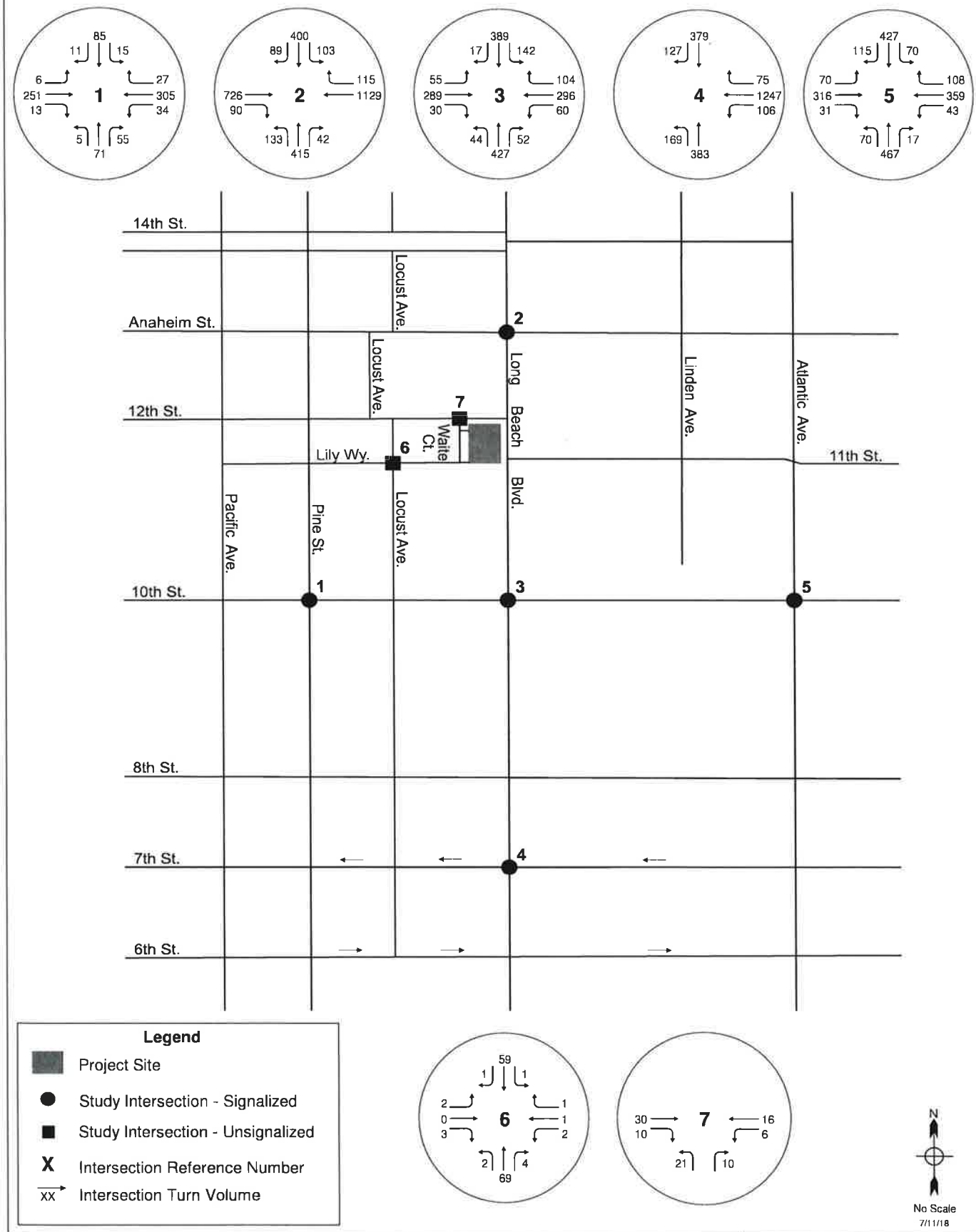

Figure 6.1
Future Cumulative With Project Traffic Volumes - AM Peak Hour

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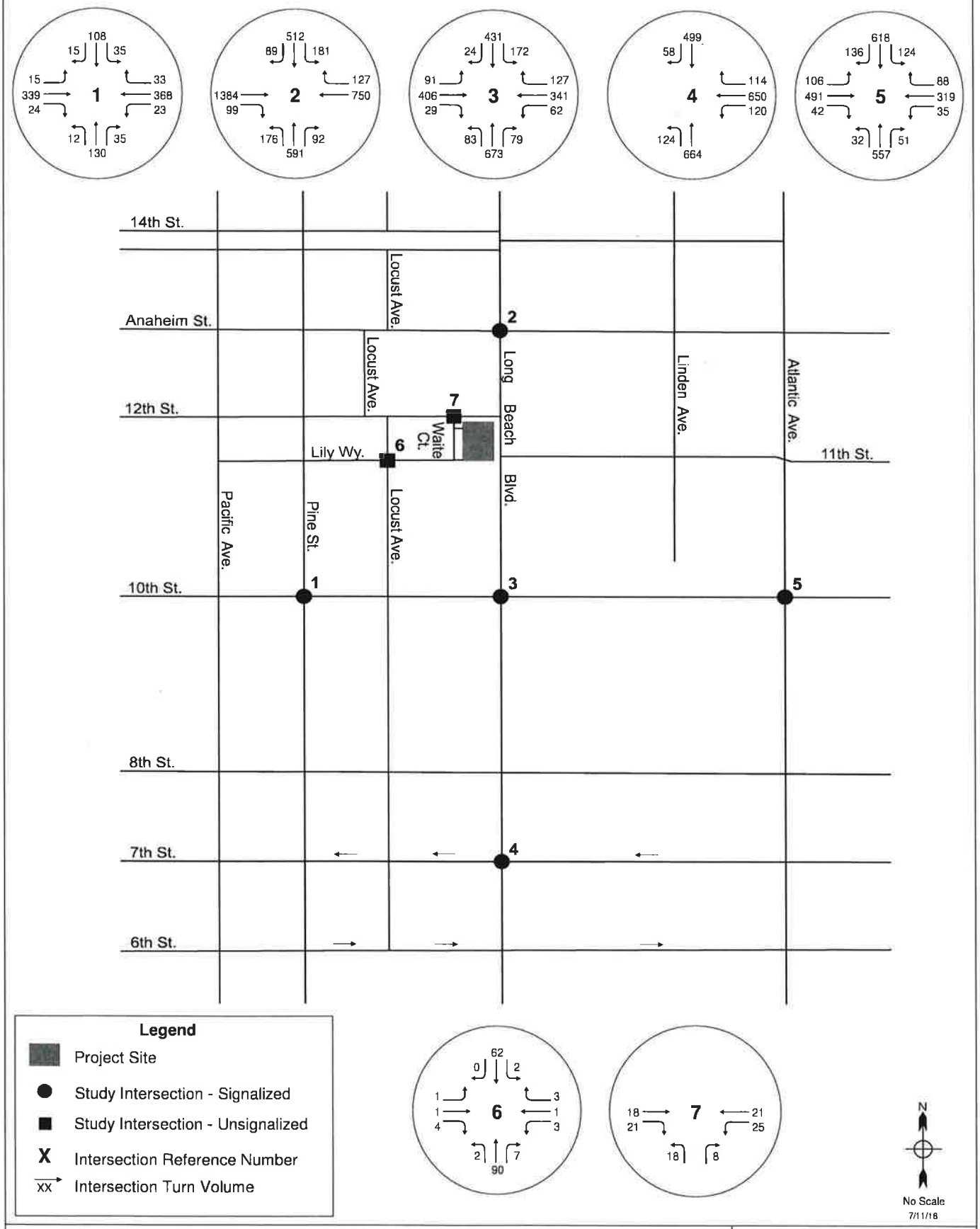

Figure 6.2
Future Cumulative With Project Traffic Volumes - PM Peak Hour

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Table 6.1 Future Cumulative With Project Conditions - Intersection Level of Service AM Peak Hour 7/5/2018

No.	Intersection	Intersection Type	Future Without Project Conditions		Future With Project Conditions		Change in V/C (Delay)	Significant Impact
			V/C or (Delay)	LOS	V/C or (Delay)	LOS		
1	Pine St. & 10th St.	Signalized	0.399	A	0.400	A	0.001	No
2	Long Beach Blvd. & Anaheim St.	Signalized	0.565	A	0.567	A	0.002	No
3	Long Beach Blvd. & 10th St.	Signalized	0.570	A	0.575	A	0.005	No
4	Long Beach Blvd. & 7th St.	Signalized	0.583	A	0.584	A	0.001	No
5	Atlantic Ave. & 10th St.	Signalized	0.649	B	0.650	B	0.001	No
6	Locust Ave. & Lily Way	Unsignalized [1]	(8.9)	A	(9.3)	A	(0.4)	No
7	Waite Ct. & 12th St.	Unsignalized [1]	(8.4)	A	(8.8)	A	(0.4)	No

Note:

[1] Unsignalized intersection shows worst case delay (secs) and LOS for controlled approach.

Table 6.2 Future Cumulative With Project Conditions - Intersection Level of Service PM Peak Hour

No.	Intersection	Intersection Type	Future Without Project Conditions		Future With Project Conditions		Change in V/C (Delay)	Significant Impact
			V/C or (Delay)	LOS	V/C or (Delay)	LOS		
1	Pine St. & 10th St.	Signalized	0.485	A	0.486	A	0.001	No
2	Long Beach Blvd. & Anaheim St.	Signalized	0.730	C	0.735	C	0.005	No
3	Long Beach Blvd. & 10th St.	Signalized	0.749	C	0.753	C	0.004	No
4	Long Beach Blvd. & 7th St.	Signalized	0.468	A	0.469	A	0.001	No
5	Atlantic Ave. & 10th St.	Signalized	0.721	C	0.721	C	0.000	No
6	Locust Ave. & Lily Way	Unsignalized [1]	(8.9)	A	(9.3)	A	(0.4)	No
7	Waite Ct. & 12th St.	Unsignalized [1]	(8.5)	A	(9.0)	A	(0.5)	No

Note:

[1] Unsignalized intersection shows worst case delay (secs) and LOS for controlled approach.

more trips during either the AM or PM weekday peak hours of adjacent street traffic. The CMP also requires that traffic studies analyze mainline freeway monitoring stations where the Project will add 150 or more trips in either direction during either AM or PM weekday peak hours. If, based on these criteria, the Traffic Study identifies no facilities for study, then no further traffic analysis is required.

CMP Arterial Monitoring Locations

A review of the 2010 CMP indicated the following arterial monitoring stations that are closest to the Project Site:

- Alamitos Blvd. & Ocean Blvd.
- Pacific Coast Hwy. & Orange Ave.
- Pacific Coast Hwy. & Santa Fe Ave.
- 7th St. & Alamitos Ave.

The additional trips added by Project at these intersections are shown in Table 6.3 below.

Table 6.3 CMP Arterial Analysis – Number of Trips Added by Project

Location	*No. of Trips Added by Project*	
	AM	*PM*
Alamitos Blvd. & Ocean Blvd	0	0
Pacific Coast Hwy. & Orange Ave.	3	3
Pacific Coast Hwy. & Santa Fe Ave.	1	2
7th St. & Alamitos Ave.	0	1

These CMP monitoring locations are between approximately 0.7 and 1.6 miles from the Project Site. Based on the trip generation and trip distribution characteristics of the Project as described earlier, the maximum number of trips that the Project would add to any station would be 3 trips in both AM and PM peak hours. Many project trips will disperse onto numerous roadways away from the site before reaching these locations.

Because the Project will not add more than 50 trips to any CMP monitoring location, it is therefore concluded that the Project would not exceed the threshold to require analysis and would not create any significant traffic impacts at any CMP arterial monitoring locations.

CMP Freeway Monitoring Stations

A review of the 2010 CMP also indicated the following freeway monitoring stations that are closest to the Project Site.

- I-710 north of Pacific Coast Hwy. – Willow St.
- I-710 north of north of I-405, south of Del Amo Blvd.
- I-405 at Santa Fe Ave.

The monitoring locations are located between 1.9 and 4 miles from the site. The number of Project vehicle trips expected to pass through these stations was estimated based on the Project trip distribution and the Project trip generation. The additional trips added by Project at these locations are shown in Table 6.4 below.

The maximum number of one-way Project trips that would be added to these freeway segments would be 9 AM trips and 13 PM peak hour trips at the I-710 north of Pacific Coast Highway. – Willow Street. These low incremental volumes are well below the CMP threshold of 150 trips. It is therefore concluded that the Project would not exceed the threshold to require analysis, and that the Project would not cause any significant impacts at CMP freeway monitoring locations.

Table 6.4 CMP Freeway Analysis – Number of Trips added by Project

Location	*Direction*	*No. of Trips Added by Project*	
		AM	*PM*
I-710 north of Pacific Coast Hwy. – Willow St.	NB	9	7
	SB	3	13
I-710 north of I-405, south of Del Amo Blvd.	NB	3	2
	SB	1	4
I-405 at Santa Fe Ave.	EB	2	7
	WB	5	4

CMP Transit Impact Analysis

An analysis of potential Project impacts on the transit system was also performed, per the CMP guidelines.

The number of transit trips that would be generated by the Project was estimated based on the trip generation methodology described in Chapter 3. The estimate of base vehicle trips (unadjusted) for each Project land use (from Table 3.1) was converted to person trips by applying a conversion factor of 1.4, as per CMP guidelines. The person trip numbers were then multiplied by the estimated percent taking transit for each land use, as previously determined and discussed earlier in Chapter 3.

The estimated number of transit trips for the CMP analysis is shown in Table 6.5. In the AM peak hour, the Project would generate an estimated 3 net additional transit trips (1 inbound trip

Table 6.5 Transit Trips Generated by The Project

7/10/2018

Land Use	Base (Unadjusted) [1] Vehicle Trips		Person Trips [2]		% By Transit [3]		Transit Trips					
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour			PM Peak Hour		
							Total	In [4]	Out [4]	Total	In [4]	Out [4]
Existing Uses												
Retail	-4	-17	-6	-24	5%	5%	0	0	0	-1	0	-1
Residential	0	0	0	0	0%	0%	0	0	0	0	0	0
Proposed Uses												
Residential	44	53	62	74	5%	5%	3	1	2	4	2	2
Restaurant	4	39	6	55	5%	5%	0	0	0	3	2	1
Total	44	75	62	105			3	1	2	6	4	2

1. From Table 3.1 - Trip Generation Estimates.
2. Conversion factor of 1.4 from vehicle trips to person trips, per CMP guidelines.
3. Transit percentage from Table 3.1 - Trip Generation Estimates.
4. In/out distribution from Table 3.1 - Trip Generation Estimates.

and 2 outbound trips), and in the PM peak hour approximately 6 additional transit trips (4 inbound and 2 outbound), as shown in Table 6.5.

The two directional peak capacity of the transit system serving the Project Site (based on transit service information in Table 2.3) is approximately 5,700 persons during the AM peak hour and the PM peak hour. The highest total volume of peak hour trips added by the Project would be 6 trips, which would represent approximately 0.1% of the total transit capacity during the peak hour. It is concluded that the Project would not cause the capacity of the transit system to be substantially exceeded, and therefore that the Project would not create a significant impact on the transit systems serving the Project area.

7. Mitigation Measures

This report section addresses the need for mitigation measures to address any potential significant impacts from the Project.

As the preceding analysis has determined that there would be no significant traffic impacts at intersections, no CMP arterial or freeway impacts, and no CMP transit impacts caused by the Project, no mitigation measures are necessary.

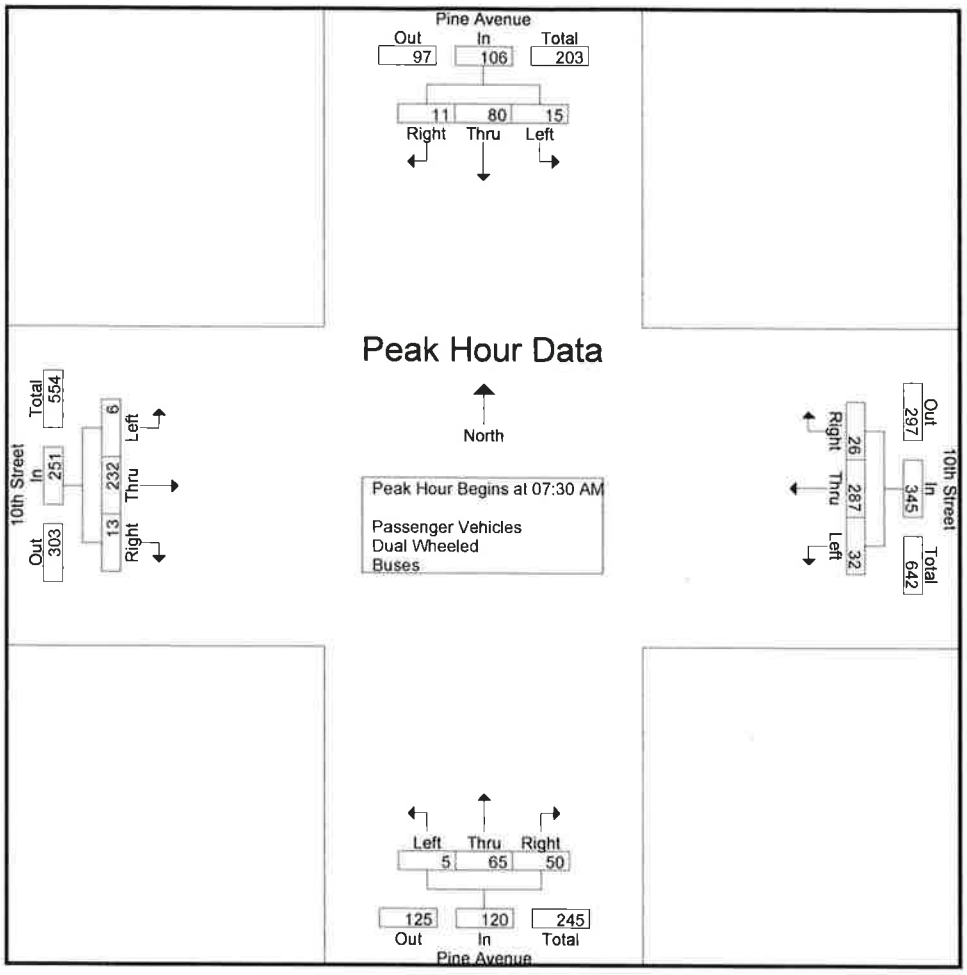
Appendix A

Traffic Count Data

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Long Beach
N/S: Pine Avenue
E/W: 10th Street
Weather: Clear

File Name : 01_LBC_Pine_10th AM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



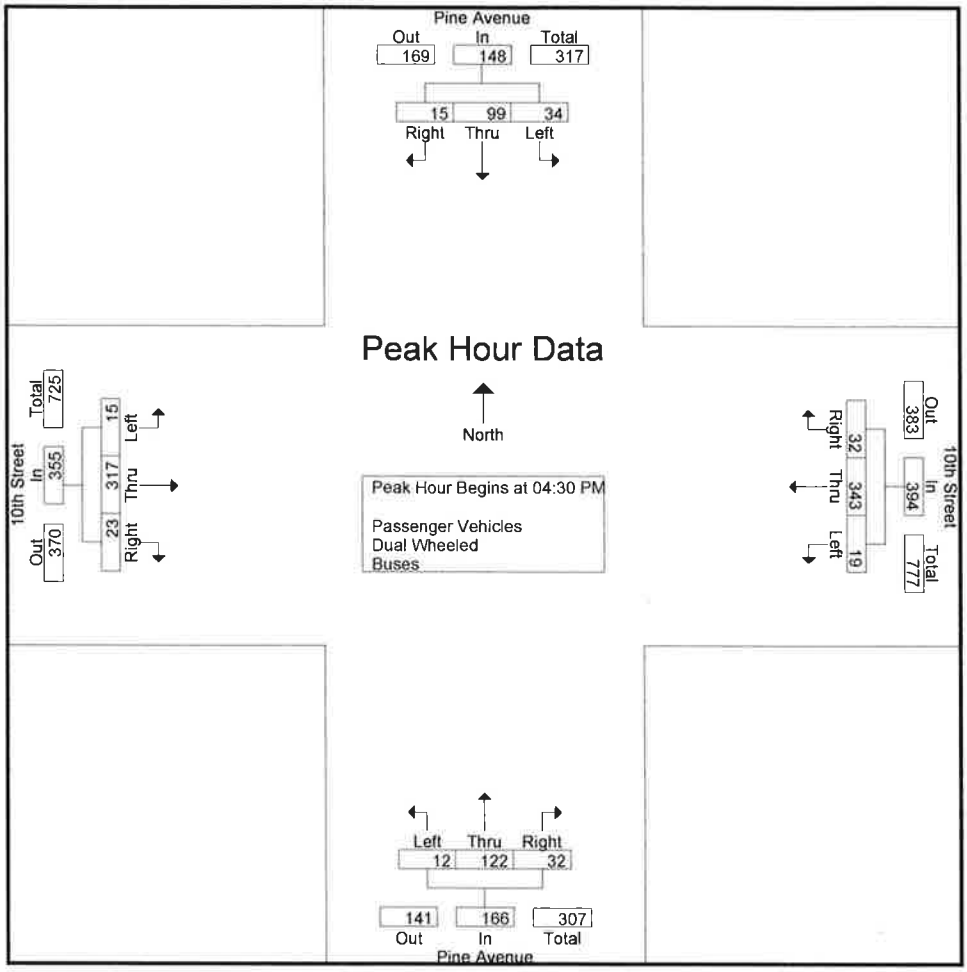
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:30 AM				07:30 AM				07:30 AM				07:30 AM			
+0 mins.	3	25	3	**31**	7	70	5	82	1	17	11	29	1	48	**8**	57
+15 mins.	2	**26**	1	29	**11**	**76**	9	**96**	**2**	**20**	**18**	**40**	1	**67**	3	**71**
+30 mins.	**5**	15	**4**	24	5	72	0	77	1	15	13	29	**2**	59	0	61
+45 mins.	5	**14**	3	22	9	69	**12**	90	1	13	8	22	2	58	2	62
Total Volume	15	80	11	106	32	287	26	345	5	65	50	120	6	232	13	251
% App. Total	14.2	75.5	10.4		9.3	83.2	7.5		4.2	54.2	41.7		2.4	92.4	5.2	
PHF	.750	.769	.688	.855	.727	.944	.542	.898	.625	.813	.694	.750	.750	.866	.406	.884

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Long Beach
N/S: Pine Avenue
E/W: 10th Street
Weather: Clear

File Name : 01_LBC_Pine_10th PM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				03:15 PM				04:45 PM			
+0 mins.	**11**	21	3	35	2	88	8	98	1	25	16	42	3	**106**	5	**114**
+15 mins.	10	20	**5**	35	**6**	62	**10**	78	0	38	**17**	**55**	3	82	3	88
+30 mins.	7	**31**	2	**40**	6	**101**	9	**116**	**4**	34	7	45	**6**	67	**9**	82
+45 mins.	6	27	5	38	5	92	5	102	2	**40**	9	51	2	77	5	84
Total Volume	34	99	15	148	19	343	32	394	7	137	49	193	14	332	22	368
% App. Total	23	66.9	10.1		4.8	87.1	8.1		3.6	71	25.4		3.8	90.2	6	
PHF	.773	.798	.750	.925	.792	.849	.800	.849	.438	.856	.721	.877	.583	.783	.611	.807

Counts Unlimited
PO Box 1178
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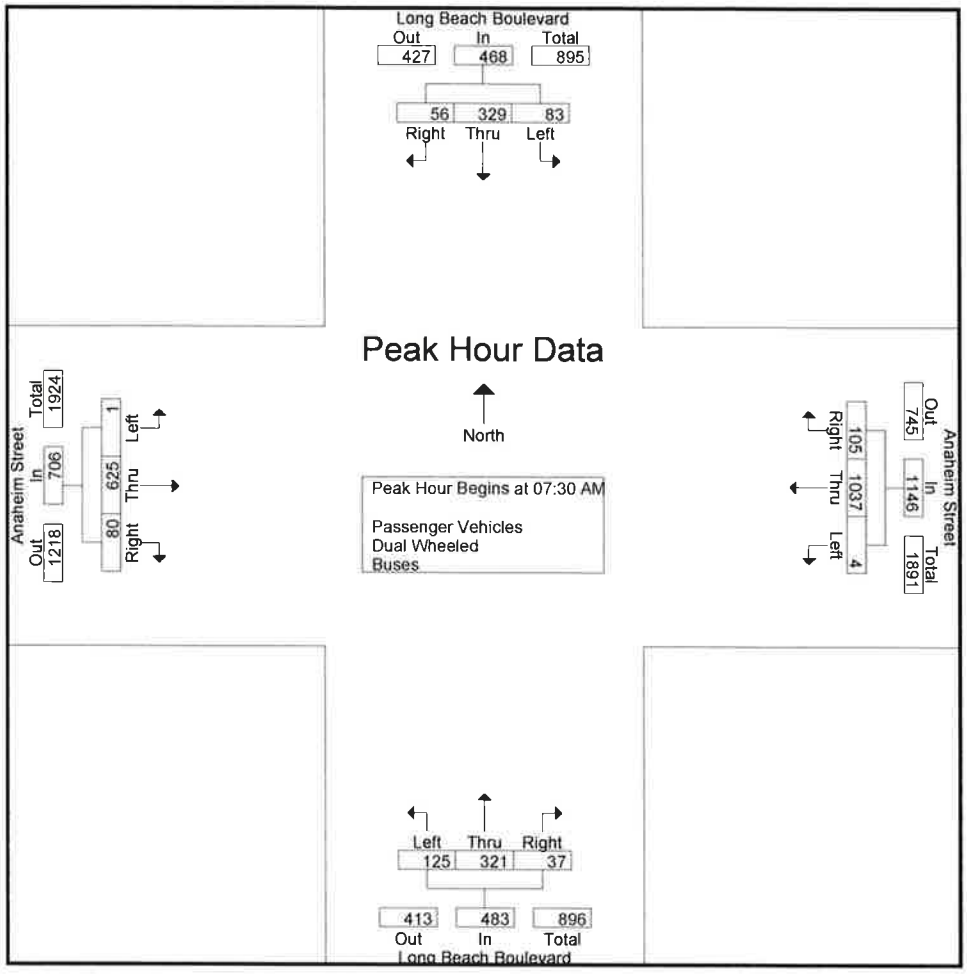
City of Long Beach
N/S: Long Beach Boulevard
E/W: Anaheim Street
Weather: Clear

File Name : 02_LBC_Long Beach_Anaheim AM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				09:00 AM				09:00 AM			
+0 mins.	24	95	10	129	1	271	17	289	36	71	18	125	**1**	**196**	16	**213**
+15 mins.	25	87	**19**	131	1	285	29	315	31	75	12	118	0	175	15	190
+30 mins.	20	77	16	113	**2**	**308**	29	**339**	23	**79**	18	120	1	162	16	179
+45 mins.	**31**	**101**	13	**145**	0	219	**30**	249	**41**	76	**21**	**138**	0	189	**19**	208
Total Volume	100	360	58	518	4	1083	105	1192	131	301	69	501	2	722	66	790
% App. Total	19.3	69.5	11.2		0.3	90.9	8.8		26.1	60.1	13.8		0.3	91.4	8.4	
PHF	.806	.891	.763	.893	.500	.879	.875	.879	.799	.953	.821	.908	.500	.921	.868	.927

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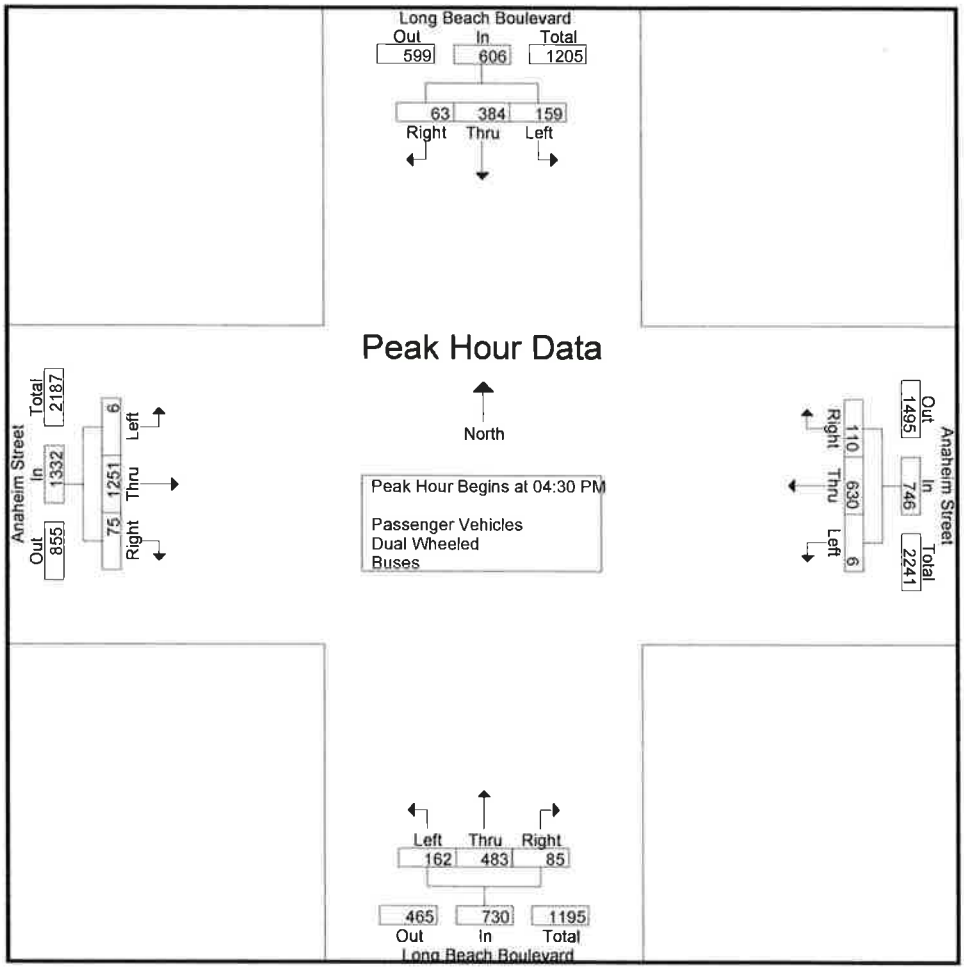
City of Long Beach
N/S: Long Beach Boulevard
E/W: Anaheim Street
Weather: Clear

File Name : 02_LBC_Long Beach_Anaheim PM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:30 PM				03:00 PM				04:45 PM				04:15 PM			
+0 mins.	**47**	78	**29**	154	0	**201**	21	**222**	46	**134**	15	**195**	2	**330**	13	**345**
+15 mins.	37	88	18	143	1	149	27	177	39	122	**25**	186	2	322	**21**	345
+30 mins.	44	109	21	**174**	**3**	167	20	190	**47**	115	23	185	**4**	304	16	324
+45 mins.	40	**111**	16	167	0	157	**30**	187	31	133	24	188	0	312	20	332
Total Volume	168	386	84	638	4	674	98	776	163	504	87	754	8	1268	70	1346
% App. Total	26.3	60.5	13.2		0.5	86.9	12.6		21.6	66.8	11.5		0.6	94.2	5.2	
PHF	.894	.869	.724	.917	.333	.838	.817	.874	.867	.940	.870	.967	.500	.961	.833	.975

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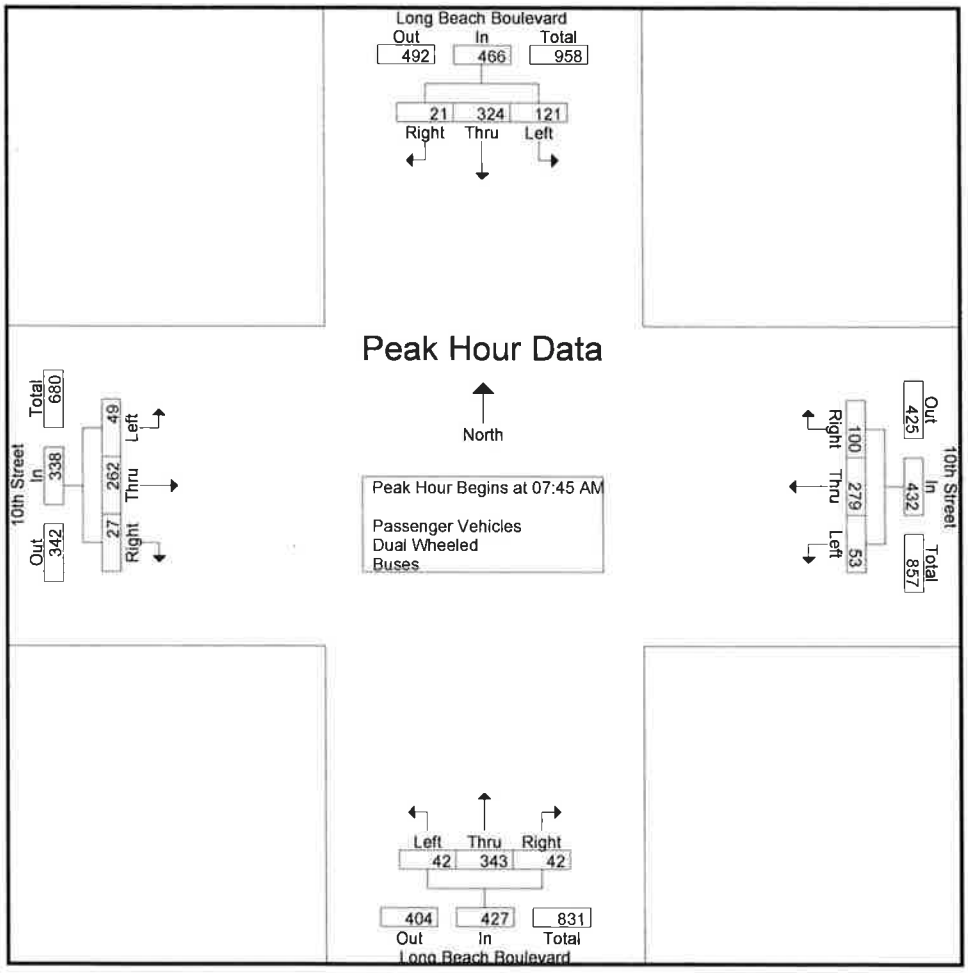
City of Long Beach
N/S: Long Beach Boulevard
E/W: 10th Street
Weather: Clear

File Name : 03_LBC_Long Beach_10th AM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM				07:45 AM				09:00 AM				07:30 AM			
+0 mins.	31	79	7	117	**17**	**83**	**29**	**129**	12	**98**	9	119	12	73	9	**94**
+15 mins.	26	78	0	104	12	70	19	101	17	88	9	114	11	66	**10**	87
+30 mins.	31	75	**9**	115	15	61	28	104	12	83	4	99	12	**75**	3	90
+45 mins.	**33**	**92**	5	**130**	9	65	24	98	**20**	93	**16**	**129**	**13**	57	5	75
Total Volume	121	324	21	466	53	279	100	432	61	362	38	461	48	271	27	346
% App. Total	26	69.5	4.5		12.3	64.6	23.1		13.2	78.5	8.2		13.9	78.3	7.8	
PHF	.917	.880	.583	.896	.779	.840	.862	.837	.763	.923	.594	.893	.923	.903	.675	.920

Counts Unlimited
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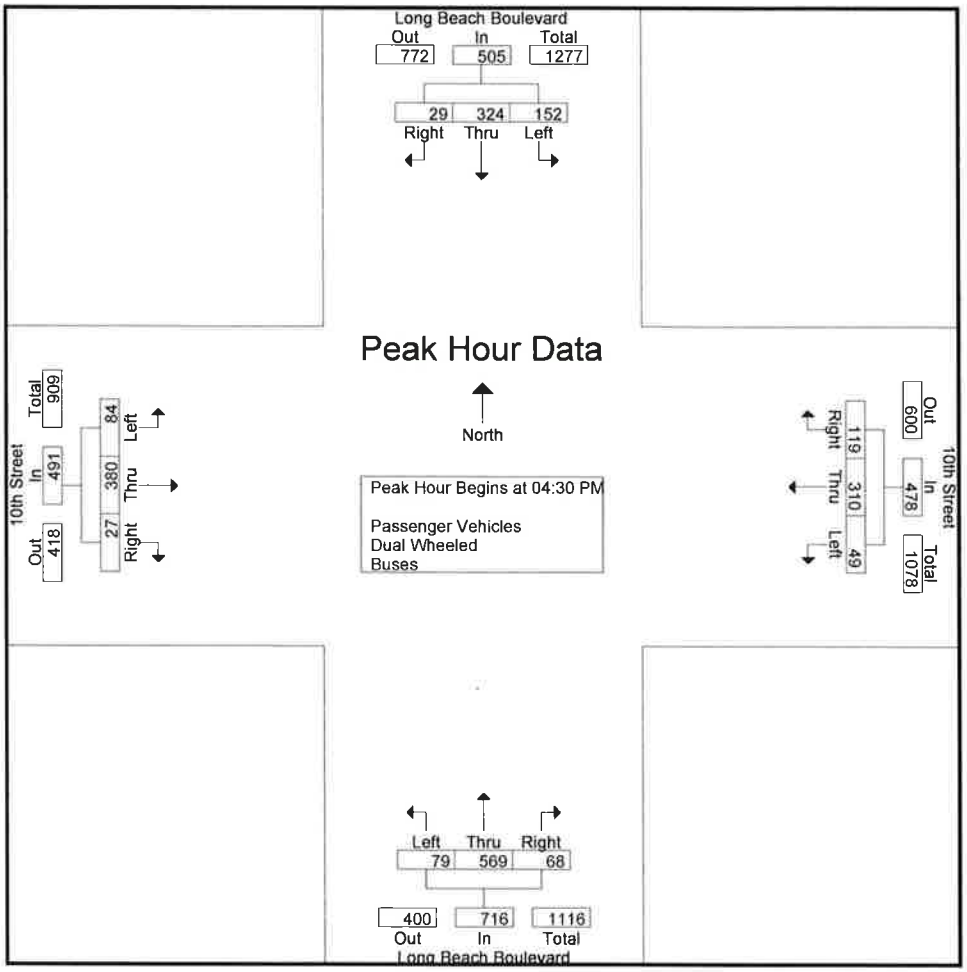
City of Long Beach
N/S: Long Beach Boulevard
E/W: 10th Street
Weather: Clear

File Name : 03_LBC_Long Beach_10th PM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:30 PM				04:30 PM				03:15 PM			
+0 mins.	**39**	78	11	128	8	80	23	111	15	**162**	13	**190**	**22**	107	**14**	**143**
+15 mins.	37	93	9	139	**16**	**81**	30	**127**	18	135	**20**	173	18	88	5	111
+30 mins.	39	71	**15**	125	9	79	29	117	**27**	128	17	172	14	107	11	132
+45 mins.	37	**98**	13	**148**	16	70	**37**	123	19	144	18	181	16	**109**	7	132
Total Volume	152	340	48	540	49	310	119	478	79	569	68	716	70	411	37	518
% App. Total	28.1	63	8.9		10.3	64.9	24.9		11	79.5	9.5		13.5	79.3	7.1	
PHF	.974	.867	.800	.912	.766	.957	.804	.941	.731	.878	.850	.942	.795	.943	.661	.906

Counts Unlimited
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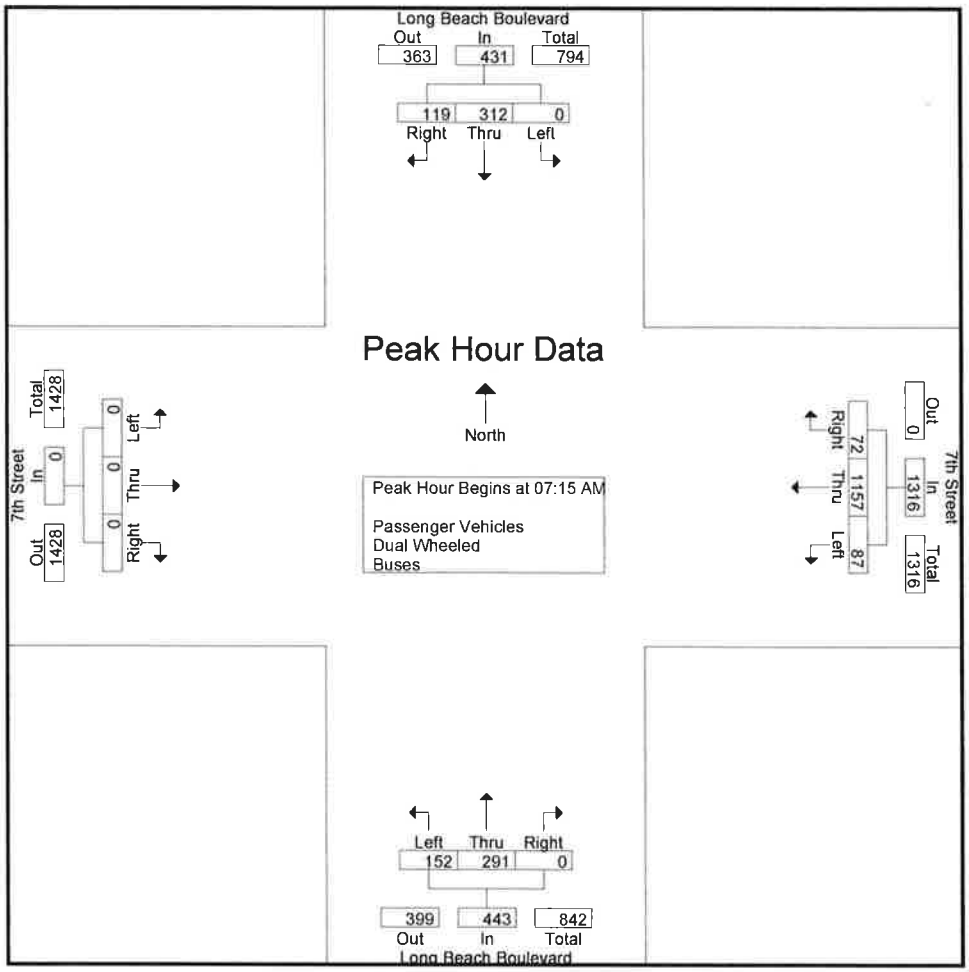
City of Long Beach
N/S: Long Beach Boulevard
E/W: 7th Street
Weather: Clear

File Name : 04_LBC_Long Beach_7th AM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1

Peak Hour for Each Approach Begins at:

	07:45 AM				07:15 AM				08:00 AM				07:00 AM			
+0 mins.	0	92	**43**	**135**	22	284	13	319	**38**	76	0	114	0	0	0	0
+15 mins.	0	94	25	119	22	**303**	18	343	38	81	0	119	0	0	0	0
+30 mins.	0	68	16	84	**28**	298	**21**	**347**	32	77	0	109	0	0	0	0
+45 mins.	0	**95**	17	112	15	272	20	307	33	**93**	0	**126**	0	0	0	0
Total Volume	0	349	101	450	87	1157	72	1316	141	327	0	468	0	0	0	0
% App. Total	0	77.6	22.4		6.6	87.9	5.5		30.1	69.9	0		0	0	0	
PHF	.000	.918	.587	.833	.777	.955	.857	.948	.928	.879	.000	.929	.000	.000	.000	.000

Counts Unlimited
PO Box 1178
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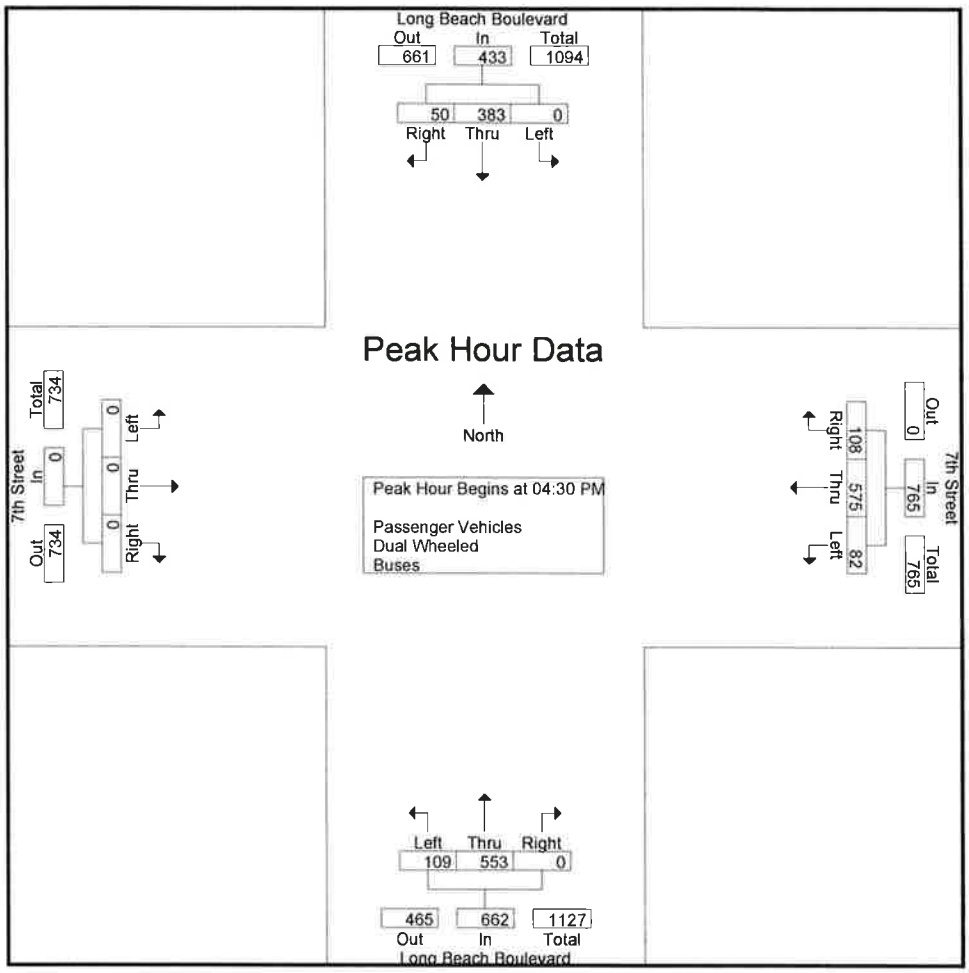
(951) 268-6268

City of Long Beach
N/S: Long Beach Boulevard
E/W: 7th Street
Weather: Clear

File Name : 04_LBC_Long Beach_7th PM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



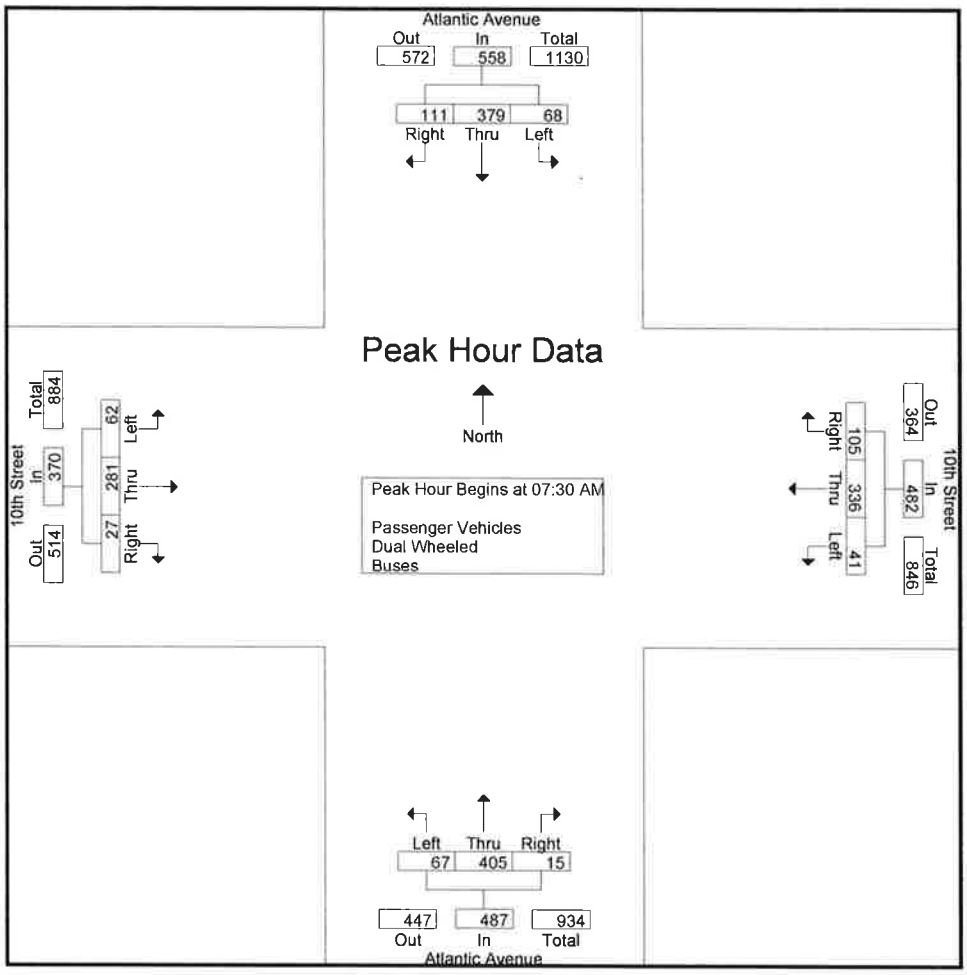
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				04:15 PM				04:30 PM				03:00 PM			
+0 mins.	0	**109**	6	115	23	138	27	188	**30**	**154**	0	**184**	0	0	0	0
+15 mins.	0	99	**17**	**116**	19	140	**30**	189	25	128	0	153	0	0	0	0
+30 mins.	0	81	16	97	**24**	143	20	187	28	148	0	176	0	0	0	0
+45 mins.	0	105	9	114	22	**164**	25	**211**	26	123	0	149	0	0	0	0
Total Volume	0	394	48	442	88	585	102	775	109	553	0	662	0	0	0	0
% App. Total	0	89.1	10.9		11.4	75.5	13.2		16.5	83.5	0		0	0	0	
PHF	.000	.904	.706	.953	.917	.892	.850	.918	.908	.898	.000	.899	.000	.000	.000	.000

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Long Beach
N/S: Atlantic Avenue
E/W: 10th Street
Weather: Clear

File Name : 05_LBC_Atlantic_10th AM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:15 AM				07:15 AM				07:15 AM				09:00 AM			
+0 mins.	16	97	**35**	148	9	74	22	105	13	81	5	99	**22**	70	**17**	**109**
+15 mins.	15	89	23	127	8	82	**33**	123	12	**117**	0	129	19	65	10	94
+30 mins.	15	97	35	147	**16**	**98**	26	**140**	**21**	105	**7**	**133**	20	61	7	88
+45 mins.	**17**	**108**	29	**154**	10	75	31	116	19	106	3	128	10	**71**	10	91
Total Volume	63	391	122	576	43	329	112	484	65	409	15	489	71	267	44	382
% App. Total	10.9	67.9	21.2		8.9	68	23.1		13.3	83.6	3.1		18.6	69.9	11.5	
PHF	.926	.905	.871	.935	.672	.839	.848	.864	.774	.874	.536	.919	.807	.940	.647	.876

Counts Unlimited
PO Box 1178
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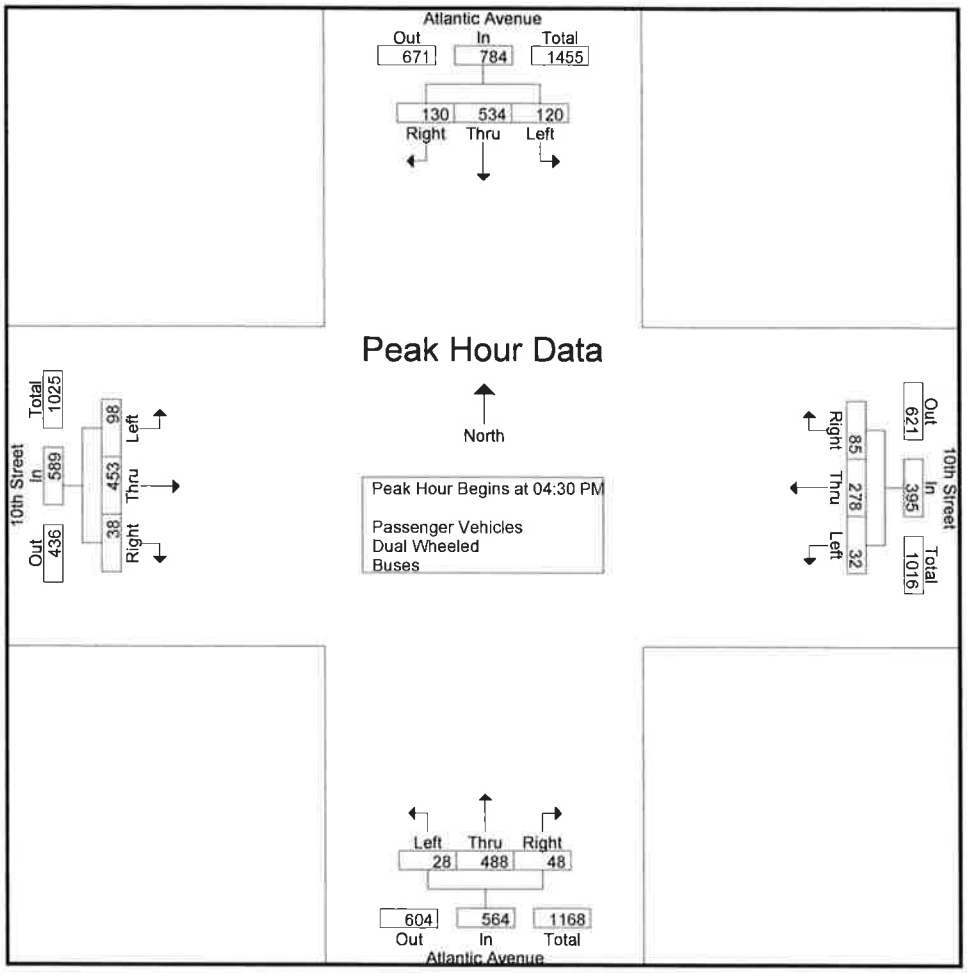
(951) 268-6268

City of Long Beach
N/S: Atlantic Avenue
E/W: 10th Street
Weather: Clear

File Name : 05_LBC_Atlantic_10th PM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				03:15 PM				04:45 PM				03:45 PM			
+0 mins.	31	**150**	**35**	**216**	7	70	20	97	8	130	11	149	**30**	116	**16**	**162**
+15 mins.	22	114	30	166	6	72	27	105	**9**	**137**	11	**157**	28	**123**	7	158
+30 mins.	**40**	139	31	210	9	73	22	104	6	119	**19**	144	18	101	13	132
+45 mins.	27	131	34	192	**10**	**85**	**28**	**123**	4	103	17	124	19	113	5	137
Total Volume	120	534	130	784	32	300	97	429	27	489	58	574	95	453	41	589
% App. Total	15.3	68.1	16.6		7.5	69.9	22.6		4.7	85.2	10.1		16.1	76.9	7	
PHF	.750	.890	.929	.907	.800	.882	.866	.872	.750	.892	.763	.914	.792	.921	.641	.909

Counts Unlimited
PO Box 1178
Corona, CA 92878
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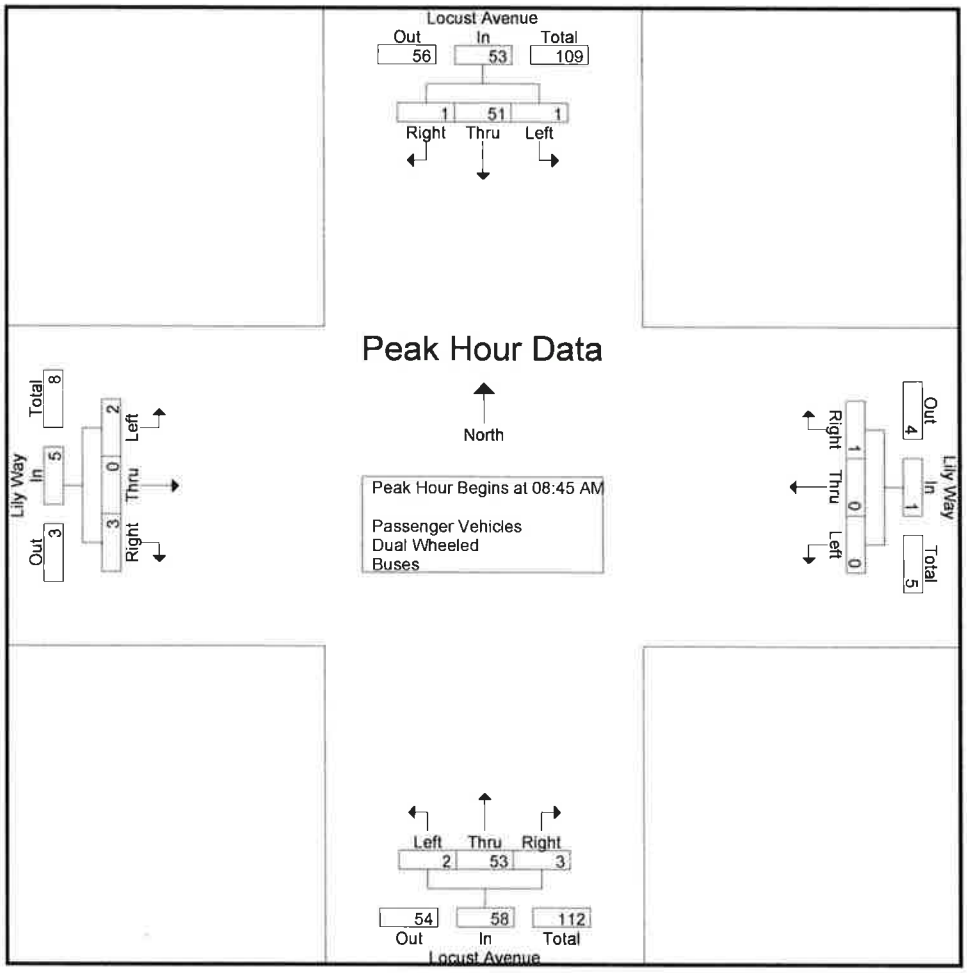
City of Long Beach
N/S: Locust Avenue
E/W: Lily Way
Weather: Clear

File Name : 06_LBC_Locust_Lily Way AM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	08:30 AM				07:00 AM				08:45 AM				08:15 AM			
+0 mins.	0	**15**	0	15	0	0	1	1	0	12	**2**	14	**1**	0	**2**	**3**
+15 mins.	0	9	0	9	0	0	0	0	**1**	13	0	14	0	0	0	0
+30 mins.	0	15	0	15	**1**	0	**3**	**4**	0	11	0	11	1	0	0	1
+45 mins.	**1**	15	**1**	**17**	1	0	1	2	1	**17**	1	**19**	1	0	2	3
Total Volume	1	54	1	56	2	0	5	7	2	53	3	58	3	0	4	7
% App. Total	1.8	96.4	1.8		28.6	0	71.4		3.4	91.4	5.2		42.9	0	57.1	
PHF	.250	.900	.250	.824	.500	.000	.417	.438	.500	.779	.375	.763	.750	.000	.500	.583

Counts Unlimited
PO Box 1178
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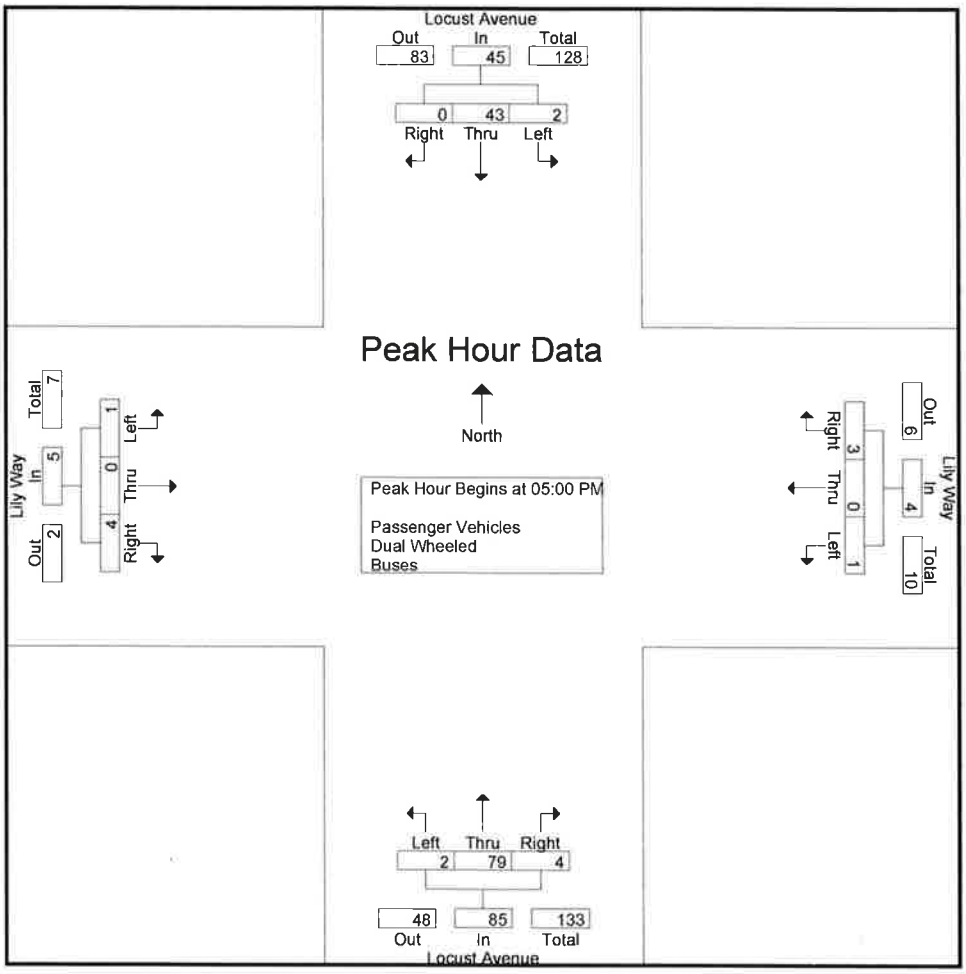
City of Long Beach
N/S: Locust Avenue
E/W: Lily Way
Weather: Clear

File Name : 06_LBC_Locust_Lily Way PM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



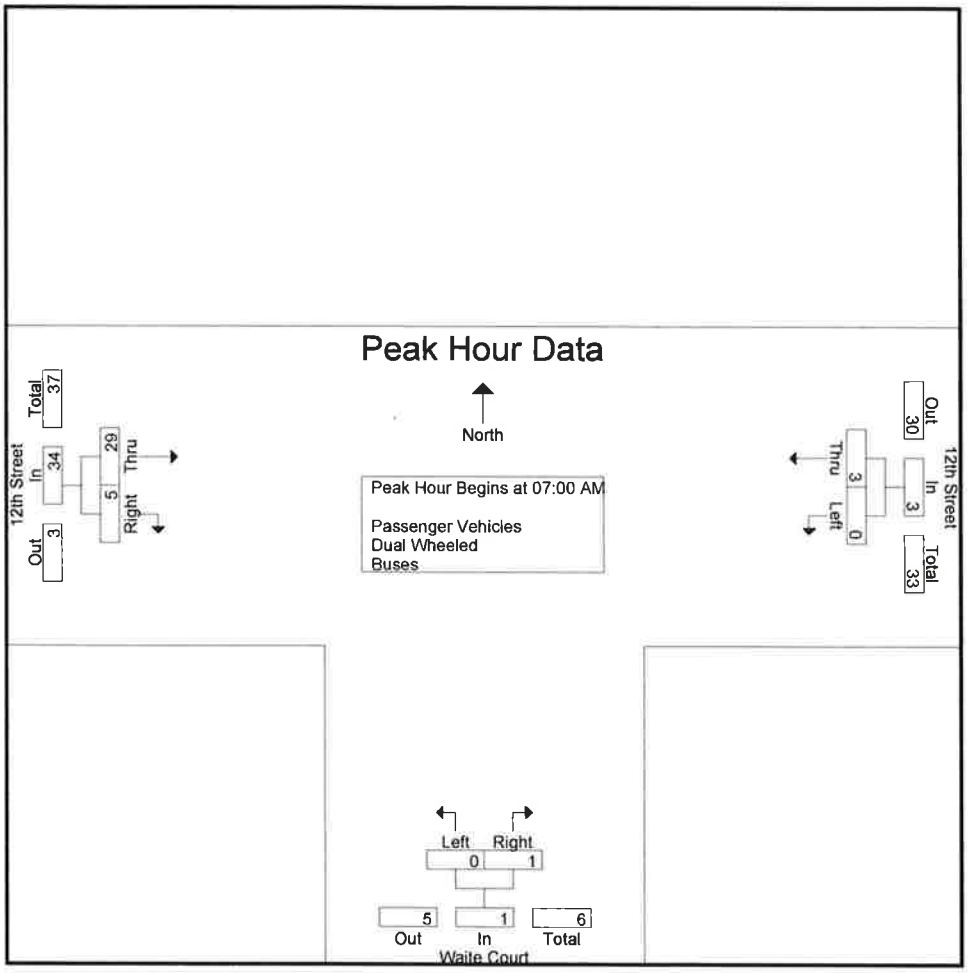
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:45 PM				03:00 PM				05:00 PM				04:45 PM			
+0 mins.	1	**13**	0	**14**	0	0	1	1	0	**29**	1	**30**	**1**	0	1	**2**
+15 mins.	0	12	**1**	13	0	0	**5**	**5**	**1**	10	1	12	1	0	1	2
+30 mins.	**2**	8	0	10	0	0	1	1	0	14	**2**	16	0	0	1	1
+45 mins.	0	11	0	11	0	0	0	0	1	26	0	27	0	0	**2**	2
Total Volume	3	44	1	48	0	0	7	7	2	79	4	85	2	0	5	7
% App. Total	6.2	91.7	2.1		0	0	100		2.4	92.9	4.7		28.6	0	71.4	
PHF	.375	.846	.250	.857	.000	.000	.350	.350	.500	.681	.500	.708	.500	.000	.625	.875

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Long Beach
N/S: Waite Court
E/W: 12th Street
Weather: Clear

File Name : 07_LBC_Waite Ct_12th AM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



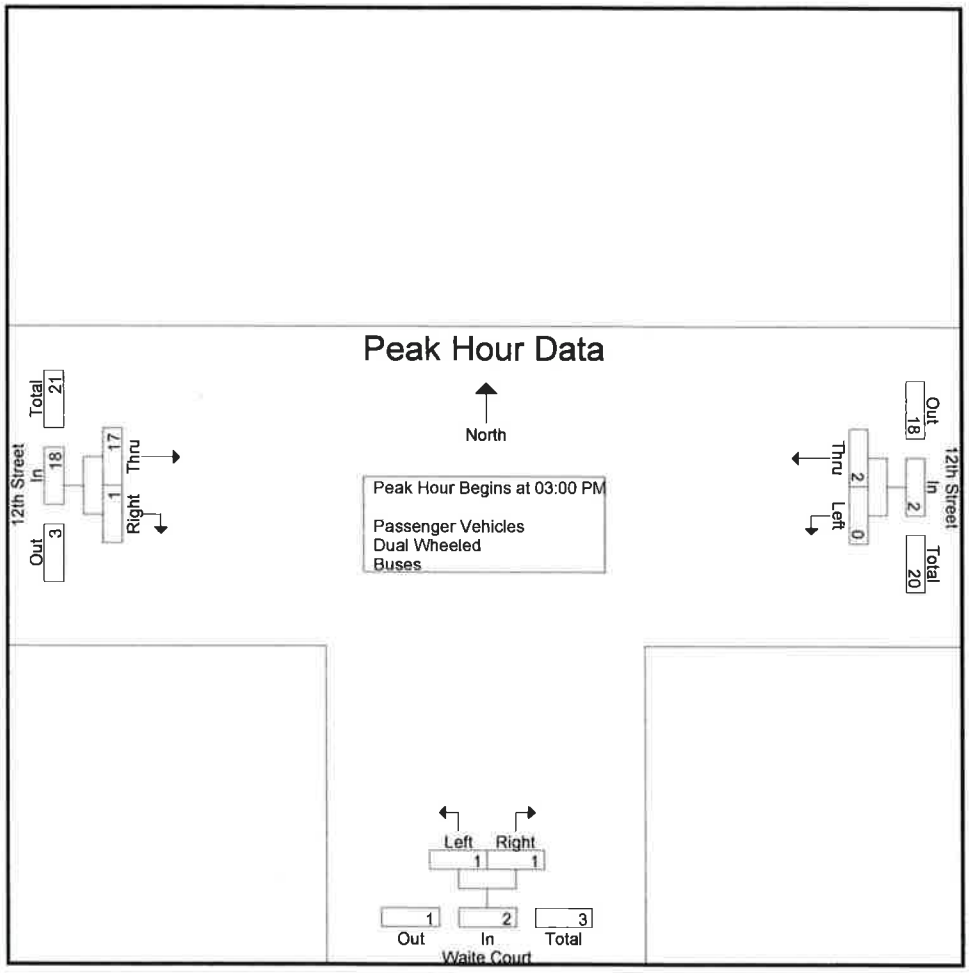
Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:00 AM			07:15 AM			09:00 AM		
+0 mins.	0	**3**	**3**	0	0	0	**10**	**3**	**13**
+15 mins.	0	0	0	0	0	0	5	1	6
+30 mins.	0	0	0	0	0	0	7	0	7
+45 mins.	0	0	0	0	**2**	**2**	9	1	10
Total Volume	0	3	3	0	2	2	31	5	36
% App. Total	0	100		0	100		86.1	13.9	
PHF	.000	.250	.250	.000	.250	.250	.775	.417	.692

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Long Beach
N/S: Waite Court
E/W: 12th Street
Weather: Clear

File Name : 07_LBC_Waite Ct_12th PM
Site Code : 12818455
Start Date : 6/5/2018
Page No : 2



Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM			03:15 PM			04:30 PM		
+0 mins.	0	0	0	**1**	**1**	**2**	4	0	4
+15 mins.	0	**1**	**1**	0	0	0	3	**1**	4
+30 mins.	0	1	1	0	0	0	**7**	0	**7**
+45 mins.	0	0	0	1	0	1	4	0	4
Total Volume	0	2	2	2	1	3	18	1	19
% App. Total	0	100		66.7	33.3		94.7	5.3	
PHF	.000	.500	.500	.500	.250	.375	.643	.250	.679

Appendix B
Intersection LOS Sheets

1105 Long Beach
Existing AM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #551 Pine & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.381
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0
Volume Module:												
Base Vol:	5	65	50	15	80	11	6	232	13	32	287	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	65	50	15	80	11	6	232	13	32	287	26
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	65	50	15	80	11	6	232	13	32	287	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	65	50	15	80	11	6	232	13	32	287	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	65	50	15	80	11	6	232	13	32	287	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	65	50	15	80	11	6	232	13	32	287	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.57	0.43	1.00	0.88	0.12	1.00	0.95	0.05	1.00	0.92	0.08
Final Sat.:	1600	904	696	1600	1407	193	1600	1515	85	1600	1467	133
Capacity Analysis Module:												
Vol/Sat:	0.00	0.07	0.07	0.01	0.06	0.06	0.00	0.15	0.15	0.02	0.20	0.20
Crit Moves:		****			****			****			****	

1105 Long Beach
Existing AM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #552 Long Beach & Anaheim

Cycle (sec):	100	Critical Vol./Cap.(X):	0.519
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 1	0 0	2	1 0	0 0	2	1 0
Volume Module:												
Base Vol:	125	321	37	83	329	56	0	625	80	0	1037	105
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	321	37	83	329	56	0	625	80	0	1037	105
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	125	321	37	83	329	56	0	625	80	0	1037	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	321	37	83	329	56	0	625	80	0	1037	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	321	37	83	329	56	0	625	80	0	1037	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	125	321	37	83	329	56	0	625	80	0	1037	105
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	2.00	1.00	0.00	2.66	0.34	0.00	2.72	0.28
Final Sat.:	1600	2869	331	1600	3200	1600	0	4255	545	0	4359	441
Capacity Analysis Module:												
Vol/Sat:	0.08	0.11	0.11	0.05	0.10	0.04	0.00	0.15	0.15	0.00	0.24	0.24
Crit Moves:	****				****		****				****	

1105 Long Beach
Existing AM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #553 Long Beach & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.510
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	42	343	42	121	324	16	49	262	27	53	279	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	42	343	42	121	324	16	49	262	27	53	279	100
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	42	343	42	121	324	16	49	262	27	53	279	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	42	343	42	121	324	16	49	262	27	53	279	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	343	42	121	324	16	49	262	27	53	279	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	42	343	42	121	324	16	49	262	27	53	279	100
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.78	0.22	1.00	1.91	0.09	1.00	0.91	0.09	1.00	1.00	1.00
Final Sat.:	1600	2851	349	1600	3049	151	1600	1451	149	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.12	0.12	0.08	0.11	0.11	0.03	0.18	0.18	0.03	0.17	0.06
Crit Moves:		****			****			****			****	

1105 Long Beach
Existing AM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #554 Long Beach & 7th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.534
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 2	0 0	0	0 2	0 1	0	0 0	0 0	1	0 3	0 1
Volume Module:												
Base Vol:	152	291	0	0	312	119	0	0	0	87	1157	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	291	0	0	312	119	0	0	0	87	1157	72
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	152	291	0	0	312	119	0	0	0	87	1157	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	152	291	0	0	312	119	0	0	0	87	1157	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	291	0	0	312	119	0	0	0	87	1157	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	152	291	0	0	312	119	0	0	0	87	1157	72
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.09	0.00	0.00	0.10	0.07	0.00	0.00	0.00	0.05	0.24	0.05
Crit Moves:	****				****						****	

1105 Long Beach
Existing AM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #555 Atlantic & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.609
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	67	405	15	68	379	111	62	281	27	41	336	105
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	405	15	68	379	111	62	281	27	41	336	105
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	67	405	15	68	379	111	62	281	27	41	336	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	67	405	15	68	379	111	62	281	27	41	336	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	405	15	68	379	111	62	281	27	41	336	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	67	405	15	68	379	111	62	281	27	41	336	105
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.93	0.07	1.00	1.55	0.45	1.00	0.91	0.09	1.00	0.76	0.24
Final Sat.:	1600	3086	114	1600	2475	725	1600	1460	140	1600	1219	381
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.13	0.04	0.15	0.15	0.04	0.19	0.19	0.03	0.28	0.28
Crit Moves:	****				****		****				****	

1105 Long Beach
Existing AM
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

****

Intersection #556 Locust & Alley

****

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[8.8]

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 1! 0 0			0 0 1! 0 0			0 0 0 0 1		
Volume Module:												
Base Vol:	2	53	3	1	51	1	2	0	3	0	0	1
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	53	3	1	51	1	2	0	3	0	0	1
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	53	3	1	51	1	2	0	3	0	0	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	53	3	1	51	1	2	0	3	0	0	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	53	3	1	51	1	2	0	3	0	0	1
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	xxxxx	xxxx	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	52	xxxx	xxxxx	56	xxxx	xxxxx	113	114	52	xxxx	xxxx	55
Potent Cap.:	1567	xxxx	xxxxx	1562	xxxx	xxxxx	870	780	1022	xxxx	xxxx	1018
Move Cap.:	1567	xxxx	xxxxx	1562	xxxx	xxxxx	868	779	1022	xxxx	xxxx	1018
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	0.00
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.0
Control Del:	7.3	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	8.5
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	954	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.8	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			8.8			8.5		
ApproachLOS:	*			*			A			A		

****

Note: Queue reported is the number of cars per lane.

****

1105 Long Beach
Existing AM
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #557 12th & Alley

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: A[8.4]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 0 1 0			0 0 1 0 0		
Volume Module:												
Base Vol:	0	0	1	0	0	0	0	29	5	0	5	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	1	0	0	0	0	29	5	0	5	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	0	1	0	0	0	0	29	5	0	5	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	1	0	0	0	0	29	5	0	5	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	1	0	0	0	0	29	5	0	5	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	32	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	1048	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	1048	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.0	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	8.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	A	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	8.4			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	A			*			*			*		

Note: Queue reported is the number of cars per lane.

1105 Long Beach
Existing PM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #551 Pine & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.461
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0
Volume Module:												
Base Vol:	12	122	32	34	99	15	15	317	23	19	343	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	122	32	34	99	15	15	317	23	19	343	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	122	32	34	99	15	15	317	23	19	343	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	122	32	34	99	15	15	317	23	19	343	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	122	32	34	99	15	15	317	23	19	343	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	122	32	34	99	15	15	317	23	19	343	32
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.79	0.21	1.00	0.87	0.13	1.00	0.93	0.07	1.00	0.91	0.09
Final Sat.:	1600	1268	332	1600	1389	211	1600	1492	108	1600	1463	137
Capacity Analysis Module:												
Vol/Sat:	0.01	0.10	0.10	0.02	0.07	0.07	0.01	0.21	0.21	0.01	0.23	0.23
Crit Moves:		****			****			****			****	

1105 Long Beach
Existing PM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #552 Long Beach & Anaheim

Cycle (sec):	100	Critical Vol./Cap.(X):	0.653
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 1	0 0	2	1 0	0 0	2	1 0
Volume Module:												
Base Vol:	162	483	85	159	384	63	0	1251	75	0	630	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	483	85	159	384	63	0	1251	75	0	630	110
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	162	483	85	159	384	63	0	1251	75	0	630	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	162	483	85	159	384	63	0	1251	75	0	630	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	483	85	159	384	63	0	1251	75	0	630	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	162	483	85	159	384	63	0	1251	75	0	630	110
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.70	0.30	1.00	2.00	1.00	0.00	2.83	0.17	0.00	2.55	0.45
Final Sat.:	1600	2721	479	1600	3200	1600	0	4529	271	0	4086	714
Capacity Analysis Module:												
Vol/Sat:	0.10	0.18	0.18	0.10	0.12	0.04	0.00	0.28	0.28	0.00	0.15	0.15
Crit Moves:		****			****				****		****	

1105 Long Beach
Existing PM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #553 Long Beach & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.679
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	79	569	68	152	324	22	84	380	27	49	310	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	569	68	152	324	22	84	380	27	49	310	119
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	79	569	68	152	324	22	84	380	27	49	310	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	79	569	68	152	324	22	84	380	27	49	310	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	569	68	152	324	22	84	380	27	49	310	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	79	569	68	152	324	22	84	380	27	49	310	119
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	1.87	0.13	1.00	0.93	0.07	1.00	1.00	1.00
Final Sat.:	1600	2858	342	1600	2997	203	1600	1494	106	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.20	0.20	0.10	0.11	0.11	0.05	0.25	0.25	0.03	0.19	0.07
Crit Moves:		****		****				****		****		

1105 Long Beach
Existing PM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #554 Long Beach & 7th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.408
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	2 0	1	0 0	0 0	0	1 0	3 0	1
Volume Module:												
Base Vol:	109	553	0	0	383	50	0	0	0	82	575	108
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	109	553	0	0	383	50	0	0	0	82	575	108
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	109	553	0	0	383	50	0	0	0	82	575	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	109	553	0	0	383	50	0	0	0	82	575	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	553	0	0	383	50	0	0	0	82	575	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	109	553	0	0	383	50	0	0	0	82	575	108
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.00	0.00	0.12	0.03	0.00	0.00	0.00	0.05	0.12	0.07
Crit Moves:	****				****						****	

1105 Long Beach
Existing PM
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #555 Atlantic & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.669
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	46	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	28	488	48	120	534	130	98	453	38	32	278	85
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28	488	48	120	534	130	98	453	38	32	278	85
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	28	488	48	120	534	130	98	453	38	32	278	85
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	28	488	48	120	534	130	98	453	38	32	278	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	488	48	120	534	130	98	453	38	32	278	85
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	28	488	48	120	534	130	98	453	38	32	278	85
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	1.61	0.39	1.00	0.92	0.08	1.00	0.77	0.23
Final Sat.:	1600	2913	287	1600	2573	627	1600	1476	124	1600	1225	375
Capacity Analysis Module:												
Vol/Sat:	0.02	0.17	0.17	0.08	0.21	0.21	0.06	0.31	0.31	0.02	0.23	0.23
Crit Moves:		****		****				****		****		

1105 Long Beach
Existing PM
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #556 Locust & Alley

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: A[8.8]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	2	79	4	2	43	0	1	0	4	1	0	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	79	4	2	43	0	1	0	4	1	0	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	79	4	2	43	0	1	0	4	1	0	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	79	4	2	43	0	1	0	4	1	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	79	4	2	43	0	1	0	4	1	0	3
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	43	xxxx	xxxxx	83	xxxx	xxxxx	134	134	43	134	132	81
Potent Cap.:	1579	xxxx	xxxxx	1527	xxxx	xxxxx	843	760	1033	842	762	985
Move Cap.:	1579	xxxx	xxxxx	1527	xxxx	xxxxx	839	759	1033	837	760	985
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.00	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	987	xxxxx	xxxx	943	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	8.7	xxxxx	xxxxx	8.8	xxxxx
Shared LOS:	*	*	*	A	*	*	*	A	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx				8.7			8.8	
ApproachLOS:	*			*				A			A	

Note: Queue reported is the number of cars per lane.

1105 Long Beach
Existing PM
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #557 12th & Alley

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[8.5]

Approach:	North Bound			South Bound			East Bound						West Bound					
Movement:	L	- T	- R	L	- T	- R	L	- T	- R				L	- T	- R			
Control:	Stop Sign			Stop Sign			Uncontrolled						Uncontrolled					
Rights:	Include			Include			Include						Include					
Lanes:	0	0 1!	0 0	0	0 0	0 0	0	0 0	0 1	0			0	0 1	0 0			
Volume Module:																		
Base Vol:	1	0	1	0	0	0	0	17	1				0	7	0			
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00			
Initial Bse:	1	0	1	0	0	0	0	17	1				0	7	0			
Added Vol:	0	0	0	0	0	0	0	0	0				0	0	0			
PasserByVol:	0	0	0	0	0	0	0	0	0				0	0	0			
Initial Fut:	1	0	1	0	0	0	0	17	1				0	7	0			
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00			
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00			
PHF Volume:	1	0	1	0	0	0	0	17	1				0	7	0			
Reduct Vol:	0	0	0	0	0	0	0	0	0				0	0	0			
FinalVolume:	1	0	1	0	0	0	0	17	1				0	7	0			
Critical Gap Module:																		
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Capacity Module:																		
Cnflict Vol:	25	25	18	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Potent Cap.:	997	873	1067	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Move Cap.:	997	873	1067	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Volume/Cap:	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx						
Level Of Service Module:																		
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx						
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*						
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT						
Shared Cap.:	xxxx	1031	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx						
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shrd ConDel:	xxxxx	8.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx						
Shared LOS:	*	A	*	*	*	*	*	*	*	*	*	*						
ApproachDel:		8.5		xxxxxx			xxxxxx			xxxxxx								
ApproachLOS:		A		*			*			*								

Note: Queue reported is the number of cars per lane.

1105 Long Beach
EWP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #551 Pine & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.381
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	5	65	50	15	80	11	6	232	13	32	287	26
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	5	65	50	15	80	11	6	232	13	32	287	26
Added Vol:	0	0	0	0	1	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	65	50	15	81	11	6	232	13	32	287	26
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	65	50	15	81	11	6	232	13	32	287	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	65	50	15	81	11	6	232	13	32	287	26
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	65	50	15	81	11	6	232	13	32	287	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.57	0.43	1.00	0.88	0.12	1.00	0.95	0.05	1.00	0.92	0.08
Final Sat.:	1600	904	696	1600	1409	191	1600	1515	85	1600	1467	133
Capacity Analysis Module:												
Vol/Sat:	0.00	0.07	0.07	0.01	0.06	0.06	0.00	0.15	0.15	0.02	0.20	0.20
Crit Moves:		****			****			****			****	

1105 Long Beach
EWP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #552 Long Beach & Anaheim

Cycle (sec):	100	Critical Vol./Cap.(X):	0.521
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 1	0 0	2	1 0	0 0	2	1 0
Volume Module:												
Base Vol:	125	321	37	83	329	56	0	625	80	0	1037	105
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	125	321	37	83	329	56	0	625	80	0	1037	105
Added Vol:	1	6	0	0	3	0	0	6	3	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	126	327	37	83	332	56	0	631	83	0	1039	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	126	327	37	83	332	56	0	631	83	0	1039	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	126	327	37	83	332	56	0	631	83	0	1039	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	126	327	37	83	332	56	0	631	83	0	1039	105
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.80	0.20	1.00	2.00	1.00	0.00	2.65	0.35	0.00	2.72	0.28
Final Sat.:	1600	2875	325	1600	3200	1600	0	4242	558	0	4359	441
Capacity Analysis Module:												
Vol/Sat:	0.08	0.11	0.11	0.05	0.10	0.04	0.00	0.15	0.15	0.00	0.24	0.24
Crit Moves:	****				****		****				****	

1105 Long Beach
EWP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #553 Long Beach & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.514
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	42	343	42	121	324	16	49	262	27	53	279	100
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	42	343	42	121	324	16	49	262	27	53	279	100
Added Vol:	0	1	0	6	3	0	0	1	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	42	344	42	127	327	16	49	263	27	53	279	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	42	344	42	127	327	16	49	263	27	53	279	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	344	42	127	327	16	49	263	27	53	279	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	42	344	42	127	327	16	49	263	27	53	279	100
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.78	0.22	1.00	1.91	0.09	1.00	0.91	0.09	1.00	1.00	1.00
Final Sat.:	1600	2852	348	1600	3051	149	1600	1451	149	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.12	0.12	0.08	0.11	0.11	0.03	0.18	0.18	0.03	0.17	0.06
Crit Moves:		****			****				****		****	

1105 Long Beach
EWP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #554 Long Beach & 7th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.534
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 2	0 0	0	0 2	0 1	0	0 0	0 0	1	0 3	0 1
Volume Module:												
Base Vol:	152	291	0	0	312	119	0	0	0	87	1157	72
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	152	291	0	0	312	119	0	0	0	87	1157	72
Added Vol:	0	1	0	0	2	1	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	152	292	0	0	314	120	0	0	0	87	1157	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	152	292	0	0	314	120	0	0	0	87	1157	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	292	0	0	314	120	0	0	0	87	1157	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	152	292	0	0	314	120	0	0	0	87	1157	72
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.09	0.00	0.00	0.10	0.08	0.00	0.00	0.00	0.05	0.24	0.05
Crit Moves:	****				****						****	

1105 Long Beach
EWP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #555 Atlantic & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.609
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	41	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	67	405	15	68	379	111	62	281	27	41	336	105
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	67	405	15	68	379	111	62	281	27	41	336	105
Added Vol:	0	0	0	0	0	0	0	1	1	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	67	405	15	68	379	111	62	282	28	41	336	105
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	67	405	15	68	379	111	62	282	28	41	336	105
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	405	15	68	379	111	62	282	28	41	336	105
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	67	405	15	68	379	111	62	282	28	41	336	105
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.93	0.07	1.00	1.55	0.45	1.00	0.91	0.09	1.00	0.76	0.24
Final Sat.:	1600	3086	114	1600	2475	725	1600	1455	145	1600	1219	381
Capacity Analysis Module:												
Vol/Sat:	0.04	0.13	0.13	0.04	0.15	0.15	0.04	0.19	0.19	0.03	0.28	0.28
Crit Moves:	****				****		****				****	

1105 Long Beach
EWP - AM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #556 Locust & Alley

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: A[9.1]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	2	53		3			1	51		1			2	0		3			0	0		1		
Growth Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
Initial Bse:	2	53		3			1	51		1			2	0		3			0	0		1		
Added Vol:	0	0		1			0	0		0			0	0		0			2	1		0		
PasserByVol:	0	0		0			0	0		0			0	0		0			0	0		0		
Initial Fut:	2	53		4			1	51		1			2	0		3			2	1		1		
User Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Adj:	1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00			1.00	1.00		1.00		
PHF Volume:	2	53		4			1	51		1			2	0		3			2	1		1		
Reduct Vol:	0	0		0			0	0		0			0	0		0			0	0		0		
FinalVolume:	2	53		4			1	51		1			2	0		3			2	1		1		
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx				4.1	xxxx	xxxxx				7.1	6.5		6.2			7.1	6.5		6.2		
FollowUpTim:	2.2	xxxx	xxxxx				2.2	xxxx	xxxxx				3.5	4.0		3.3			3.5	4.0		3.3		
Capacity Module:																								
Cnflict Vol:	52	xxxx	xxxxx				57	xxxx	xxxxx				114	115		52			114	113		55		
Potent Cap.:	1567	xxxx	xxxxx				1560	xxxx	xxxxx				868	779		1022			868	781		1018		
Move Cap.:	1567	xxxx	xxxxx				1560	xxxx	xxxxx				866	778		1022			864	779		1018		
Volume/Cap:	0.00	xxxx	xxxx				0.00	xxxx	xxxx				0.00	0.00		0.00			0.00	0.00		0.00		
Level Of Service Module:																								
2Way95thQ:	0.0	xxxx	xxxxx				0.0	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx			
Control Del:	7.3	xxxx	xxxxx				7.3	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx			
LOS by Move:	A	*		*			A	*		*			*	*		*			*	*		*		
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx	xxxx	xxxxx				xxxx	xxxx	xxxxx				xxxx	953	xxxxx				xxxx	873	xxxxx			
SharedQueue:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	0.0	xxxxx				xxxxx	0.0	xxxxx			
Shrd ConDel:	xxxxx	xxxx	xxxxx				xxxxx	xxxx	xxxxx				xxxxx	8.8	xxxxx				xxxxx	9.1	xxxxx			
Shared LOS:	*	*		*			*	*		*			*	A		*			*	A		*		
ApproachDel:	xxxxxx						xxxxxx						8.8						9.1					
ApproachLOS:	*						*						A						A					

Note: Queue reported is the number of cars per lane.

1105 Long Beach
EWP - AM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #557 12th & Alley

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: A[8.8]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	0	0	1	0	0	0	0	29	5	0	5	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	1	0	0	0	0	29	5	0	5	0
Added Vol:	21	0	9	0	0	0	0	0	5	6	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	0	10	0	0	0	0	29	10	6	5	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	0	10	0	0	0	0	29	10	6	5	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	21	0	10	0	0	0	0	29	10	6	5	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	51	51	34	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	39	xxxx	xxxxx
Potent Cap.:	963	844	1045	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1584	xxxx	xxxxx
Move Cap.:	960	841	1045	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1584	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	986	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	8.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:		8.8		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		A			*			*			*	

Note: Queue reported is the number of cars per lane.

1105 Long Beach
EWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #551 Pine & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.462
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	12	122	32	34	99	15	15	317	23	19	343	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	12	122	32	34	99	15	15	317	23	19	343	32
Added Vol:	0	1	0	0	1	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	123	32	34	100	15	15	317	23	19	343	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	123	32	34	100	15	15	317	23	19	343	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	123	32	34	100	15	15	317	23	19	343	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	123	32	34	100	15	15	317	23	19	343	32
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.79	0.21	1.00	0.87	0.13	1.00	0.93	0.07	1.00	0.91	0.09
Final Sat.:	1600	1270	330	1600	1391	209	1600	1492	108	1600	1463	137
Capacity Analysis Module:												
Vol/Sat:	0.01	0.10	0.10	0.02	0.07	0.07	0.01	0.21	0.21	0.01	0.23	0.23
Crit Moves:		****			****			****			****	

1105 Long Beach
EWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #552 Long Beach & Anaheim

Cycle (sec):	100	Critical Vol./Cap.(X):	0.658
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 1	0 0	2	1 0	0 0	2	1 0
Volume Module:												
Base Vol:	162	483	85	159	384	63	0	1251	75	0	630	110
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	162	483	85	159	384	63	0	1251	75	0	630	110
Added Vol:	3	5	0	0	10	0	0	5	12	0	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	165	488	85	159	394	63	0	1256	87	0	639	110
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	165	488	85	159	394	63	0	1256	87	0	639	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	165	488	85	159	394	63	0	1256	87	0	639	110
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	165	488	85	159	394	63	0	1256	87	0	639	110
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.70	0.30	1.00	2.00	1.00	0.00	2.81	0.19	0.00	2.56	0.44
Final Sat.:	1600	2725	475	1600	3200	1600	0	4489	311	0	4095	705
Capacity Analysis Module:												
Vol/Sat:	0.10	0.18	0.18	0.10	0.12	0.04	0.00	0.28	0.28	0.00	0.16	0.16
Crit Moves:		****			****				****		****	

1105 Long Beach
EWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #553 Long Beach & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.684
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	79	569	68	152	324	22	84	380	27	49	310	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	79	569	68	152	324	22	84	380	27	49	310	119
Added Vol:	0	3	0	5	2	0	0	1	0	0	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	79	572	68	157	326	22	84	381	27	49	312	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	79	572	68	157	326	22	84	381	27	49	312	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	572	68	157	326	22	84	381	27	49	312	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	79	572	68	157	326	22	84	381	27	49	312	119
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	1.87	0.13	1.00	0.93	0.07	1.00	1.00	1.00
Final Sat.:	1600	2860	340	1600	2998	202	1600	1494	106	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.20	0.20	0.10	0.11	0.11	0.05	0.25	0.26	0.03	0.20	0.07
Crit Moves:		****		****					****	****		

1105 Long Beach
EWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #554 Long Beach & 7th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.408
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	2 0	1	0 0	0 0	0	1 0	3 0	1
Volume Module:												
Base Vol:	109	553	0	0	383	50	0	0	0	82	575	108
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	109	553	0	0	383	50	0	0	0	82	575	108
Added Vol:	0	2	0	0	2	1	0	0	0	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	109	555	0	0	385	51	0	0	0	82	576	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	109	555	0	0	385	51	0	0	0	82	576	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	555	0	0	385	51	0	0	0	82	576	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	109	555	0	0	385	51	0	0	0	82	576	108
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.00	0.00	0.12	0.03	0.00	0.00	0.00	0.05	0.12	0.07
Crit Moves:	****				****						****	

1105 Long Beach
EWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #555 Atlantic & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.671
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	28	488	48	120	534	130	98	453	38	32	278	85
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	28	488	48	120	534	130	98	453	38	32	278	85
Added Vol:	1	0	0	0	0	0	0	1	1	0	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	29	488	48	120	534	130	98	454	39	32	279	85
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	29	488	48	120	534	130	98	454	39	32	279	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	29	488	48	120	534	130	98	454	39	32	279	85
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	29	488	48	120	534	130	98	454	39	32	279	85
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	1.61	0.39	1.00	0.92	0.08	1.00	0.77	0.23
Final Sat.:	1600	2913	287	1600	2573	627	1600	1473	127	1600	1226	374
Capacity Analysis Module:												
Vol/Sat:	0.02	0.17	0.17	0.08	0.21	0.21	0.06	0.31	0.31	0.02	0.23	0.23
Crit Moves:		****			****				****		****	

1105 Long Beach
EWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #556 Locust & Alley

Average Delay (sec/veh): 1.0 Worst Case Level Of Service: A[9.1]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	2	79	4	2	43	0	1	0	4	1	0	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	2	79	4	2	43	0	1	0	4	1	0	3
Added Vol:	0	0	3	0	0	0	0	1	0	2	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	79	7	2	43	0	1	1	4	3	1	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	79	7	2	43	0	1	1	4	3	1	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	79	7	2	43	0	1	1	4	3	1	3
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	43	xxxx	xxxxx	86	xxxx	xxxxx	136	137	43	136	134	83
Potent Cap.:	1579	xxxx	xxxxx	1523	xxxx	xxxxx	840	758	1033	840	761	983
Move Cap.:	1579	xxxx	xxxxx	1523	xxxx	xxxxx	835	756	1033	834	759	983
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.00	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	939	xxxxx	xxxx	879	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	8.9	xxxxx	xxxxx	9.1	xxxxx
Shared LOS:	*	*	*	A	*	*	*	A	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			8.9			9.1		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the number of cars per lane.

1105 Long Beach
EWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #557 12th & Alley

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: A[8.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Volume Module:												
Base Vol:	1	0	1	0	0	0	0	17	1	0	7	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	0	1	0	0	0	0	17	1	0	7	0
Added Vol:	17	0	7	0	0	0	0	0	20	25	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	0	8	0	0	0	0	17	21	25	7	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	0	8	0	0	0	0	17	21	25	7	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	18	0	8	0	0	0	0	17	21	25	7	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	85	85	28	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	38	xxxx	xxxxx
Potent Cap.:	922	809	1054	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1585	xxxx	xxxxx
Move Cap.:	911	797	1054	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1585	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	950	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	8.9	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:		8.9		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		A		*			*			*		

Note: Queue reported is the number of cars per lane.

1105 Long Beach
FWOP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #551 Pine & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.399
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0
Volume Module:												
Base Vol:	5	65	50	15	80	11	6	232	13	32	287	26
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	5	67	52	15	82	11	6	239	13	33	296	27
Added Vol:	0	4	3	0	2	0	0	12	0	1	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	71	55	15	84	11	6	251	13	34	305	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	71	55	15	84	11	6	251	13	34	305	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	71	55	15	84	11	6	251	13	34	305	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	71	55	15	84	11	6	251	13	34	305	27
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.57	0.43	1.00	0.88	0.12	1.00	0.95	0.05	1.00	0.92	0.08
Final Sat.:	1600	905	695	1600	1411	189	1600	1519	81	1600	1471	129
Capacity Analysis Module:												
Vol/Sat:	0.00	0.08	0.08	0.01	0.06	0.06	0.00	0.17	0.17	0.02	0.21	0.21
Crit Moves:		****			****			****			****	

1105 Long Beach
FWOP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #552 Long Beach & Anaheim

Cycle (sec):	100	Critical Vol./Cap.(X):	0.565
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 1	0 0	2	1 0	0 0	2	1 0
Volume Module:												
Base Vol:	125	321	37	83	329	56	0	625	80	0	1037	105
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	129	331	38	85	339	58	0	644	82	0	1068	108
Added Vol:	3	78	4	18	58	31	0	76	5	0	59	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	132	409	42	103	397	89	0	720	87	0	1127	115
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	132	409	42	103	397	89	0	720	87	0	1127	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	409	42	103	397	89	0	720	87	0	1127	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	132	409	42	103	397	89	0	720	87	0	1127	115
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.81	0.19	1.00	2.00	1.00	0.00	2.68	0.32	0.00	2.72	0.28
Final Sat.:	1600	2901	299	1600	3200	1600	0	4280	520	0	4355	445
Capacity Analysis Module:												
Vol/Sat:	0.08	0.14	0.14	0.06	0.12	0.06	0.00	0.17	0.17	0.00	0.26	0.26
Crit Moves:	****				****		****				****	

1105 Long Beach
FWOP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #553 Long Beach & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.570
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	42	343	42	121	324	16	49	262	27	53	279	100
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	43	353	43	125	334	16	50	270	28	55	287	103
Added Vol:	1	73	9	11	52	1	5	18	2	5	9	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	426	52	136	386	17	55	288	30	60	296	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	44	426	52	136	386	17	55	288	30	60	296	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	44	426	52	136	386	17	55	288	30	60	296	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	44	426	52	136	386	17	55	288	30	60	296	104
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.78	0.22	1.00	1.91	0.09	1.00	0.91	0.09	1.00	1.00	1.00
Final Sat.:	1600	2851	349	1600	3061	139	1600	1450	150	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.15	0.15	0.08	0.13	0.13	0.03	0.20	0.20	0.04	0.19	0.07
Crit Moves:		****			****				****		****	

1105 Long Beach
FWOP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #554 Long Beach & 7th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.583
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	2 0	1	0 0	0 0	0	1 0	3 0	1
Volume Module:												
Base Vol:	152	291	0	0	312	119	0	0	0	87	1157	72
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	157	300	0	0	321	123	0	0	0	90	1192	74
Added Vol:	12	82	0	0	56	3	0	0	0	16	55	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	169	382	0	0	377	126	0	0	0	106	1247	75
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	169	382	0	0	377	126	0	0	0	106	1247	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	169	382	0	0	377	126	0	0	0	106	1247	75
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	169	382	0	0	377	126	0	0	0	106	1247	75
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.12	0.00	0.00	0.12	0.08	0.00	0.00	0.00	0.07	0.26	0.05
Crit Moves:	****				****						****	

1105 Long Beach
FWOP - AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #555 Atlantic & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.649
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	67	405	15	68	379	111	62	281	27	41	336	105
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	69	417	15	70	390	114	64	289	28	42	346	108
Added Vol:	1	50	2	0	37	1	6	26	2	1	13	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	467	17	70	427	115	70	315	30	43	359	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	467	17	70	427	115	70	315	30	43	359	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	467	17	70	427	115	70	315	30	43	359	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	467	17	70	427	115	70	315	30	43	359	108
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.93	0.07	1.00	1.57	0.43	1.00	0.91	0.09	1.00	0.77	0.23
Final Sat.:	1600	3085	115	1600	2520	680	1600	1462	138	1600	1230	370
Capacity Analysis Module:												
Vol/Sat:	0.04	0.15	0.15	0.04	0.17	0.17	0.04	0.22	0.22	0.03	0.29	0.29
Crit Moves:	****				****		****				****	

1105 Long Beach
FWOP - AM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #556 Locust & Alley

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[8.9]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Uncontrolled						Uncontrolled						Stop Sign						Stop Sign					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	0	0	1	
Volume Module:																								
Base Vol:	2		53		3		1		51		1		2		0		3		0		0		1	
Growth Adj:	1.03		1.03		1.03		1.03		1.03		1.03		1.03		1.03		1.03		1.03		1.03		1.03	
Initial Bse:	2		55		3		1		53		1		2		0		3		0		0		1	
Added Vol:	0		14		0		0		6		0		0		0		0		0		0		0	
PasserByVol:	0		0		0		0		0		0		0		0		0		0		0		0	
Initial Fut:	2		69		3		1		59		1		2		0		3		0		0		1	
User Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Adj:	1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00		1.00	
PHF Volume:	2		69		3		1		59		1		2		0		3		0		0		1	
Reduct Vol:	0		0		0		0		0		0		0		0		0		0		0		0	
FinalVolume:	2		69		3		1		59		1		2		0		3		0		0		1	
Critical Gap Module:																								
Critical Gp:	4.1	xxxx	xxxxx				4.1	xxxx	xxxxx				7.1		6.5		6.2		xxxxx	xxxx			6.2	
FollowUpTim:	2.2	xxxx	xxxxx				2.2	xxxx	xxxxx				3.5		4.0		3.3		xxxxx	xxxx			3.3	
Capacity Module:																								
Cnflict Vol:	60	xxxx	xxxxx				72	xxxx	xxxxx				136		137		59		xxxx	xxxx			70	
Potent Cap.:	1557	xxxx	xxxxx				1541	xxxx	xxxxx				840		758		1012		xxxx	xxxx			998	
Move Cap.:	1557	xxxx	xxxxx				1541	xxxx	xxxxx				838		756		1012		xxxx	xxxx			998	
Volume/Cap:	0.00	xxxx	xxxx				0.00	xxxx	xxxx				0.00		0.00		0.00		xxxx	xxxx			0.00	
Level Of Service Module:																								
2Way95thQ:	0.0	xxxx	xxxxx				0.0	xxxx	xxxxx				xxxx		xxxx		xxxxx		xxxx	xxxx			0.0	
Control Del:	7.3	xxxx	xxxxx				7.3	xxxx	xxxxx				xxxxx		xxxx		xxxxx		xxxxx	xxxx			8.6	
LOS by Move:	A		*		*		A		*		*		*		*		*		*		*		A	
Movement:	LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT		LT	-	LTR	-	RT	
Shared Cap.:	xxxx		xxxx		xxxxx		xxxx		xxxx		xxxxx		xxxx		934		xxxxx		xxxx		xxxx		xxxxx	
SharedQueue:	xxxxx		xxxx		xxxxx		xxxxx		xxxx		xxxxx		xxxxx		0.0		xxxxx		xxxxx		xxxx		xxxxx	
Shrd ConDel:	xxxxx		xxxx		xxxxx		xxxxx		xxxx		xxxxx		xxxxx		8.9		xxxxx		xxxxx		xxxx		xxxxx	
Shared LOS:	*		*		*		*		*		*		*		A		*		*		*		*	
ApproachDel:	xxxxxx						xxxxxx						8.9						8.6					
ApproachLOS:	*						*						A						A					

Note: Queue reported is the number of cars per lane.

1105 Long Beach
FWOP - AM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #557 12th & Alley

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: A[8.4]

Approach:	North Bound					South Bound					East Bound					West Bound				
Movement:	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R	L	-	T	-	R
Control:	Stop Sign					Stop Sign					Uncontrolled					Uncontrolled				
Rights:	Include					Include					Include					Include				
Lanes:	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0
Volume Module:																				
Base Vol:	0	0	1			0	0	0			0	29	5			0	5	0		
Growth Adj:	1.03	1.03	1.03			1.03	1.03	1.03			1.03	1.03	1.03			1.03	1.03	1.03		
Initial Bse:	0	0	1			0	0	0			0	30	5			0	5	0		
Added Vol:	0	0	0			0	0	0			0	0	0			0	11	0		
PasserByVol:	0	0	0			0	0	0			0	0	0			0	0	0		
Initial Fut:	0	0	1			0	0	0			0	30	5			0	16	0		
User Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Adj:	1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00			1.00	1.00	1.00		
PHF Volume:	0	0	1			0	0	0			0	30	5			0	16	0		
Reduct Vol:	0	0	0			0	0	0			0	0	0			0	0	0		
FinalVolume:	0	0	1			0	0	0			0	30	5			0	16	0		
Critical Gap Module:																				
Critical Gp:	xxxxx	xxxx	6.2			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
FollowUpTim:	xxxxx	xxxx	3.3			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Capacity Module:																				
Cnflict Vol:	xxxx	xxxx	32			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Potent Cap.:	xxxx	xxxx	1047			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Move Cap.:	xxxx	xxxx	1047			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Volume/Cap:	xxxx	xxxx	0.00			xxxx	xxxx	xxxx			xxxx	xxxx	xxxx			xxxx	xxxx	xxxx		
Level Of Service Module:																				
2Way95thQ:	xxxx	xxxx	0.0			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
Control Del:	xxxxx	xxxx	8.4			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
LOS by Move:	*	*	A			*	*	*			*	*	*			*	*	*		
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap.:	xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx			xxxx	xxxx	xxxxx		
SharedQueue:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shrd ConDel:	xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx			xxxxx	xxxx	xxxxx		
Shared LOS:	*	*	*			*	*	*			*	*	*			*	*	*		
ApproachDel:	8.4					xxxxxx					xxxxxx					xxxxxx				
ApproachLOS:	A					*					*					*				

Note: Queue reported is the number of cars per lane.

1105 Long Beach
FWOP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #551 Pine & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.485
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0
Volume Module:												
Base Vol:	12	122	32	34	99	15	15	317	23	19	343	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	12	126	33	35	102	15	15	327	24	20	353	33
Added Vol:	0	3	2	0	5	0	0	12	0	3	15	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	129	35	35	107	15	15	339	24	23	368	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	129	35	35	107	15	15	339	24	23	368	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	129	35	35	107	15	15	339	24	23	368	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	129	35	35	107	15	15	339	24	23	368	33
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.79	0.21	1.00	0.87	0.13	1.00	0.93	0.07	1.00	0.92	0.08
Final Sat.:	1600	1258	342	1600	1398	202	1600	1495	105	1600	1469	131
Capacity Analysis Module:												
Vol/Sat:	0.01	0.10	0.10	0.02	0.08	0.08	0.01	0.23	0.23	0.01	0.25	0.25
Crit Moves:		****			****			****			****	

1105 Long Beach
FWOP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #552 Long Beach & Anaheim

Cycle (sec):	100	Critical Vol./Cap.(X):	0.730
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 1	0 0	2	1 0	0 0	2	1 0
Volume Module:												
Base Vol:	162	483	85	159	384	63	0	1251	75	0	630	110
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	167	497	88	164	396	65	0	1289	77	0	649	113
Added Vol:	6	89	4	17	106	24	0	90	10	0	92	14
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	173	586	92	181	502	89	0	1379	87	0	741	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	173	586	92	181	502	89	0	1379	87	0	741	127
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	586	92	181	502	89	0	1379	87	0	741	127
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	173	586	92	181	502	89	0	1379	87	0	741	127
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.73	0.27	1.00	2.00	1.00	0.00	2.82	0.18	0.00	2.56	0.44
Final Sat.:	1600	2768	432	1600	3200	1600	0	4514	286	0	4096	704
Capacity Analysis Module:												
Vol/Sat:	0.11	0.21	0.21	0.11	0.16	0.06	0.00	0.31	0.31	0.00	0.18	0.18
Crit Moves:		****			****				****		****	

1105 Long Beach
FWOP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #553 Long Beach & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.749
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	57	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	79	569	68	152	324	22	84	380	27	49	310	119
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	81	586	70	157	334	23	87	391	28	50	319	123
Added Vol:	2	84	9	10	95	1	4	14	1	12	20	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	83	670	79	167	429	24	91	405	29	62	339	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	83	670	79	167	429	24	91	405	29	62	339	127
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	670	79	167	429	24	91	405	29	62	339	127
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	83	670	79	167	429	24	91	405	29	62	339	127
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.79	0.21	1.00	1.90	0.10	1.00	0.93	0.07	1.00	1.00	1.00
Final Sat.:	1600	2862	338	1600	3033	167	1600	1494	106	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.23	0.23	0.10	0.14	0.14	0.06	0.27	0.27	0.04	0.21	0.08
Crit Moves:		****		****				****		****		

1105 Long Beach
FWOP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #554 Long Beach & 7th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.468
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	2 0	1	0 0	0 0	0	1 0	3 0	1
Volume Module:												
Base Vol:	109	553	0	0	383	50	0	0	0	82	575	108
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	112	570	0	0	394	52	0	0	0	84	592	111
Added Vol:	12	92	0	0	103	5	0	0	0	36	57	3
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	124	662	0	0	497	57	0	0	0	120	649	114
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	124	662	0	0	497	57	0	0	0	120	649	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	662	0	0	497	57	0	0	0	120	649	114
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	662	0	0	497	57	0	0	0	120	649	114
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.21	0.00	0.00	0.16	0.04	0.00	0.00	0.00	0.08	0.14	0.07
Crit Moves:	****				****						****	

1105 Long Beach
FWOP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #555 Atlantic & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.721
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	28	488	48	120	534	130	98	453	38	32	278	85
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	29	503	49	124	550	134	101	467	39	33	286	88
Added Vol:	2	54	2	0	68	2	5	23	2	2	32	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	31	557	51	124	618	136	106	490	41	35	318	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	31	557	51	124	618	136	106	490	41	35	318	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	557	51	124	618	136	106	490	41	35	318	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	31	557	51	124	618	136	106	490	41	35	318	88
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.83	0.17	1.00	1.64	0.36	1.00	0.92	0.08	1.00	0.78	0.22
Final Sat.:	1600	2929	271	1600	2623	577	1600	1476	124	1600	1255	345
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.19	0.08	0.24	0.24	0.07	0.33	0.33	0.02	0.25	0.25
Crit Moves:		****			****				****		****	

1105 Long Beach
FWOP - PM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #556 Locust & Alley

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[8.9]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	2	79	4	2	43	0	1	0	4	1	0	3
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	2	81	4	2	44	0	1	0	4	1	0	3
Added Vol:	0	9	0	0	18	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	90	4	2	62	0	1	0	4	1	0	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	90	4	2	62	0	1	0	4	1	0	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	90	4	2	62	0	1	0	4	1	0	3
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	62	xxxx	xxxxx	94	xxxx	xxxxx	165	165	62	165	163	92
Potent Cap.:	1553	xxxx	xxxxx	1512	xxxx	xxxxx	805	731	1008	804	733	970
Move Cap.:	1553	xxxx	xxxxx	1512	xxxx	xxxxx	800	729	1008	799	731	970
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.00	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	958	xxxxx	xxxx	921	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	8.8	xxxxx	xxxxx	8.9	xxxxx
Shared LOS:	*	*	*	A	*	*	*	A	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			8.8			8.9		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the number of cars per lane.

1105 Long Beach
FWOP - PM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #557 12th & Alley

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[8.5]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 0	1	0	0 0 1	0	0
Volume Module:												
Base Vol:	1	0	1	0	0	0	0	17	1	0	7	0
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	1	0	1	0	0	0	0	18	1	0	7	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	0	1	0	0	0	0	18	1	0	21	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	0	1	0	0	0	0	18	1	0	21	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	0	1	0	0	0	0	18	1	0	21	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	39	39	18	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	978	857	1066	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	978	857	1066	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	1020	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	8.5	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	*	*	*
ApproachDel:		8.5		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		A		*			*			*		

Note: Queue reported is the number of cars per lane.

1105 Long Beach
FWP- AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #551 Pine & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.400
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0
Volume Module:												
Base Vol:	5	65	50	15	80	11	6	232	13	32	287	26
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	5	67	52	15	82	11	6	239	13	33	296	27
Added Vol:	0	5	3	0	2	0	0	12	0	1	9	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	72	55	15	84	11	6	251	13	34	305	27
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	72	55	15	84	11	6	251	13	34	305	27
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	72	55	15	84	11	6	251	13	34	305	27
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	72	55	15	84	11	6	251	13	34	305	27
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.57	0.43	1.00	0.88	0.12	1.00	0.95	0.05	1.00	0.92	0.08
Final Sat.:	1600	910	690	1600	1411	189	1600	1519	81	1600	1471	129
Capacity Analysis Module:												
Vol/Sat:	0.00	0.08	0.08	0.01	0.06	0.06	0.00	0.17	0.17	0.02	0.21	0.21
Crit Moves:		****			****			****			****	

1105 Long Beach
FWP- AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #552 Long Beach & Anaheim

Cycle (sec):	100	Critical Vol./Cap.(X):	0.567
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 1	0 0	2	1 0	0 0	2	1 0
Volume Module:												
Base Vol:	125	321	37	83	329	56	0	625	80	0	1037	105
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	129	331	38	85	339	58	0	644	82	0	1068	108
Added Vol:	4	84	4	18	61	31	0	82	8	0	61	7
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	133	415	42	103	400	89	0	726	90	0	1129	115
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	133	415	42	103	400	89	0	726	90	0	1129	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	415	42	103	400	89	0	726	90	0	1129	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	133	415	42	103	400	89	0	726	90	0	1129	115
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.82	0.18	1.00	2.00	1.00	0.00	2.67	0.33	0.00	2.72	0.28
Final Sat.:	1600	2905	295	1600	3200	1600	0	4268	532	0	4356	444
Capacity Analysis Module:												
Vol/Sat:	0.08	0.14	0.14	0.06	0.12	0.06	0.00	0.17	0.17	0.00	0.26	0.26
Crit Moves:	****				****		****				****	

1105 Long Beach
FWP- AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #553 Long Beach & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.575
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	42	343	42	121	324	16	49	262	27	53	279	100
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	43	353	43	125	334	16	50	270	28	55	287	103
Added Vol:	1	74	9	17	55	1	5	19	2	5	9	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	44	427	52	142	389	17	55	289	30	60	296	104
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	44	427	52	142	389	17	55	289	30	60	296	104
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	44	427	52	142	389	17	55	289	30	60	296	104
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	44	427	52	142	389	17	55	289	30	60	296	104
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.78	0.22	1.00	1.91	0.09	1.00	0.91	0.09	1.00	1.00	1.00
Final Sat.:	1600	2851	349	1600	3062	138	1600	1450	150	1600	1600	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.15	0.15	0.09	0.13	0.13	0.03	0.20	0.20	0.04	0.19	0.07
Crit Moves:		****		****				****			****	

1105 Long Beach
FWP- AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #554 Long Beach & 7th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.584
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 2	0 0	0	0 2	0 1	0	0 0	0 0	1	0 3	0 1
Volume Module:												
Base Vol:	152	291	0	0	312	119	0	0	0	87	1157	72
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	157	300	0	0	321	123	0	0	0	90	1192	74
Added Vol:	12	82	0	0	58	4	0	0	0	16	55	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	169	382	0	0	379	127	0	0	0	106	1247	75
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	169	382	0	0	379	127	0	0	0	106	1247	75
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	169	382	0	0	379	127	0	0	0	106	1247	75
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	169	382	0	0	379	127	0	0	0	106	1247	75
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.12	0.00	0.00	0.12	0.08	0.00	0.00	0.00	0.07	0.26	0.05
Crit Moves:	****				****						****	

1105 Long Beach
FWP- AM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #555 Atlantic & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.650
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	B

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0 1	1 0	1	0 1	1 0	1	0 0	1 0	1	0 0	1 0
Volume Module:												
Base Vol:	67	405	15	68	379	111	62	281	27	41	336	105
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	69	417	15	70	390	114	64	289	28	42	346	108
Added Vol:	1	50	2	0	37	1	6	27	3	1	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	70	467	17	70	427	115	70	316	31	43	360	108
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70	467	17	70	427	115	70	316	31	43	360	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	467	17	70	427	115	70	316	31	43	360	108
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	467	17	70	427	115	70	316	31	43	360	108
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.93	0.07	1.00	1.57	0.43	1.00	0.91	0.09	1.00	0.77	0.23
Final Sat.:	1600	3085	115	1600	2520	680	1600	1458	142	1600	1230	370
Capacity Analysis Module:												
Vol/Sat:	0.04	0.15	0.15	0.04	0.17	0.17	0.04	0.22	0.22	0.03	0.29	0.29
Crit Moves:	****				****		****				****	

1105 Long Beach
FWP- AM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #556 Locust & Alley

Average Delay (sec/veh): 0.7 Worst Case Level Of Service: A[9.3]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Volume Module:												
Base Vol:	2	53	3	1	51	1	2	0	3	0	0	1
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	2	55	3	1	53	1	2	0	3	0	0	1
Added Vol:	0	14	1	0	6	0	0	0	0	2	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	69	4	1	59	1	2	0	3	2	1	1
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	69	4	1	59	1	2	0	3	2	1	1
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	69	4	1	59	1	2	0	3	2	1	1
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	60	xxxx	xxxxx	73	xxxx	xxxxx	137	138	59	137	136	71
Potent Cap.:	1557	xxxx	xxxxx	1540	xxxx	xxxxx	839	757	1012	838	758	998
Move Cap.:	1557	xxxx	xxxxx	1540	xxxx	xxxxx	836	755	1012	834	757	998
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.00	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	7.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	933	xxxxx	xxxx	848	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	8.9	xxxxx	xxxxx	9.3	xxxxx
Shared LOS:	*	*	*	*	*	*	*	A	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			8.9			9.3		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the number of cars per lane.

1105 Long Beach
FWP- AM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #557 12th & Alley

Average Delay (sec/veh): 3.4 Worst Case Level Of Service: A[8.8]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0 0		0 0 0	0 0		0 0 0	1 0		0 1	0 0	
Volume Module:												
Base Vol:	0	0	1	0	0	0	0	29	5	0	5	0
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	0	0	1	0	0	0	0	30	5	0	5	0
Added Vol:	21	0	9	0	0	0	0	0	5	6	11	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	21	0	10	0	0	0	0	30	10	6	16	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	21	0	10	0	0	0	0	30	10	6	16	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	21	0	10	0	0	0	0	30	10	6	16	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	63	63	35	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	40	xxxx	xxxxx
Potent Cap.:	948	832	1044	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1583	xxxx	xxxxx
Move Cap.:	945	828	1044	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1583	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.00	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	975	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	8.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:		8.8			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS:		A			*			*			*	

Note: Queue reported is the number of cars per lane.

1105 Long Beach
FWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #551 Pine & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.486
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	0 1	0	1	0	0 1	0	1	0	0 1	0
Volume Module:												
Base Vol:	12	122	32	34	99	15	15	317	23	19	343	32
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	12	126	33	35	102	15	15	327	24	20	353	33
Added Vol:	0	4	2	0	5	0	0	12	0	3	16	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	12	130	35	35	107	15	15	339	24	23	369	33
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	12	130	35	35	107	15	15	339	24	23	369	33
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	12	130	35	35	107	15	15	339	24	23	369	33
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	12	130	35	35	107	15	15	339	24	23	369	33
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.79	0.21	1.00	0.87	0.13	1.00	0.93	0.07	1.00	0.92	0.08
Final Sat.:	1600	1260	340	1600	1398	202	1600	1495	105	1600	1469	131
Capacity Analysis Module:												
Vol/Sat:	0.01	0.10	0.10	0.02	0.08	0.08	0.01	0.23	0.23	0.01	0.25	0.25
Crit Moves:		****			****			****			****	

1105 Long Beach
FWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #552 Long Beach & Anaheim

Cycle (sec):	100	Critical Vol./Cap.(X):	0.735
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	2	0 1	0 0	2	1 0	0 0	2	1 0
Volume Module:												
Base Vol:	162	483	85	159	384	63	0	1251	75	0	630	110
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	167	497	88	164	396	65	0	1289	77	0	649	113
Added Vol:	9	93	4	17	116	24	0	95	22	0	101	14
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	176	590	92	181	512	89	0	1384	99	0	750	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	176	590	92	181	512	89	0	1384	99	0	750	127
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	176	590	92	181	512	89	0	1384	99	0	750	127
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	176	590	92	181	512	89	0	1384	99	0	750	127
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.73	0.27	1.00	2.00	1.00	0.00	2.80	0.20	0.00	2.56	0.44
Final Sat.:	1600	2770	430	1600	3200	1600	0	4479	321	0	4103	697
Capacity Analysis Module:												
Vol/Sat:	0.11	0.21	0.21	0.11	0.16	0.06	0.00	0.31	0.31	0.00	0.18	0.18
Crit Moves:		****		****				****			****	

1105 Long Beach
FWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #553 Long Beach & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.753
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	T	R	L	T	T	R	L	T	T	R	L	T	T	R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	0	1	0	
Volume Module:																
Base Vol:	79	569	68		152	324	22		84	380	27		49	310	119	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	81	586	70		157	334	23		87	391	28		50	319	123	
Added Vol:	2	87	9		15	97	1		4	15	1		12	22	4	
PasserByVol:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	83	673	79		172	431	24		91	406	29		62	341	127	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	83	673	79		172	431	24		91	406	29		62	341	127	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	83	673	79		172	431	24		91	406	29		62	341	127	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	83	673	79		172	431	24		91	406	29		62	341	127	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.79	0.21		1.00	1.90	0.10		1.00	0.93	0.07		1.00	1.00	1.00	
Final Sat.:	1600	2864	336		1600	3033	167		1600	1494	106		1600	1600	1600	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.24	0.24		0.11	0.14	0.14		0.06	0.27	0.27		0.04	0.21	0.08	
Crit Moves:		****				****					****			****		

1105 Long Beach
FWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #554 Long Beach & 7th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.469
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	32	Level Of Service:	A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	2 0	0	0 0	2 0	1	0 0	0 0	0	1 0	3 0	1
Volume Module:												
Base Vol:	109	553	0	0	383	50	0	0	0	82	575	108
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	112	570	0	0	394	52	0	0	0	84	592	111
Added Vol:	12	94	0	0	104	6	0	0	0	36	58	4
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	124	664	0	0	498	58	0	0	0	120	650	115
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	124	664	0	0	498	58	0	0	0	120	650	115
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	664	0	0	498	58	0	0	0	120	650	115
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	664	0	0	498	58	0	0	0	120	650	115
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.00	3.00	1.00
Final Sat.:	1600	3200	0	0	3200	1600	0	0	0	1600	4800	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.21	0.00	0.00	0.16	0.04	0.00	0.00	0.00	0.08	0.14	0.07
Crit Moves:	****				****						****	

1105 Long Beach
FWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #555 Atlantic & 10th

Cycle (sec):	100	Critical Vol./Cap.(X):	0.721
Loss Time (sec):	10	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	Level Of Service:	C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	1	1 0	1 0	1	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	28	488	48	120	534	130	98	453	38	32	278	85
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	29	503	49	124	550	134	101	467	39	33	286	88
Added Vol:	3	54	2	0	68	2	5	24	2	2	33	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	32	557	51	124	618	136	106	491	41	35	319	88
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	32	557	51	124	618	136	106	491	41	35	319	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	32	557	51	124	618	136	106	491	41	35	319	88
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	32	557	51	124	618	136	106	491	41	35	319	88
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.83	0.17	1.00	1.64	0.36	1.00	0.92	0.08	1.00	0.78	0.22
Final Sat.:	1600	2929	271	1600	2623	577	1600	1476	124	1600	1256	344
Capacity Analysis Module:												
Vol/Sat:	0.02	0.19	0.19	0.08	0.24	0.24	0.07	0.33	0.33	0.02	0.25	0.25
Crit Moves:		****		****				****			****	

1105 Long Beach
FWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #556 Locust & Alley

Average Delay (sec/veh): 0.9 Worst Case Level Of Service: A[9.3]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			0 1 0 0 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:												
Base Vol:	2	79	4	2	43	0	1	0	4	1	0	3
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	2	81	4	2	44	0	1	0	4	1	0	3
Added Vol:	0	9	3	0	18	0	0	1	0	2	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	2	90	7	2	62	0	1	1	4	3	1	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	2	90	7	2	62	0	1	1	4	3	1	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	90	7	2	62	0	1	1	4	3	1	3
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	62	xxxx	xxxxx	97	xxxx	xxxxx	167	168	62	167	164	94
Potent Cap.:	1553	xxxx	xxxxx	1508	xxxx	xxxxx	802	728	1008	802	732	968
Move Cap.:	1553	xxxx	xxxxx	1508	xxxx	xxxxx	797	726	1008	796	730	968
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	0.00	0.00	0.00
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.3	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	910	xxxxx	xxxx	851	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxxx	0.0	xxxxx	xxxxx	0.0	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	xxxxx	9.0	xxxxx	xxxxx	9.3	xxxxx
Shared LOS:	*	*	*	A	*	*	*	A	*	*	A	*
ApproachDel:	xxxxxx			xxxxxx			9.0			9.3		
ApproachLOS:	*			*			A			A		

Note: Queue reported is the number of cars per lane.

1105 Long Beach
FWP - PM Peak Hour
7-5-18

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #557 12th & Alley

Average Delay (sec/veh): 3.8 Worst Case Level Of Service: A[9.0]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1!	0	0	0 0 0	0	0	0 0 0	1	0	0 1 0	0	0
Volume Module:												
Base Vol:	1	0	1	0	0	0	0	17	1	0	7	0
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	1	0	1	0	0	0	0	18	1	0	7	0
Added Vol:	17	0	7	0	0	0	0	0	20	25	14	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	18	0	8	0	0	0	0	18	21	25	21	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	18	0	8	0	0	0	0	18	21	25	21	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	18	0	8	0	0	0	0	18	21	25	21	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	99	99	28	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	39	xxxx	xxxxx
Potent Cap.:	904	795	1053	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1585	xxxx	xxxxx
Move Cap.:	893	782	1053	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1585	xxxx	xxxxx
Volume/Cap:	0.02	0.00	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	937	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	9.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.3	xxxx	xxxxx
Shared LOS:	*	A	*	*	*	*	*	*	*	A	*	*
ApproachDel:		9.0		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:		A		*			*			*		

Note: Queue reported is the number of cars per lane.