

### 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 12<sup>th</sup> 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:

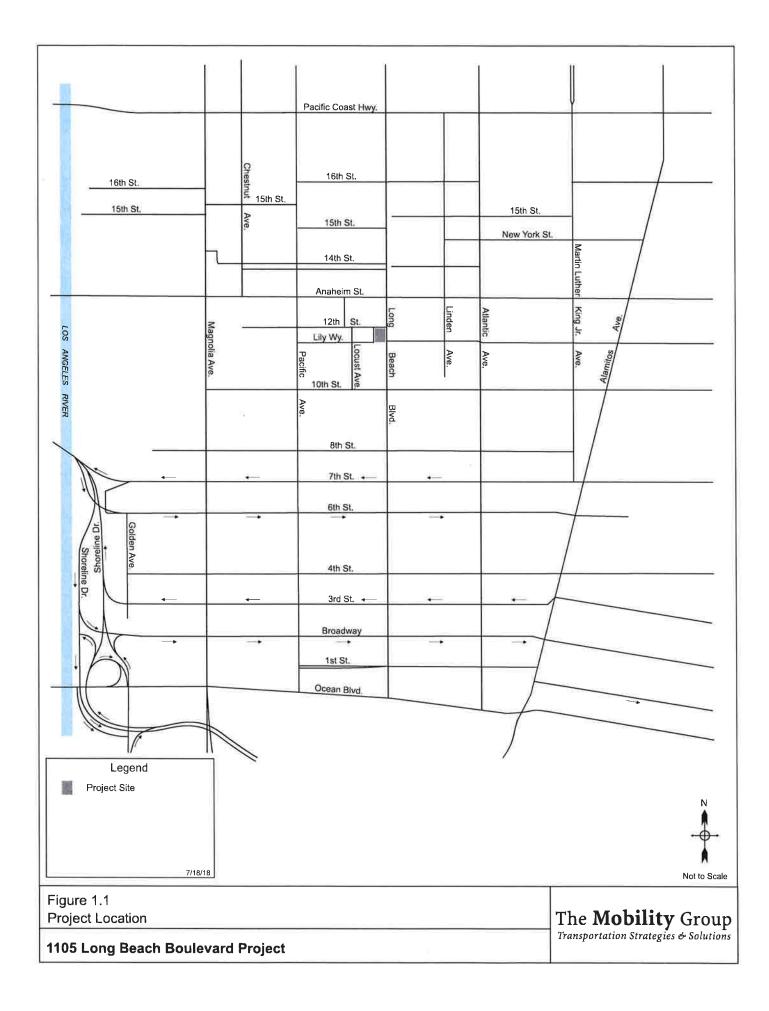
- Weekday AM peak hour
- Weekday PM peak hour

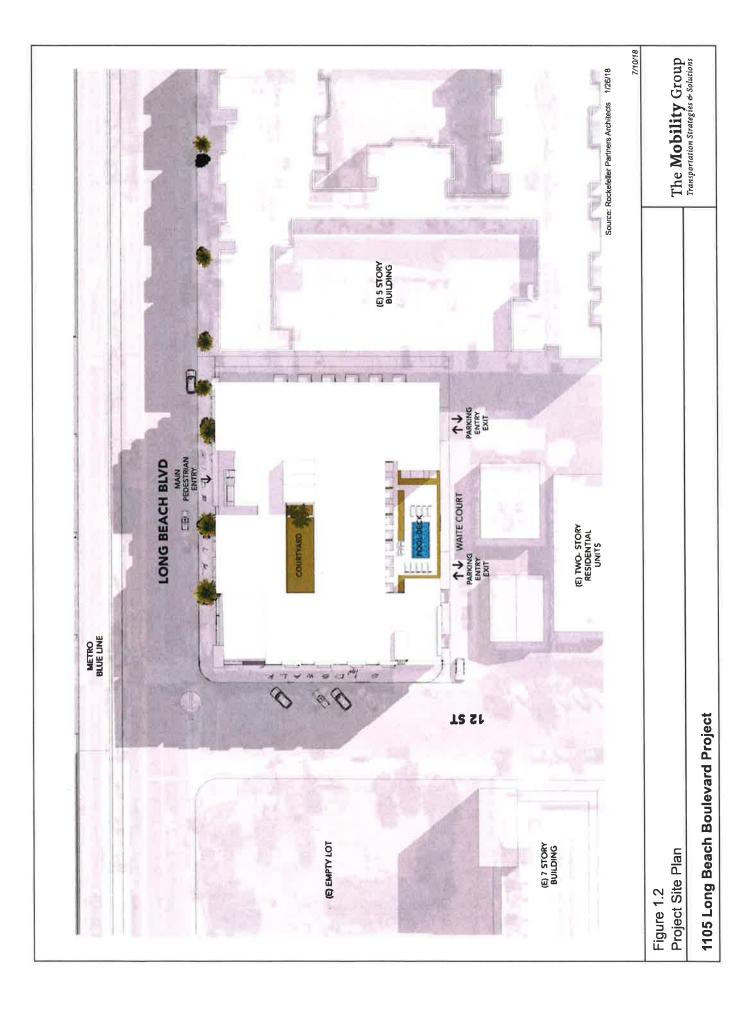
The analysis addresses completion of the Project by 2021, and addresses the following scenarios:

- 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.





# 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 eastwest 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.

<u>Pine Avenue</u>: 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.

<u>Atlantic Avenue</u>: 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

<u>Anaheim Street:</u> 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.

<u>12<sup>th</sup> Street:</u> 12<sup>th</sup> 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 12<sup>th</sup> 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.

<u>10th Street</u>: 10<sup>th</sup> 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.

<u>7th Street:</u> 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:

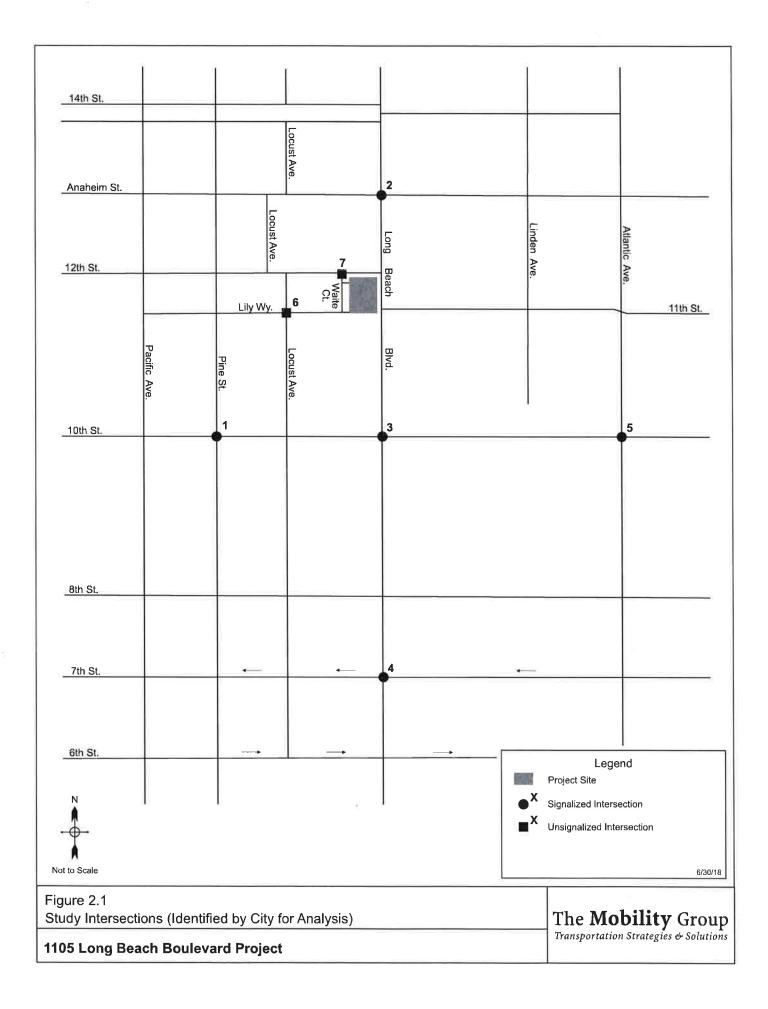
1.	Pine Street & 10 <sup>th</sup> Street	(signal)
2.	Long Beach Boulevard & Anaheim Street	(signal)
3.	Long Beach Boulevard & 10th Street	(signal)
4.	Long Beach Boulevard & 7th Street	(signal)
5.	Atlantic Avenue & 10th Street	(signal)
6.	Locust Avenue & Lily Way (Alley)	(stop sign)
7.	Waite Court (Alley)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

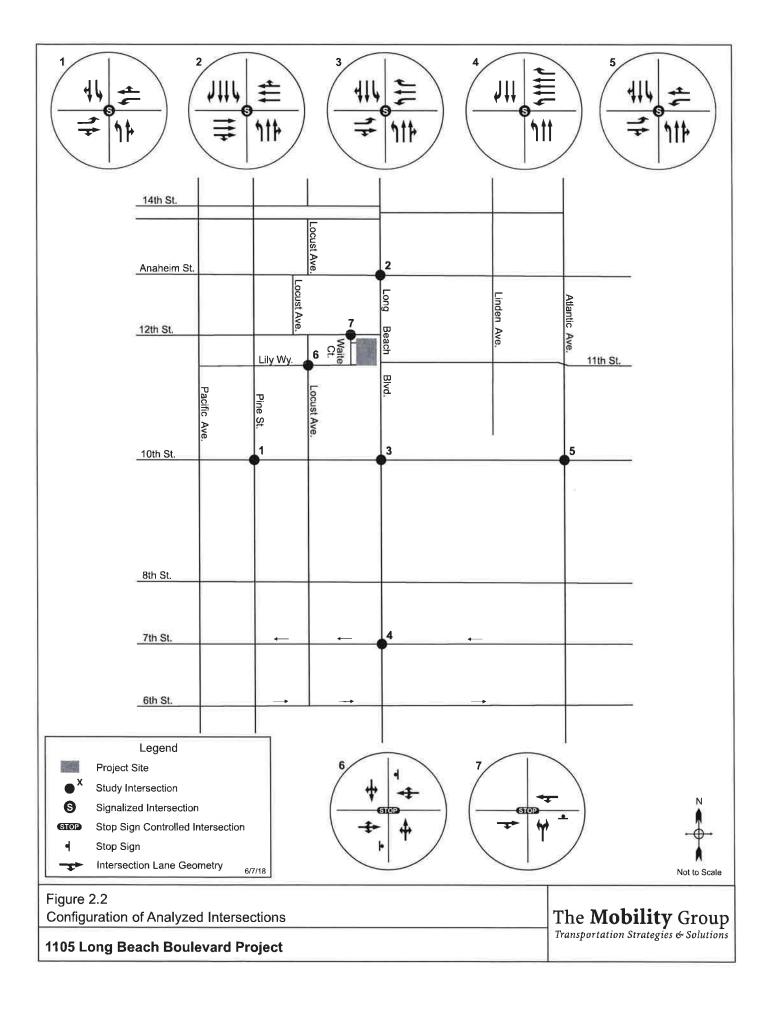
Five of these intersections are signalized and two are unsignalized, as indicated above. The existing lane configurations for these seven intersections are shown in Figure 2.2.

### 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





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<sup>1</sup>.

#### 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

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

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
В	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
С	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

### Table 2.1 Level of Service Definitions for Signalized Intersections

intersections only the minor street traffic controlled by the stop sign is required to stop (at twoway 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 stopcontrolled (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.

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

### Table 2.2 Level Of Service Definitions For Unsignalized Intersections

### Existing Peak Hour Levels of Service

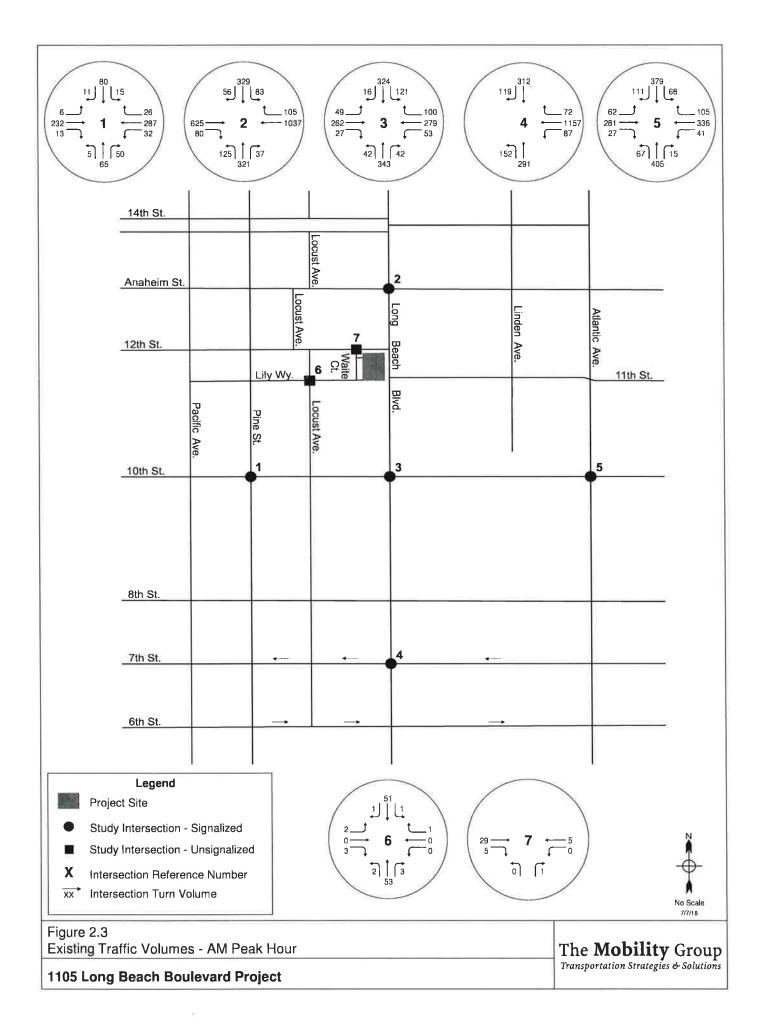
Table 2.3 summarizes the existing AM and PM peak hour V/C ratios and corresponding levels of service at the analyzed intersections.

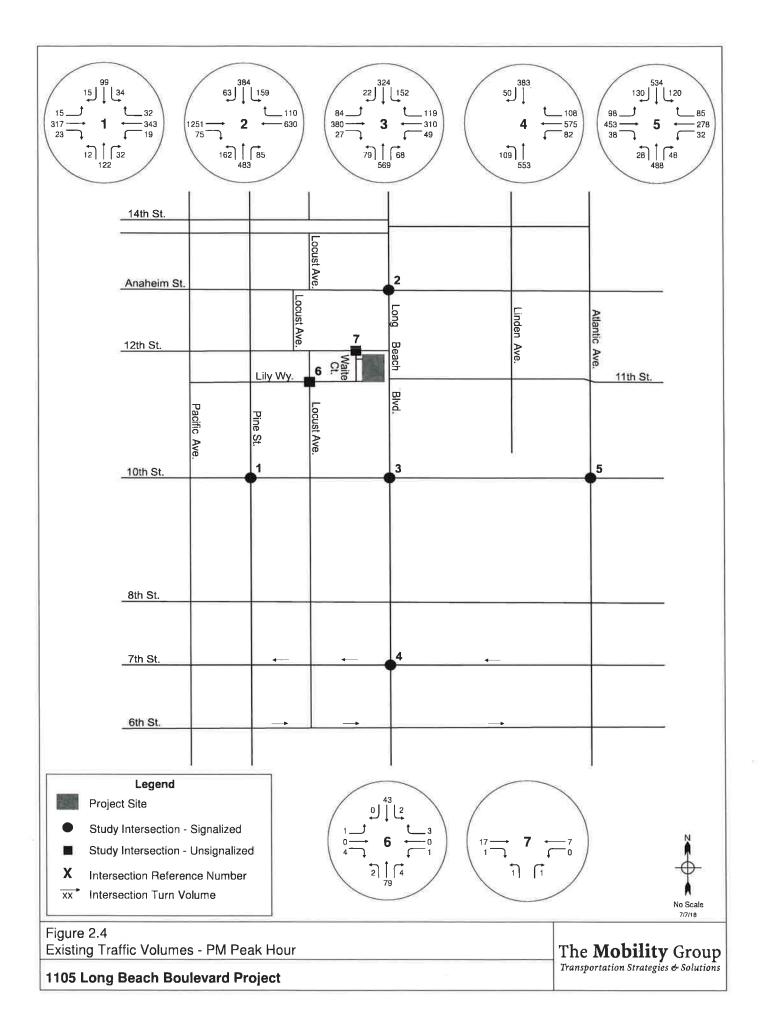
### AM Peak Hour

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.





### Table 2.3 Existing Conditions - Intersection Level of Service

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

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.

Services
: Transit
ig Public
Existin
Table 2.4

	Cturant	Service	Hours of Operation	Avera	ge Headv	Average Headway (minutes)	utes)
Provider, Koutes and Service Area	Surcer	Type		AM Peak Hour		PM Peak Hour	k Hour
				NB/EB SB/WB NB/EB SB/WB	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

5/31/18

# **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 12<sup>th</sup> 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* 10<sup>th</sup> 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 10<sup>th</sup> 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** 

			Source 1			Daily				
Land Use Assumptions		Notes	& Code	Quantity	Units	Trip Rate	Total Trips			
Existing Uses										
Retail		2,4	ITE 820	4,500	SF	37.75	-170			
(Reduction for internal trips) -	0%						C			
(Reduction for walk/bike trips) -	0%						0			
(Reduction for transit trips) -	5%		1 I I I				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%						( ) ( )			
(Reduction for transit trips) -	0%									
Net Residential							C			
Total Existing						1	-80			
Proposed Uses										
Residential		5	ITE 221	121	DUs	5.44	658			
(Reduction for internal trips) -	0%						(			
(Reduction for walk/bike trips) -	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%									
(Reduction for walk/bike trips) -	0%									
(Reduction for transit trips) -	5%						-21			
(Reduction for pass-by trips) -	10%						-4(			
Net Restaurant							358			
Total Proposed			-				983			
Total Net							903			

6/4/2018

#### Table 3.1 1105 Long Beach Blvd - Trip Generation Estimates

#### AM Peak

		Source 1					AM Pea			
Land Use Assumptions	Note	& Code	Quantity	Units		Trip Rate				
					In	Out	Total	In	Total Trips           Out           -1           0           -1           33           0           -1           33           0           0           -1           32           2           0           0           0           -1           32           2           0           0           0           0           0           0           0           0           0           0           0           0           0      0	Total
Existing Uses										
Retail	2,4	ITE 820	4,500	SF	0.58	0.36	0.94	-3	<u>_1</u>	-4
(Reduction for internal trips) -	0%							o	0	
(Reduction for walk/bike trips) =	0%							0	0	
(Reduction for transit trips) -	5%							0	0	
(Reduction for pass-by trips) -	50%							2		
Net Retail								-1	-1	-
Residential	2,3	ITE 220	12	DUs	0.00	0.00	0.00	0	0	
(Reduction for internal trips) -	0%							0	0	
(Reduction for walk/bike trips) -	0%							0	0	
(Reduction for transit trips) -	0%							0	0	
Net Residential								0	0	
Total Existing								-1	-1	-
Proposed Uses										
Residential	5	ITE 221	121	DUs	0.09	0.27	0.36	11	33	4
(Reduction for internal trips) -	0%							0	0	
(Reduction for walk/bike trips) -	0%							0	0	
(Reduction for transit trips) -	5%							-1		
Net Residential								10	32	4
Restaurant	6	ITE 931	5,000	SF	0.40	0.33	0.73	2	2	
(Reduction for internal trips) -	0%							0	0	
(Reduction for walk/bike trips) -	0%							0	0	
(Reduction for transit trips) -	5%							0	0	
(Reduction for pass-by trips) -	10%			L				0		
Net Restaurant								2	2	
Total Proposed								12	34	4
Total Net	_	-		-				11	33	4

#### Table 3.1 1105 Long Beach Blvd - Trip Generation Estimates

PM Peak

			Source 1		-				ak Hour		
Land Use Assumptions	r	Notes	& Code	Quantity	Units		Trip Rate			Total Trip	
	-				_	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	(
(Reduction for walk/bike trips) -	0%					1 1		1 1	0	o	(
(Reduction for transit trips) -	5%								0	1	
(Reduction for pass-by trips) -	50%								4	4	8
Net Retail									-4	-4	
Residential		2,3	ITE 220	12	DUs	0.00	0.00	0.00	0	o	(
(Reduction for internal trips) -	0%	=10							o	o	
(Reduction for walk/bike trips) -	0%								0	ō	(
(Reduction for transit trips) -	0%								0	ō	(
Net Residential									0	0	(
Total Existing	-								-4	-4	-8
Proposed Uses								1 1			
Residential		5	ITE 221	121	DUs	0.27	0.17	0.44	33	20	53
(Reduction for internal trips) -	0%								0	0	(
(Reduction for walk/bike trips) -	0%								0	0	
(Reduction for transit trips) -	5%	L,							-2		
Net Residential									31	19	5
Restaurant		6	ITE 931	5,000	SF	5.23	2.57	7.80	26	13	3
(Reduction for internal trips) -	0%						1.000	1.04	0	0	
(Reduction for walk/bike trips) -	0%								0	0	
(Reduction for transit trips) -	5%								-1	-1	-1
(Reduction for pass-by trips) -	10%				·				-3	-1	
Net Restaurant									22	11	3
Total Proposed									53	30	8
Total Net	-								49	26	7

#### 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.

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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

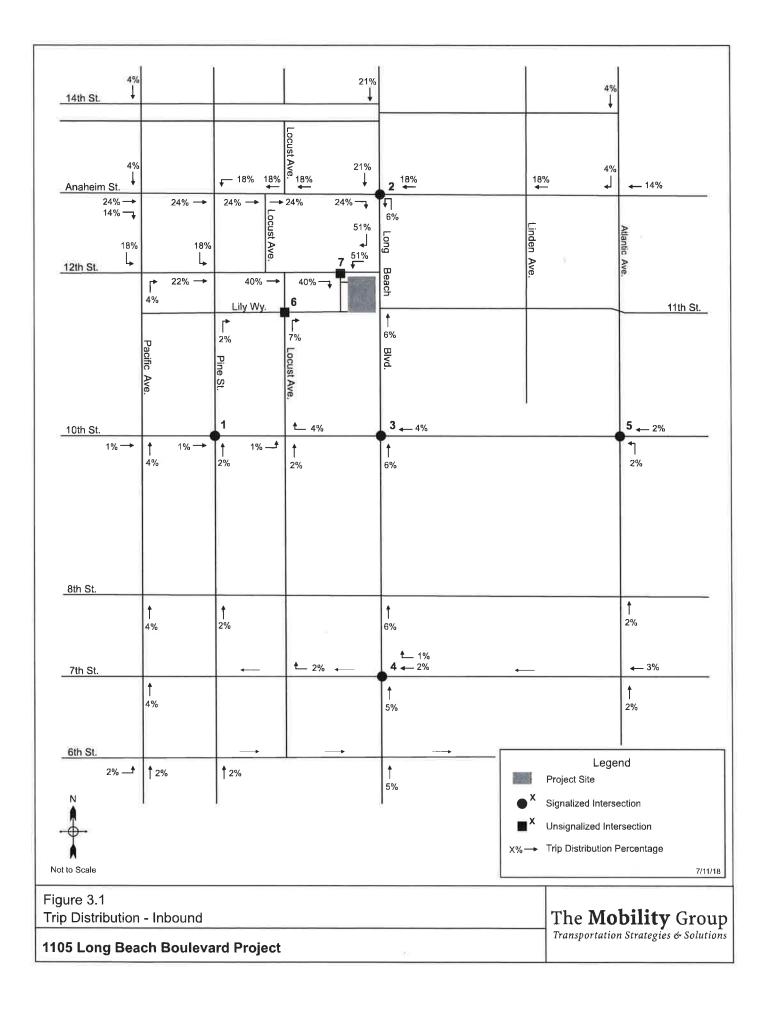
The likely distribution of Project trips was identified based on the type of land uses in the Project, the likely destinations of Project residents based on the local and regional distributions of employment and commercial destinations, the likely origins of commercial visitors based on the local distribution 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:

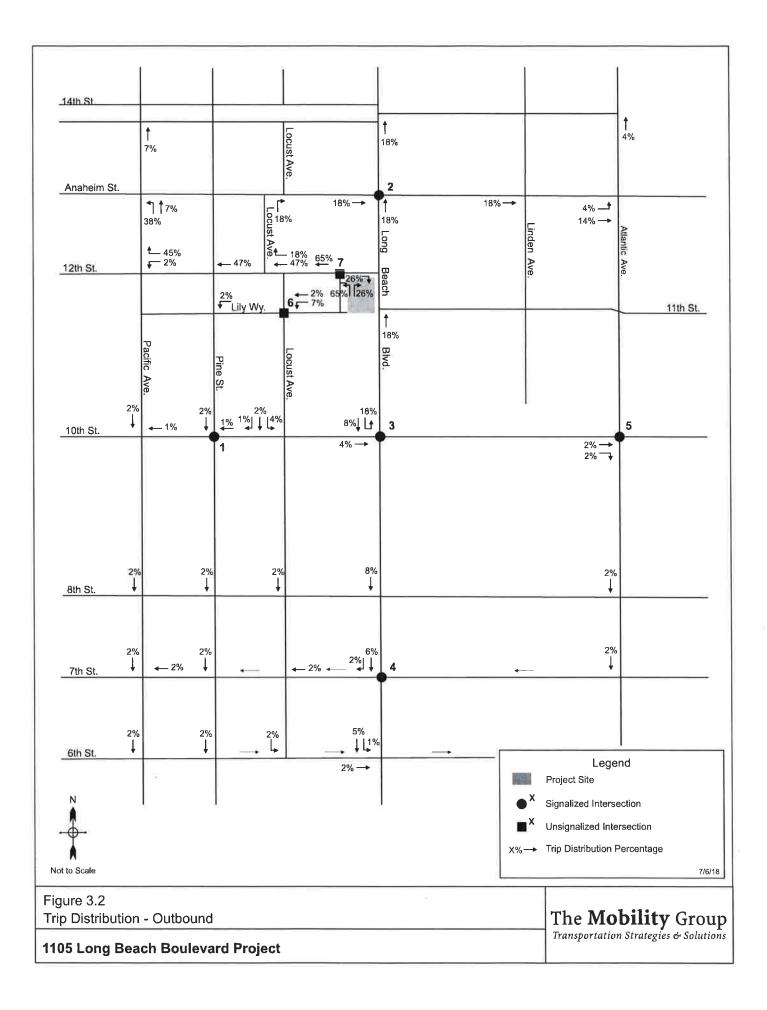
- 30% of the trips towards the north
- 20% of the trips towards the south
- 30% of the trips towards the east
- = 20% of the trips towards the west

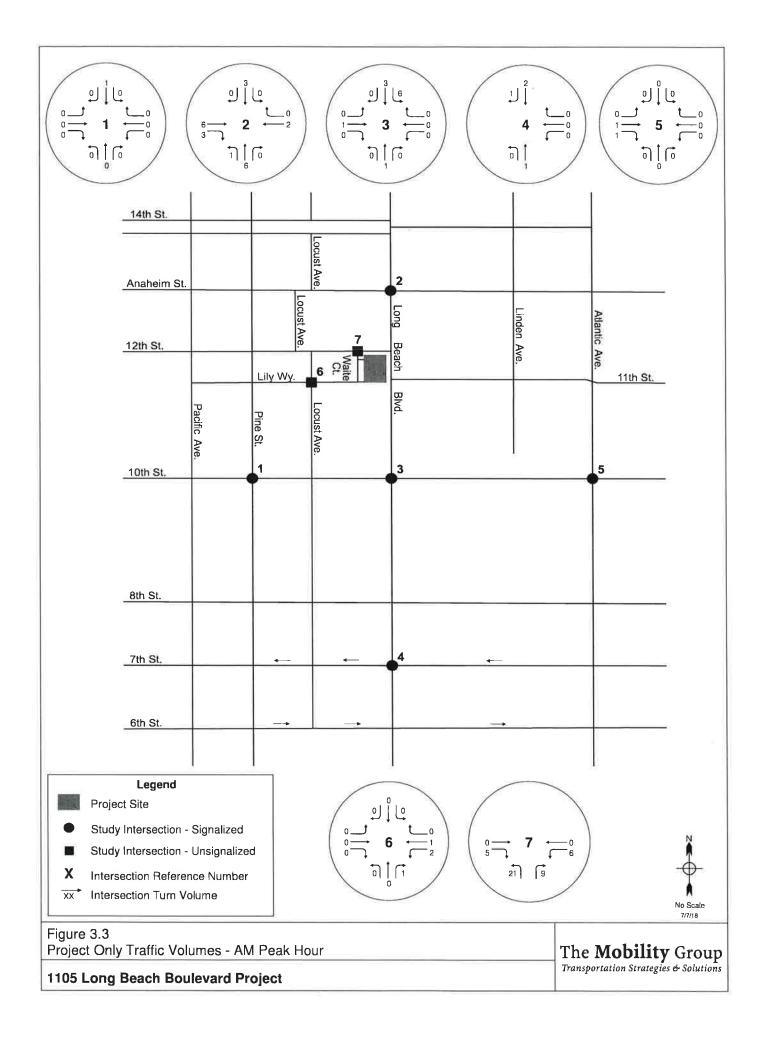
The detailed trip distribution percentages are shown in Figure 3.1 for the inbound direction and Figure 3.2 for the outbound. These take account of the left turn and u-turn prohibitions on Anaheim Street.

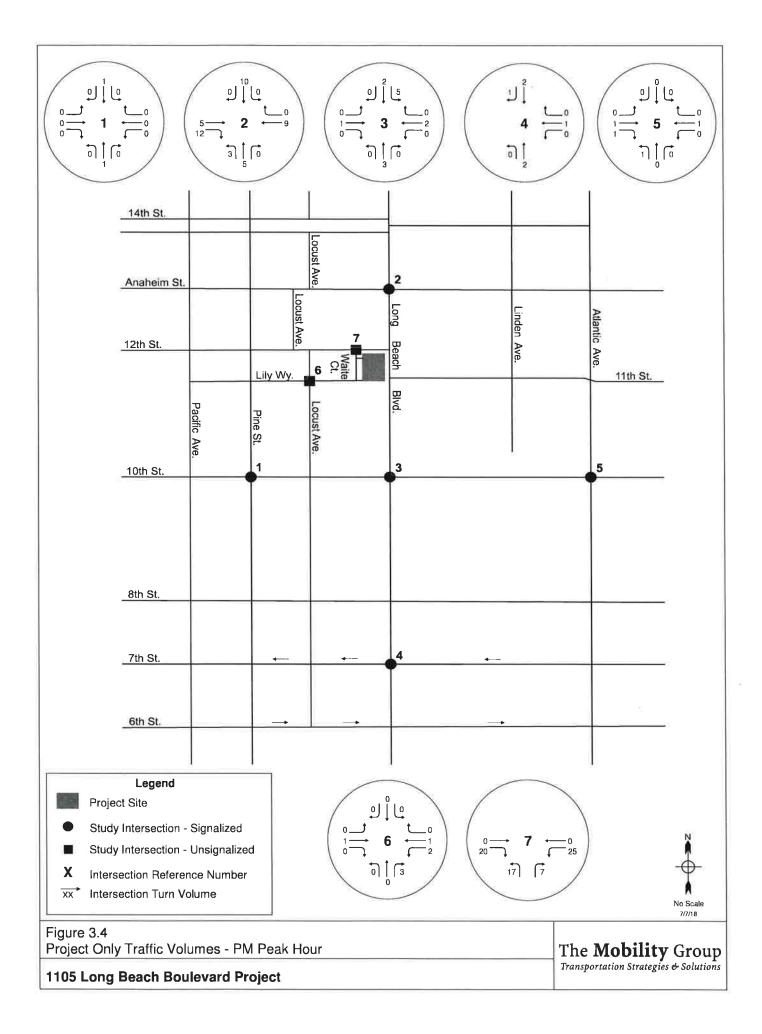
### **3.2 Project Traffic Projections**

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.









# 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.

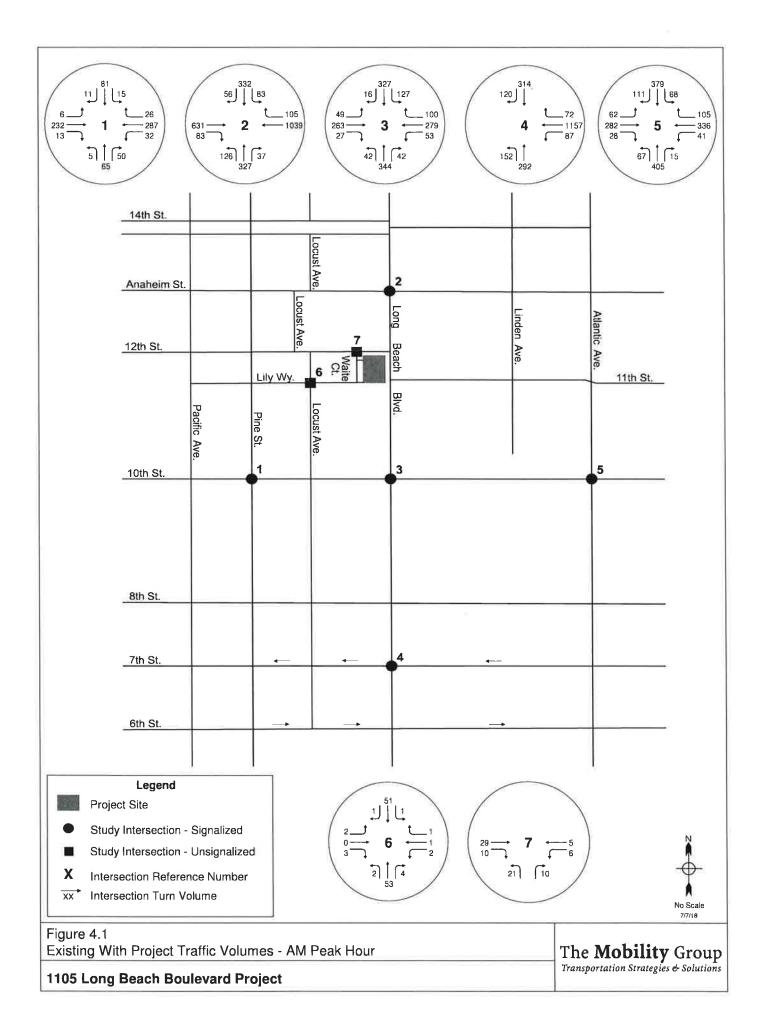
#### AM Peak Hour

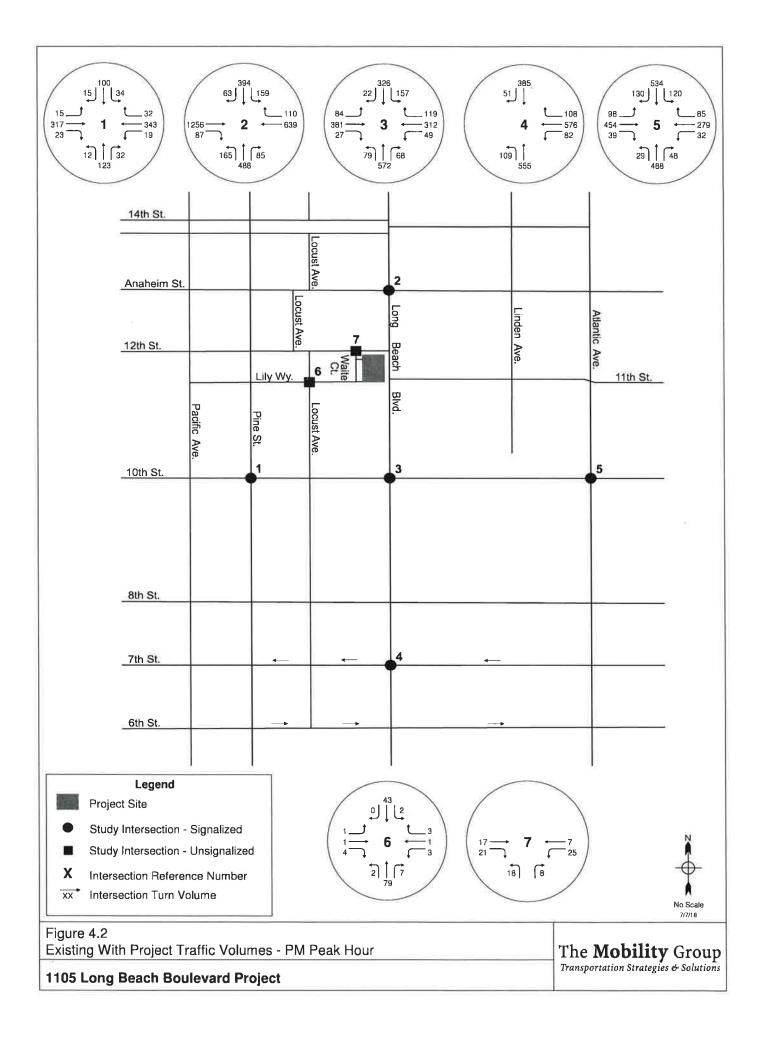
The analysis summarized in Table 4.1 indicates that for the AM peak hour, all intersections would continue to operate at LOS B or better, and that all increases in the volume/capacity (V/C) ratios would be less than the threshold for a significant impact to occur.

#### 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.





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

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

Note:

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

# Table 4.2Existing With Project Conditions - Intersection Level of Service<br/>PM Peak Hour

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

Note:

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

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# 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<sup>1</sup>. 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.

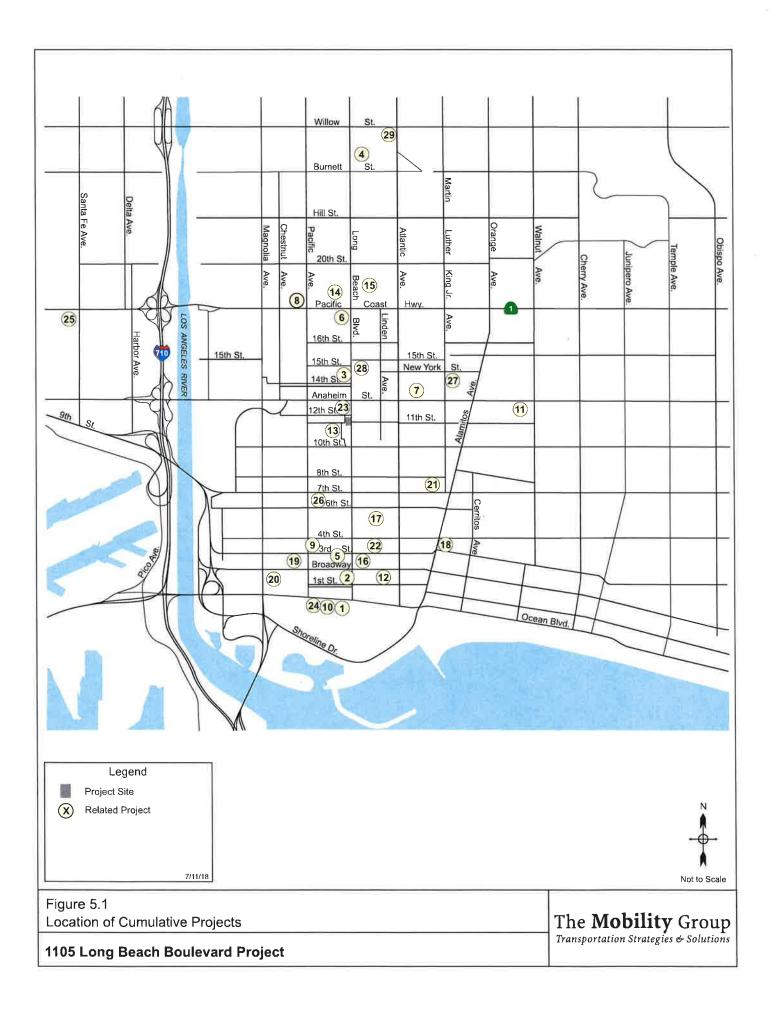
### 5.2 Cumulative Projects

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 10<sup>th</sup> Edition trip rates. These estimates are considered

<sup>&</sup>lt;sup>1</sup> 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.



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 Table 5.1
 Cumulative Projects List and Trip Generation Estimates

Hole         ITE 201         I.4.65         4.9         3.3         82         54         51         100           Apertments         ITE 200         1.5.66         2.4         7         6         76         76         76         76         76         76           Apertments         ITE 200         1.5.66         2.4         7         7         73         76 <td< th=""><th></th><th>Project Description <sup>1</sup></th><th></th><th>Trips<sup>2</sup></th><th>¥ ۲</th><th>AM Peak Hour <sup>2</sup></th><th>Total</th><th>Ē _</th><th>PM Peak Hour <sup>4</sup></th><th>Total</th></td<>		Project Description <sup>1</sup>		Trips <sup>2</sup>	¥ ۲	AM Peak Hour <sup>2</sup>	Total	Ē _	PM Peak Hour <sup>4</sup>	Total
ments         ITE 220 $1,566$ $24$ $76$ $100$ $76$ $46$ $1$ i         ITE 820 $275$ $4$ $3$ $7$ $13$ $15$ $15$ $1$ $15$ $15$ $15$ $107$ $89$ $61$ $1$ ifments         ITE 820 $1,381$ $28$ $7$ $10$ $7$ $10$ $76$ $66$ $90$ $91$ $1$ ifments         ITE 820 $1,190$ $18$ $10$ $19$ $29$ $90$ $91$ $7$ $90$ $7$ ifments         ITE 820 $1,383$ $21$ $10$ $76$ $90$ $91$ $70$ $11$ iffeendity         ITE 820 $1,781$ $27$ $90$ $91$ $70$ $11$ $7$ $90$ $71$ $70$ $71$ $70$ $90$ $71$ $70$ $70$ $70$ $70$ $70$ $70$ $70$ $70$ $70$ <t< th=""><th></th><th>Hotel</th><th>ITE 310</th><th>1,463</th><th>49</th><th>33</th><th>82</th><th>54</th><th>51</th><th>105</th></t<>		Hotel	ITE 310	1,463	49	33	82	54	51	105
I         TE 820 $275$ $4$ $3$ $7$ $13$ $15$ $15$ $15$ $15$ $15$ $15$ $16$ $16$ $13$ $13$ $7$ $13$ $15$ $13$ $13$ $15$ $13$ $11$ $1$		Apartments	ITE 220	1,596	24	76	100	76	46	122
Important         I		Retail	ITE 820	275	4	ю	2	13	15	28
Intertis         ITE 220         1,039         16         49         65         50         30         30           Intertis         ITE 820         151         2         2         4         7         8         30           Intertis         ITE 820         151         2         2         4         7         8         30           Intertis         ITE 820         537         10         18         51         68         87         36         40         1           Intertis         ITE 220         1,383         21         10         19         29         16         1         1           Intertis         ITE 220         1,383         21         66         87         66         40         1           Intertis         ITE 220         1,761         27         69         96         91         1           Intercial (retail)         ITE 820         153         22         4         7         8         9         91         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1		Total		1,871	28	79	107	68	61	150
I         TE 820         151         2         2         4         7         8         8           rTanstional Residential         ITE 252         537         100         18         51         680         57         38         38           rents         ITE 252         537         10         18         7         96         70         16         7         8         38           ments         ITE 250         1,363         21         66         87         66         40         7         8         38           ments         ITE 820         1,561         27         669         86         84         60         1         38           ments         ITE 820         153         27         86         84         60         1         1           ments         ITE 820         153         27         86         36         96         91         80         1 </td <td>4</td> <td>Appartments</td> <td>ITE 220</td> <td>1,039</td> <td>16</td> <td>49</td> <td>65</td> <td>50</td> <td>30</td> <td>80</td>	4	Appartments	ITE 220	1,039	16	49	65	50	30	80
r Transitional Residential $1.160$ $18$ $51$ $66$ $57$ $36$ $37$ Faculity         ITE 252 $537$ $10$ $19$ $29$ $20$ $16$ $37$ ments         ITE 220 $1.363$ $21$ $66$ $87$ $66$ $40$ $1$ ments         ITE 220 $1.363$ $21$ $66$ $87$ $66$ $40$ $1$ inters         ITE 221 $539$ $27$ $66$ $87$ $66$ $40$ $1$ ments         ITE 221 $549$ $9$ $27$ $96$ $27$ $16$ $20$ $17$ ments         ITE 221 $549$ $91$ $27$ $96$ $27$ $17$ $26$ $17$ $17$ ments         ITE 201 $1650$ $714$ $22$ $66$ $91$ $26$ $91$ $27$ style         ITE 201 $1650$ $2148$ $71$ $222$ $91$	<u>L</u> <u>r</u>	Retail	ITE 820	151	2	2	4	7	ω	15
rTansitional Residential         ITE 252         537         10         19         29         20         18         1           Facility         ITE 220         1,383         21         66         87         66         40         1           ments         ITE 820         378         6         87         66         87         66         40         1           ments         ITE 820         378         6         9         84         60         1           ments         ITE 221         549         9         6         84         60         1           ments         ITE 820         153         27         69         84         60         1           ments         ITE 820         153         27         36         27         4         7         8           ments         ITE 820         2148         46         71         29         40         7         1           eroid Restaurant         ITE 830         2148         46         71         95         91         1         1           eroid Restaurant         ITE 834         1,695         74         145         61         57         1	<u> </u>	Total		1,190	8	51	69	57	38	95
ments         ITE 220 $1.383$ $21$ $66$ $87$ $66$ $40$ $1$ I         ITE 820 $378$ $6$ $3$ $9$ $18$ $20$ $1$ I         ITE 820 $378$ $6$ $96$ $84$ $60$ $1$ ments         ITE 820 $378$ $27$ $69$ $84$ $60$ $1$ ments         ITE 820 $153$ $21$ $54$ $9$ $27$ $84$ $77$ $8$ $90$ $1$ mercial (retail)         ITE 820 $2148$ $46$ $31$ $77$ $95$ $91$ $1$ Food Restaurant         ITE 834 $1.695$ $74$ $71$ $95$ $91$ $1$ $1$ Food Restaurant         ITE 934 $1.695$ $74$ $71$ $95$ $91$ $1$ $1$ $1$ Food Restaurant         ITE 934 $1.695$ $74$ $71$ $145$ $51$ $1$	00	Senior Transitional Residential Care Facility	ITE 252	537	9	19	59	20	18	38
I         ITE B20         378         6         3         9         18         20           Intents         1,761         27         69         96         84         60         1           ments         ITE 221         549         27         69         96         84         60         1           ments         ITE 221         549         9         69         96         84         60         1           ments         ITE 820         153         9         27         36         27         8         17           mercial (retail)         ITE 820         2148         46         31         77         36         27         8         7         8         7         8         17         8         17         17         8         17<	<	Apartments	ITE 220	1,383	21	66	87	99	40	106
Intents         I,761         27         69         84         60         1           Intents         ITE 221         549         9         27         36         27         17         17           Intents         ITE 820         153         2         7         4         7         8         17           Intercial (retail)         ITE 820         153         2         1         29         94         7         8           Intercial (retail)         ITE 850         2,148         46         31         77         95         91         1           Sty Store         ITE 850         2,148         46         71         29         40         34         25         91         1           Food Restaurant         ITE 850         1,695         74         71         95         91         3           Food Restaurant         ITE 820         1,595         74         77         95         91         3         95         91         91         91           Intercial (retail)         ITE 820         1,359         219         120         102         222         156         148         31           Intercial (retail)	Ř	Retail	ITE 820	378	g	ю	σ	18	20	38
ments         ITE 221         549         9 $27$ 36 $27$ 17         8           nercial (retail)         ITE 820         153         2         2         4         7         8         7         8           nercial (retail)         ITE 820         153         2         2         4         7         8         7         8           sry Store         ITE 850         2,148         46         31         77         95         91         1           sry Store         ITE 830         2,148         46         31         77         95         91         1           cood Restaurant         ITE 934         1,695         74         71         145         61         57         1           cood Restaurant         ITE 820         1,359         21         13         34         66         71         1           ments         ITE 820         1,359         21         13         34         66         71         1           ments         ITE 221         836         14         41         55         42         26         71         1           ments         ITE 221 <td< td=""><td>Ĕ</td><td>otal</td><td></td><td>1,761</td><td>27</td><td>69</td><td>96</td><td>84</td><td>60</td><td>144</td></td<>	Ĕ	otal		1,761	27	69	96	84	60	144
Inercial (retail)         ITE 820         153         2         2         4         7         8           Inercial (retail)         TE 850         702         11         29         40         34         25           Shy Store         ITE 850         2;148         46         31         77         95         91         1           Food Restaurant         ITE 934         1,695         74         71         145         61         57         1           Food Restaurant         ITE 934         1,695         74         71         145         61         57         1           Food Restaurant         ITE 934         1,695         74         71         145         61         57         1           Food Restaurant         ITE 820         1,359         21         13         34         61         71         1           Inercial (retail)         ITE 820         1,359         21         13         34         66         71         1         1         1         1         1         1         1         1         1         3         36         36         31         36         36         36         36         36         1 <td>Apa</td> <td>Irtments</td> <td>ITE 221</td> <td>549</td> <td>σ</td> <td>27</td> <td>36</td> <td>27</td> <td>17</td> <td>4</td>	Apa	Irtments	ITE 221	549	σ	27	36	27	17	4
Since $702$ $712$ $712$ $29$ $40$ $34$ $25$ $2$ Siny Store $1F 850$ $2,148$ $46$ $31$ $77$ $95$ $91$ $1$ Food Restaurant $1F 830$ $2,148$ $46$ $31$ $77$ $95$ $91$ $1$ Food Restaurant $1F 830$ $1,695$ $74$ $71$ $145$ $61$ $57$ $1$ mercial (retail) $1F 820$ $1,359$ $21$ $120$ $102$ $222$ $156$ $148$ $3$ mercial (retail) $1F 820$ $1,359$ $21$ $13$ $34$ $66$ $71$ $1$ mertis $1F 221$ $838$ $14$ $41$ $55$ $42$ $26$ $71$ $1$ mertis $1F 221$ $1,991$ $33$ $99$ $132$ $99$ $97$ $26$ $1$ mertis $1F 820$ $1991$ $33$ $99$ $117$ $33$ $36$ $1$	Cor	mmercial (retail)	ITE 820	153	2	2	4	7	ω	15
Iny Store     ITE 850     2,148     46     31     77     95     91       Food Restaurant     ITE 934     1,695     74     71     145     61     57       Food Restaurant     ITE 934     1,695     74     71     145     61     57       Procid Restaurant     ITE 934     1,695     74     71     145     61     57       Procid (retail)     ITE 820     1,359     21     13     34     66     71       Mentis     ITE 221     838     14     41     55     42     26       Mentis     ITE 221     1,991     33     99     108     97       Mentis     ITE 221     1,991     33     99     132     99     62       Mentis     ITE 820     680     10     7     17     33     36	Total	a		702	5	29	40	34	25	59
Cood Restaurant         ITE 934         1,695         74         71         145         61         57           Food Restaurant         ITE 934         1,695         74         71         145         61         57           mercial (retail)         ITE 820         1,359         221         102         222         156         148         71           mercial (retail)         ITE 820         1,359         21         13         34         66         71         71           ments         ITE 221         838         14         41         55         42         26         71           ments         ITE 221         1,991         35         54         89         108         97         71           ments         ITE 820         680         10         33         99         132         99         97           ments         ITE 820         680         10         71         33         36         97	5 D	cery Store	ITE 850	2,148	46	31	11	95	91	186
Thercial (retail)         TE 820         1,359         120         102         222         156         148         3           Thercial (retail)         ITE 820         1,359         21         13         34         66         71         1         1           Thercial (retail)         ITE 820         1,359         21         13         34         66         71         1         1           Thercial (retail)         ITE 221         838         14         41         55         42         26         26           Thercial (retail)         ITE 221         1,991         33         99         132         99         62         1           Thercial (retail)         ITE 820         680         10         7         17         33         36         1	Fa	st Food Restaurant	ITE 934	1,695	74	71	145	61	57	118
mercial (retail)         ITE 820         1,359         21         13         34         66         71         1           menta         ITE 221         838         14         41         55         42         26         2           ments         ITE 221         838         14         41         55         42         26         2           ments         ITE 221         1,91         35         54         89         108         97         2           ments         ITE 221         1,991         33         99         132         99         62         1           nercial (retail)         ITE 820         680         10         7         17         33         36         1	Tot	<u>1</u>		3,843	120	102	222	156	148	304
ments         ITE 221         838         14         41         55         42         26           ments         2,197         35         54         89         108         97         2           ments         ITE 221         1,991         33         99         132         99         62         1           nercial (retail)         ITE 820         680         10         7         17         33         36         1	ပိ	immercial (retail)	ITE 820	1,359	21	13	34	99	12	137
ments         1         2,197         35         54         89         108         97           ments         ITE 221         1,991         33         99         132         99         62           nercial (retail)         ITE 820         680         10         7         17         33         36	Å	artments	ITE 221	838	14	41	55	42	26	89
ITE 221         1,991         33         99         132         99         62         1           ITE 820         680         10         7         17         33         36         36	Ĕ	Totai		2,197	35	54	68	108	97	205
ITE 820 680 10 7 17 33 36	Å	artments	ITE 221	1,991	33	66	132	66	62	161
	ő	mmercial (retail)	ITE 820	680	6	7	17	33	36	69
	Hotel	tel	ITE 310	3,503	117	80	197	130	121	251

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Table 5.1 Cumulative Projects List and Trip Generation Estimates

38 59 97 36 16 52 \$ 4 42 56 4 47 88 172 125 œ 4 5 93 297 6 8 1 Total PM Peak Hour 15 42 57 14 თ 23 1 16 23 16 24 4 66 65 ო 16 8 8 2 37 4 131 G 33 17 4 22  $\sim$ 29 26 26 33 26 23 49 106 8 166 ŝ 27 21 ß G 56 ~ Ē 99 97 g 4 34 35 co 3 37 3 12 46 172 35 75 65 Э თ 31 3 89 141 otal AM Peak Hour 4 N ŝ 9 118 ~ 23 37 23 25 26 25 26 25 8 4 ŝ 27 49 -20 21 ŏ 6 თ æ 52 60 N б 2 5 თ 2 16 35 19 54 2 60 8 16 2 8 2 <u>2</u> 473 1,160 154 528 136 653 1,238 3,370 1,193 1,039 446 600 517 517 468 985 2,132 110 564 132 1,171 139 Daily Trips<sup>2</sup> 687 ITE Code ITE 220 ITE 221 ITE 630 ITE 221 ITE 820 ITE 221 ITE 820 ITE 221 ITE 820 ITE 220 ITE 220 ITE 220 ITE 220 ITE 221 ITE 820 ITE 820 ITE 221 Commercial (retail) Commercial (retail) Commercial (retail) Project Description Health Clinic Apartments Retail Retail Total Total Total Total Tota! Total 77 DU 163 DU 19 DU 87 DU 82 DU 4,091 SF 97 DU 95 DU 95 DU 12,400 SF 392 DU 15 DU 142 DU 3,500 SF 18,000 SF 3,600 SF 32,807 SF 1900-1940 Long Beach Boulevard 3rd Street/Long Beach Boulevard/ 1205-1209 Walnut Avenue 1836-1852 Locust Avenue Address<sup>1</sup> 1500 E Anaheim Street / Broadway/Alamo Court 320 Alamitos Avenue 1112 Locust Avenue 135 Linden Avenue 230 W 3rd Street 500 W Broadway 425 E 5th Street 825 E 7th Street Project # ÷ 4 9 4 15 9 <u>5</u> 1 18 2 5 2 of 3

5/30/2018

**Cumulative Projects List and Trip Generation Estimates** Table 5.1

22       434 E 4th Street       43 DU       Apartments       ITE 200       959       5       10       1041	Project #	Address	<b>L</b>	Project Description <sup>1</sup>	ITE Code	Daily Trips <sup>2</sup>	×	AM Peak Hour <sup>2</sup>	2		PM Peak Hour <sup>2</sup>	
2         44E - 4th Street         49 Du         Apartments         1TE 270         359         5         16         23         17         23         17           3         1235 Long Beach Bouleward         160 DU         Senior Houang         1TE 272         562         11         21         32         22         22           4         150 W Ocean Bouleward         216 DU         Apartments         1TE 26         347         21         21         32         11         86           1         150 W Ocean Bouleward         216 DU         Apartments         1TE 20         1,436         22         99         111         86         73           5         1675 Samta Fe Avenue         2137 SF         Warehousing         1TE 20         1,414         24         74         96         73         73           6         655 Fine Avenue & 556 Pacific         21 70 U         Apartments         1TE 20         1,414         24         74         96         73           7         Avenue         1,400 SF         Reau         1/162         1         1<2         74         73         76         9         76         7           8         1,405 Lows Avenue         1,400 SF							<u>c</u>	Out	Total	5	Out	Total
3         1235 Long Beach Büuleward         160 DU         Seiner Houard         216 DU         Apartments         160 DU         Seiner Houard         216 DU         Apartments         160 DU         Seiner Houard         216 DU         Apartments         216 DU         Apartments         217 DU         218 DU <td>22</td> <td>434 E 4th Street</td> <td>49 DU</td> <td>Apartments</td> <td>ITE 220</td> <td>359</td> <td>'n</td> <td>18</td> <td>23</td> <td>17</td> <td>10</td> <td>27</td>	22	434 E 4th Street	49 DU	Apartments	ITE 220	359	'n	18	23	17	10	27
4         150 W Ocean Bouleward <sup>3</sup> 216 DU         Apartments         11         46         11         67         11         11         11         11         11         11         11         11         11         11	53	1235 Long Beach Boulevard	160 DU	Senior Housing	ITE 252	592	11	21	32	22	20	42
F         100	24	150 W Ocean Boulevard <sup>3</sup>	216 DU	Apartments		1,436	22	88	111	86	48	134
S5         E35 Fine Avenue & 636 Pacific         271 DU         Apartments         TE 221         1,474         24         74         98         73         73           Avenue         1,400 SF         Retail         TE 220         53         1         0         1         3         73           7         1400 SF         Retail         TE 220         53         74         99         76         76           7         1405 Lewis Avenue <sup>4</sup> 19 Units         Artist Studios         TE 220         139         27         74         99         76         76           9         1400 Long Beach Boulevard         64 DU         Apartments         TTE 220         139         27         7         9         76         76           9         1400 Long Beach Boulevard         64 DU         Apartments         TTE 220         468         7         9         76	25	1675 Santa Fe Avenue	21,377 SF	Warehousing	ITE 150	37	n	-	4	-	e	4
Avenue         1,400 SF         Retail         ITE 820         53         1         0         1         3         3           7         1405 Lewis Avenue <sup>4</sup> 19 Units         Total         1527         25         74         99         76         76           7         1405 Lewis Avenue <sup>4</sup> 19 Units         Artist Studios         ITE 220         139         2         7         99         76         76           8         1400 Long Beach Boulevard         64 DU         Apartments         ITE 220         468         7         22         29         27         4           9         2,100 SF         Retail         ITE 820         76         71         11         11         2         2         4         4           9         2515-2545 Atlantic Avenue         154 DU         Senior Living Facility         ITE 252         570         11         20         21         22         4	26	635 Pine Avenue & 636 Pacific	271 DU	Apartments	ITE 221	1,474	24	74	88	52	46	119
7       Total       Total       Total       Total       T       99       76       76         7       1405 Lewis Avenue <sup>4</sup> 19 Units       Artist Studios       ITE 220       139       2       7       99       76       7         8       1400 Long Beach Boulevard       64 DU       Apartments       ITE 220       468       7       22       29       22       24         9       2,100 SF       Retail       ITE 820       79       1       1       2       4       4         9       2515-2545 Atlantic Avenue       154 DU       Senior Living Facility       ITE 252       570       11       20       31       22       4       4         9       2515-2545 Atlantic Avenue       154 DU       Senior Living Facility       ITE 252       570       11       20       31       22       4		Avenue	1,400 SF	Retail	ITE 820	53	-	0	-	e	2	5
7       1405 Lewis Avenue <sup>4</sup> 19 Units       Artist Studios       ITE 220       139       2       7       9       7         8       1400 Long Beach Boulevard       64 DU       Apartments       ITE 220       468       7       22       29       22       4         8       1400 Long Beach Boulevard       64 DU       Apartments       ITE 220       468       7       22       29       22       4         9       2,100 SF       Retail       ITE 820       79       1       1       2       4       4         1       2,100 SF       Retail       ITE 820       79       1       1       2       4       4         1       2,100 SF       Retail       ITE 820       79       1       2       2       4       4       2       2       4       2       2       4       4       2       2       4       2       2       2       4       2       2       4       2       2       2       4       2       2       2       4       2       2       2       4       2       2       2       2       2       2       2       2       2       2       2 </td <td></td> <td></td> <td></td> <td>Total</td> <td></td> <td>1,527</td> <td>25</td> <td>74</td> <td>66</td> <td>76</td> <td>48</td> <td>124</td>				Total		1,527	25	74	66	76	48	124
8       1400 Long Beach Boulevard       64 DU       Apartments       ITE 220       468       7       22       29       22       4         8       1400 Long Beach Boulevard       64 DU       Apartments       ITE 220       468       7       22       29       22       4         2,100 SF       Retail       ITE 820       79       1       1       2       4         7       210 SF       Retail       ITE 820       79       11       2       4         9       2515-2545 Atlantic Avenue       154 DU       Senior Living Facility       ITE 252       570       11       20       31       26       13         3       2515-2545 Atlantic Avenue       154 DU       Senior Living Facility       ITE 252       570       11       20       31       22       13       22	27	1405 Lewis Avenue <sup>4</sup>	19 Units	Artist Studios	ITE 220	139	2	2	σ	2	4	1
2,100 SF         Retail         ITE 820         79         1         1         2         4           Potat         Totat         Totat         547         8         23         31         26           Potat         Totat         Totat         Totat         1         20         11         20         31         26           Potat         Setior Living Facility         ITE 252         570         11         20         31         22           Potat         Setior Living Facility         ITE 252         570         11         20         31         22         13	28	1400 Long Beach Boulevard	64 DU	Apartments	ITE 220	468	2	22	29	22	14	36
Total         Total         Total         547         8         23         31         26           3         2515-2545 Atlantic Avenue         154 DU         Senior Living Facility         ITE 252         570         11         20         31         22           3         2515-2545 Atlantic Avenue         154 DU         Senior Living Facility         ITE 252         570         11         20         31         22         12			2,100 SF	Retail	ITE 820	62	-	-	2	4	4	8
3         2515-2545 Atlantic Avenue         154 DU         Senior Living Facility         ITE 252         570         11         20         31         22           3         2515-2545 Atlantic Avenue         154 DU         Senior Living Facility         ITE 252         570         11         20         31         22         12				Total		547	ω	23	31	26	18	44
35,418 752 1,283 2,035 1,616	29	2515-2545 Atlantic Avenue	154 DU	Senior Living Facility	ITE 252	570	11	20	31	22	18	40
35,418 752 1,283 2,035 1,616				_								
	Total					35,418	752	1,283	2,035	1,616	1,271	2,887

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

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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

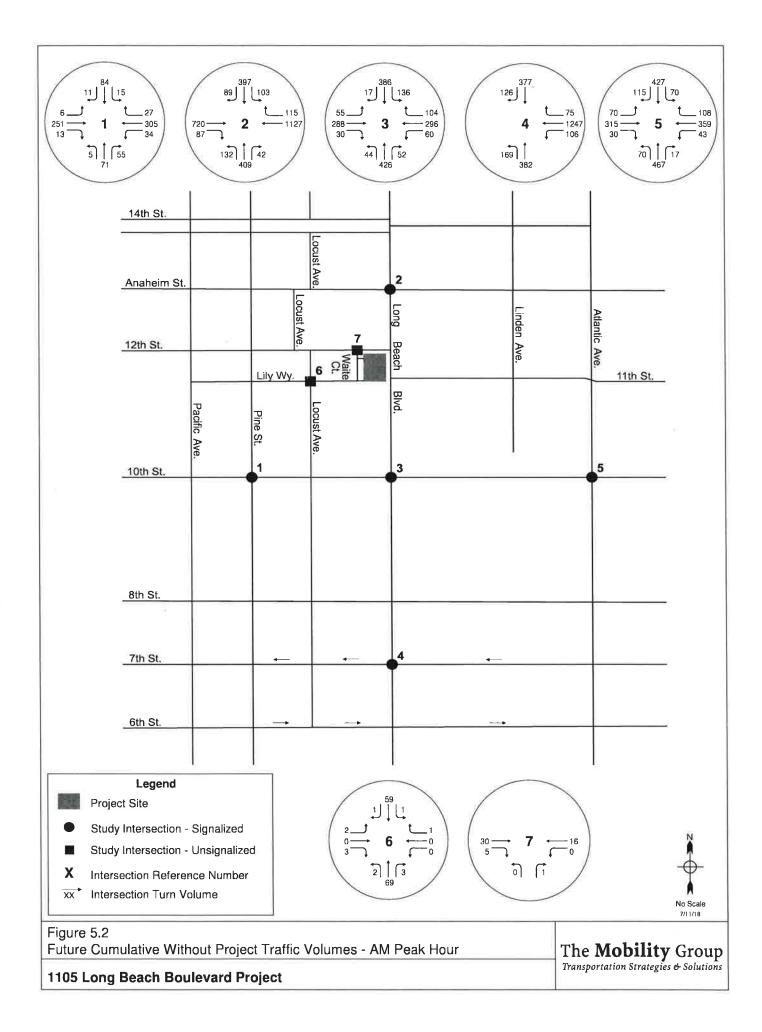
The Future Cumulative Without Project traffic forecasts were evaluated to determine the V/C ratio and LOS for the analyzed intersections for both the AM peak hour and the PM peak hour. The results are shown in Table 5.2 and Table 5.3, which summarize the intersection levels of service calculated for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

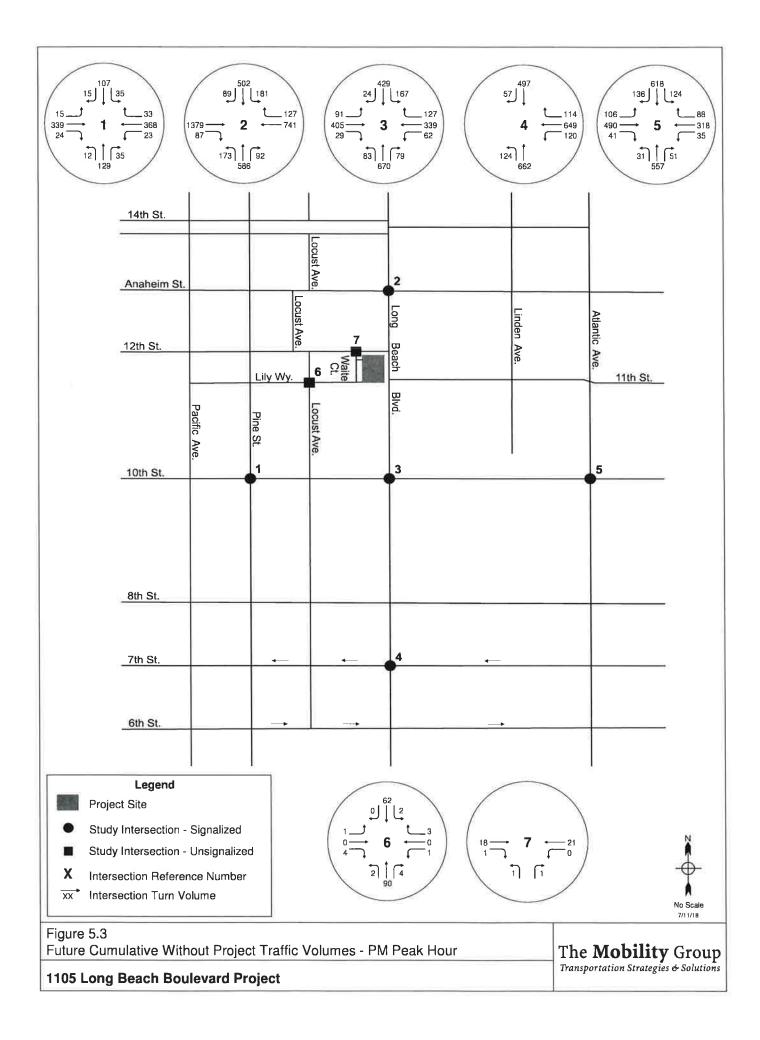
#### AM Peak Hour

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.





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

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

Note:

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

# Table 5.3Future Cumulative Without Project Conditions - Intersection Level of Service<br/>PM Peak Hour

No.	Intersection	Intersection Type	Existing C	onditions	Future V Project C	
			V/C or (Delay)	LOS	V/C or (Delay)	LOS
1	Pine St. & 10th St.	Signalized	0.461	А	0.485	А
2	Long Beach Blvd. & Anaheim St.	Signalized	0.653	В	0.730	С
3	Long Beach Blvd. & 10th St.	Signalized	0.679	В	0.749	С
4	Long Beach Blvd. & 7th St.	Signalized	0.408	А	0.468	Α
5	Atlantic Ave. & 10th St.	Signalized	0.669	В	0.721	С
6	Locust Ave. & Lily Way	Unsignalized [1]	(8.8)	A	(8.9)	Α
7	Waite Ct. & 12th St.	Unsignalized [1]	(8.5)	А	(8.5)	А

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

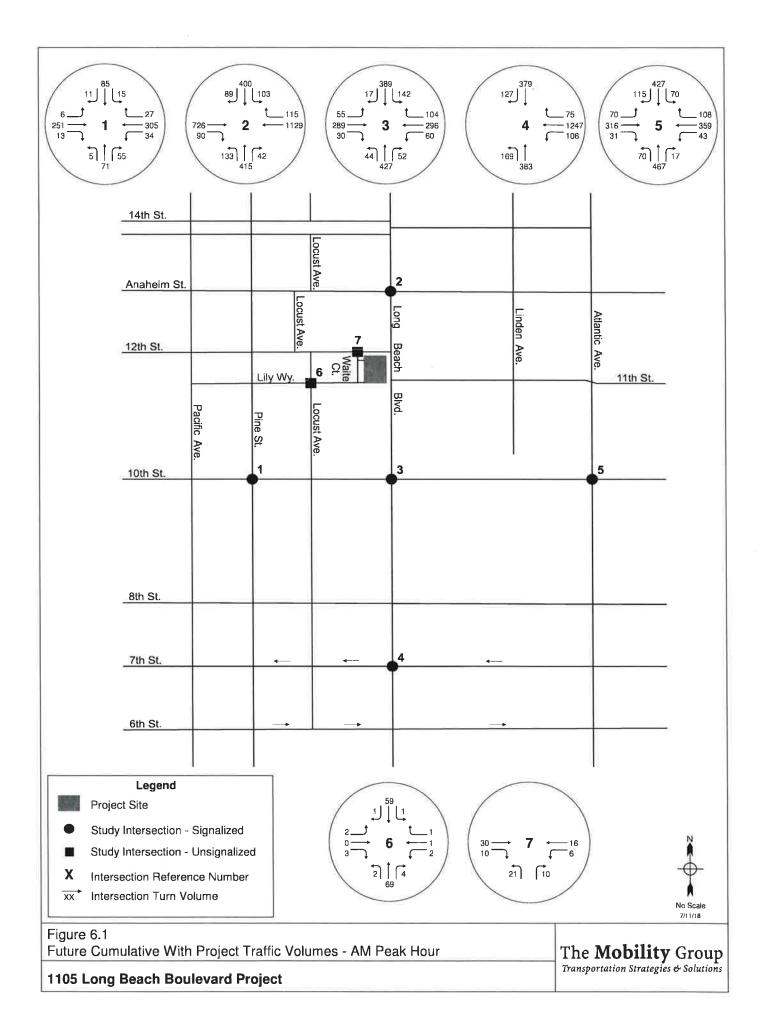
The analysis summarized in Table 6.1 indicates that for the AM peak hour, the Project would not cause a change in the level of service at any intersection, and that the increases in volume/capacity (V/C) ratios would in all cases be less than the threshold for a significant impact to occur. At both of the alley intersections serving the Project (Waite Court at 12<sup>th</sup> 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).

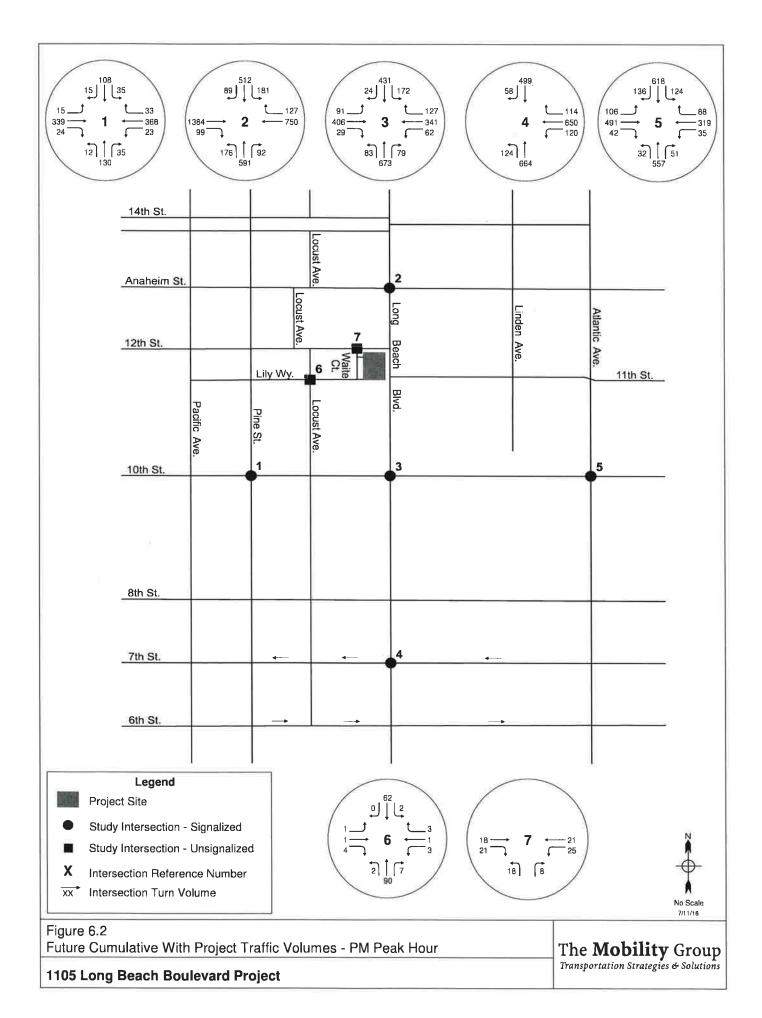
#### PM Peak Hour

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  $12^{th}$  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





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

#### Table 6.1 Future Cumulative With Project Conditions - Intersection Level of Service AM Peak Hour

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 V	Without	Future	e With	Change	Significant
			Pro	ject	Pro	ject	in V/C	Impact
			Cond	itions	Cond	itions	(Delay)	
			V/C or	LOS	V/C or	LOS		
			(Delay)		(Delay)			
1	Pine St. & 10th St.	Signalized	0.485	Α	0.486	А	0.001	No
2	Long Beach Blvd. & Anaheim St.	Signalized	0.730	С	0.735	С	0.005	No
3	Long Beach Blvd. & 10th St.	Signalized	0.749	С	0.753	С	0.004	No
4	Long Beach Blvd. & 7th St.	Signalized	0.468	Α	0.469	Α	0.001	No
5	Atlantic Ave. & 10th St.	Signalized	0.721	С	0.721	С	0.000	No
6	Locust Ave. & Lily Way	Unsignalized [1]	(8.9)	A	(9.3)	Α	(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.

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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 – Numbe	r of Trips Added by Project
-----------	-------------------------------	-----------------------------

Location	No. of Trips Ad	dded 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.

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

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

### 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

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**Transit Trips Generated by The Project** Table 6.5

	Base (Unadjusted) <sup>1</sup> Vehicle Trips	ldjusted) <sup>1</sup> e Trips	Person Trips <sup>2</sup>	Trips <sup>2</sup>	% By Transit <sup>3</sup>	ransit <sup>3</sup>				Transit Trips		
AM Peak		PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AN	AM Peak Hour	ur	PI	PM Peak Hour	ur
нош		нош	поц	mori	лоп	тоц	Total	In <sup>4</sup>	Out <sup>4</sup>	Total	$\ln^4$	Out <sup>4</sup>
	_											
-4		-17	9	-24	5%	5%	0	0	0	2	0	-
0	_	0	0	0	%0	%0	0	0	0	0	0	0
44		53	62	74	5%	5%	ŝ	1	2	4	3	2
4		39	9	55	5%	5%	0	0	0	ε	2	1
VV		75	63	105	1			-	~	9	4	6
++		<i>C1</i>	70	101			,	-	1	>	•	1

From Table 3.1 - Trip Generation Estimates.
 Conversion factor of 1.4 from vehicle trips to person trips, per CMP guidelines.
 Transit percentage from Table 3.1 - Trip Generation Estimates.
 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

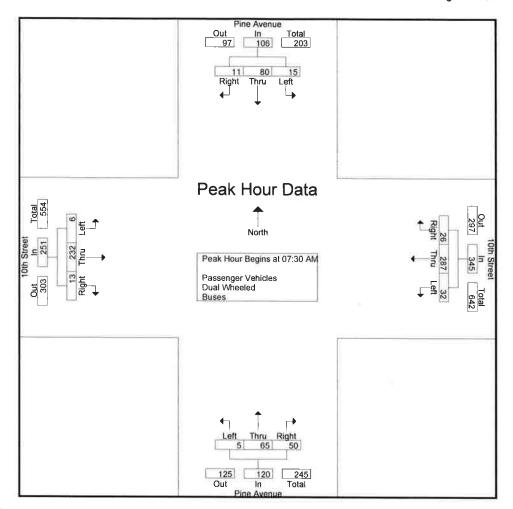
City of Long Beach N/S: Pine Avenue E/W: 10th Street Weather: Clear

 File Name
 01\_LBC\_Pine\_10th AM

 Site Code
 12818455

 Start Date
 6/5/2018

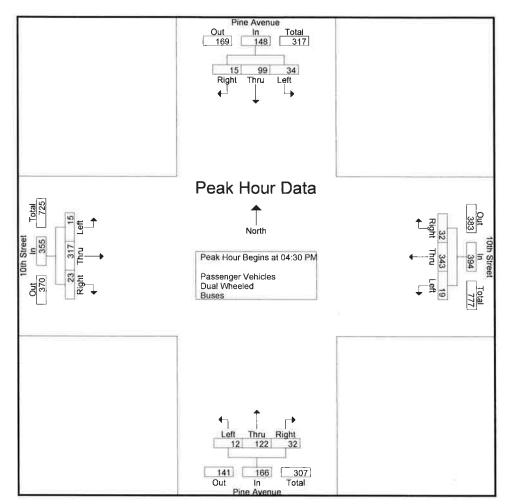
 Page No
 2



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 AN	1			07:30 AN	1			07 30 AN	1		
+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	õ	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

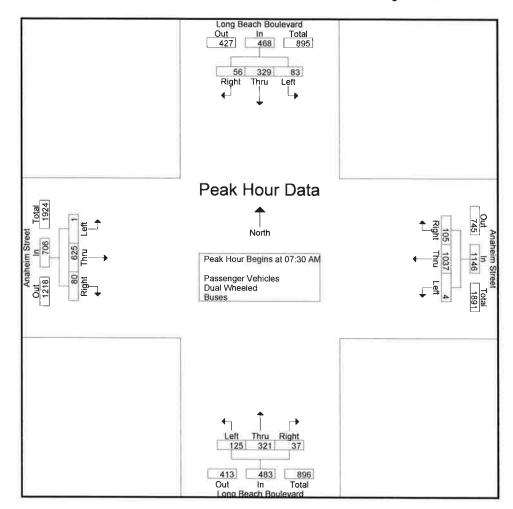
City of Long Beach N/S: Pine Avenue E/W: 10th Street Weather: Clear File Name 01\_LBC\_Pine\_10th PM Site Code 12818455 Start Date 6/5/2018 Page No 2



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	1			04:30 PN				03:15 PN	1			04 45 PM	1		
+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

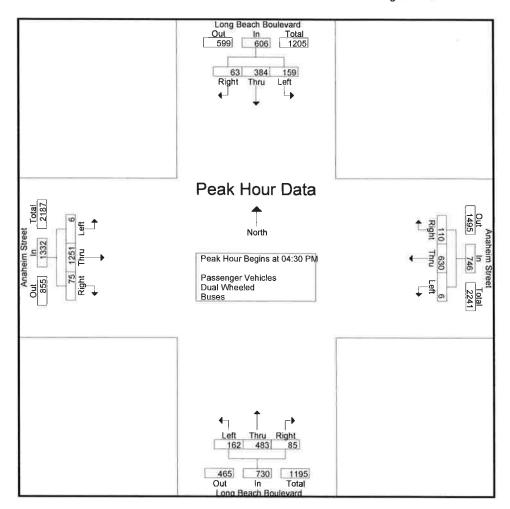
City of Long Beach N/S: Long Beach Boulevard E/W: Anaheim Street Weather: Clear File Name: 02\_LBC\_Long Beach\_Anaheim AMSite Code: 12818455Start Date: 6/5/2018Page No: 2



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

	07:45 AN	1			07 15 AN	1			09:00 AN	A			09:00 AN			
+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

City of Long Beach N/S: Long Beach Boulevard E/W: Anaheim Street Weather: Clear File Name02\_LBC\_Long Beach\_Anaheim PMSite Code12818455Start Date6/5/2018Page No2



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

	03:30 PN				03:00 PN	1			04:45 PN	1			04.15 PM	1		
+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

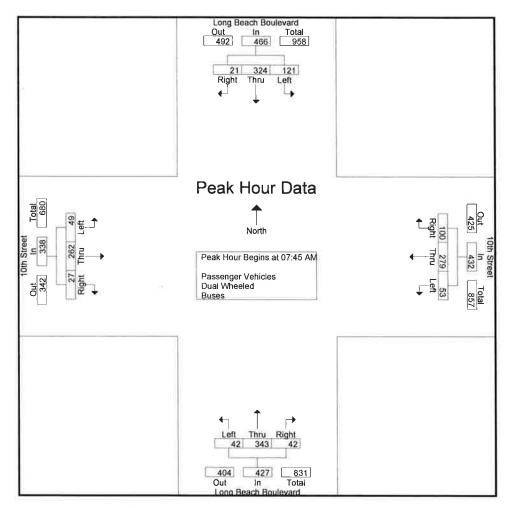
City of Long Beach N/S: Long Beach Boulevard E/W: 10th Street Weather: Clear

 File Name
 : 03\_LBC\_Long Beach\_10th AM

 Site Code
 : 12818455

 Start Date
 : 6/5/2018

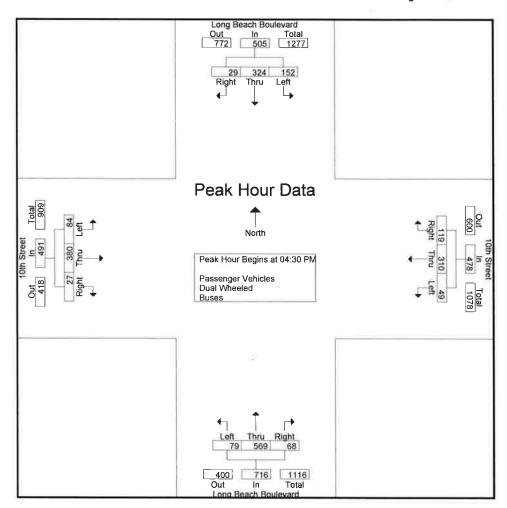
 Page No
 : 2



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 AN	1			09:00 AN	4			07:30 AN	1		
+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

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:

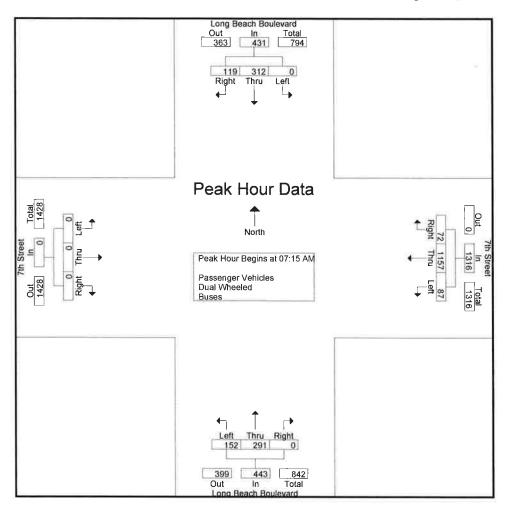
	05:00 PN				04:30 PN	1			04:30 PA	A			03:15 PN	1		
+0 mins.	39	78	11	128	8	80	23	111	15	162	13	190	22	107	14	143
+15 mins.	37	93	9	139	16	81	30	127	18	135	20	173	18	88	5	111
+30 mins.	39	71	15	125	9	79	29	117	27	128	17	172	14	107	11	132
+45 mins.	37	98	13	148	16	70	37	123	19	144	18	181	16	109	7	132
Total 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

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	1 - 7 F			07:15 AN	Λ			08.00 AM	1			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

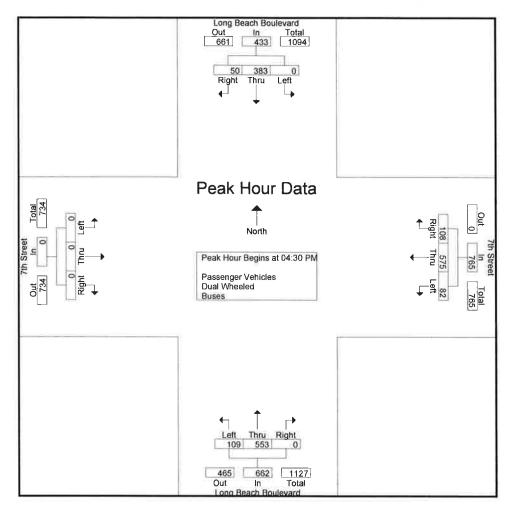
City of Long Beach N/S: Long Beach Boulevard E/W: 7th Street Weather: Clear

 File Name
 : 04\_LBC\_Long Beach\_7th PM

 Site Code
 : 12818455

 Start Date
 : 6/5/2018

 Page No
 : 2

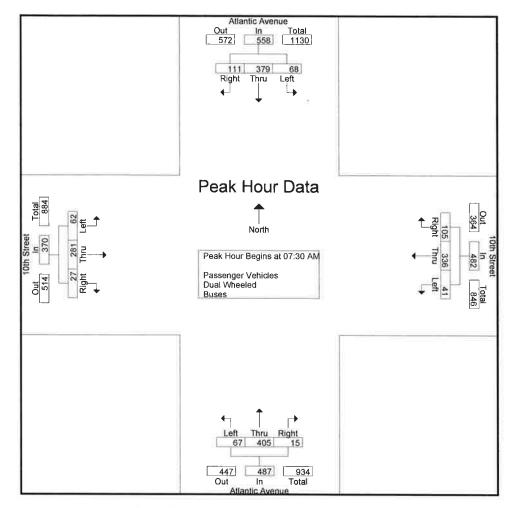


Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

	04 00 PM				04:15 PN	1			04:30 PN	1			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

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

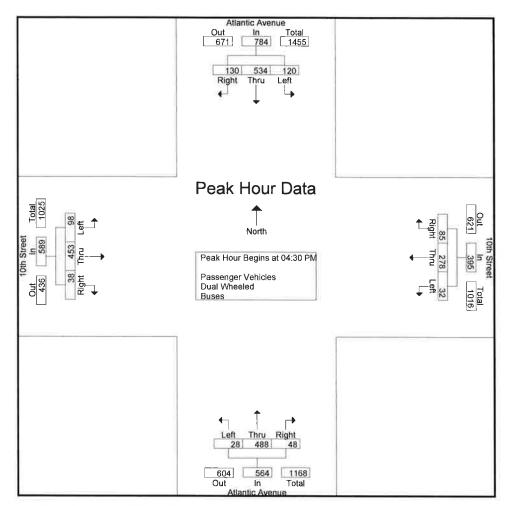
 $(\mathbf{r})$ 



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

	08:15 AN	1			07:15 AM				07:15 AN	4			09:00 AN	1		
+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

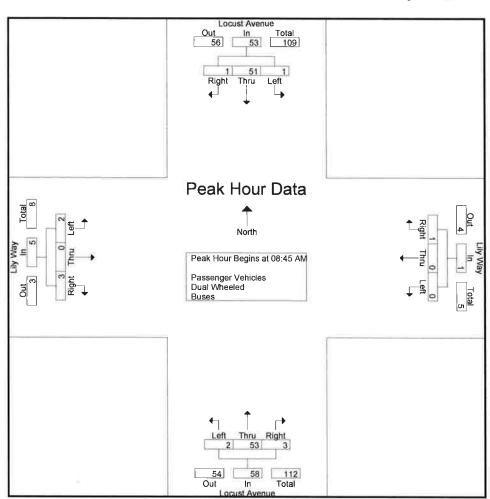
City of Long Beach N/S: Atlantic Avenue E/W: 10th Street Weather: Clear File Name : 05\_LBC\_Atlantic\_10th PM Site Code : 12818455 Start Date : 6/5/2018 Page No : 2



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

	04:30 PN	1			03:15 PN	1			04 45 PN	1			03:45 PN	1		
+0 mins.	31	150	35	216	7	70	20	97	8	130	11	149	30	116	16	16
+15 mins.	22	114	30	166	6	72	27	105	9	137	11	157	28	123	7	15
+30 mins.	40	139	31	210	9	73	22	104	6	119	19	144	18	101	13	13
+45 mins.	27	131	34	192	10	85	28	123	4	103	17	124	19	113	5	13
Total Volume	120	534	130	784	32	300	97	429	27	489	58	574	95	453	41	58
% 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	.90

> File Name 06\_LBC\_Locust\_Lily Way AM Site Code 12818455 Start Date 6/5/2018 Page No 2

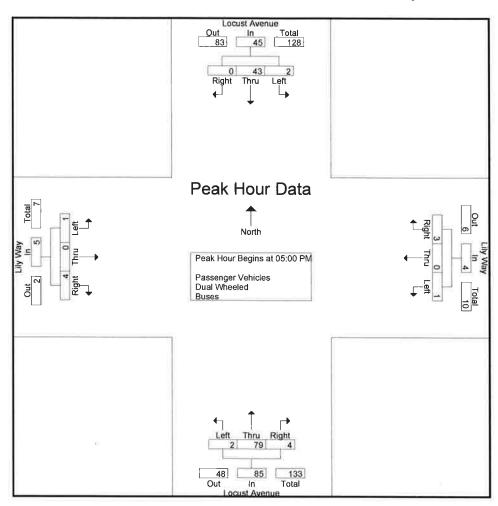


Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1 Peak Hour for Each Approach Begins at:

	08:30 AM				07:00 AM	1			08:45 AM	٨			08:15 AN			
+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	Ó	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

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:

					**				1							
	03 45 PM				03:00 PM				05:00 PN	A			04 45 PN	1		
+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

City of Long Beach N/S: Locust Avenue E/W: Lily Way Weather: Clear

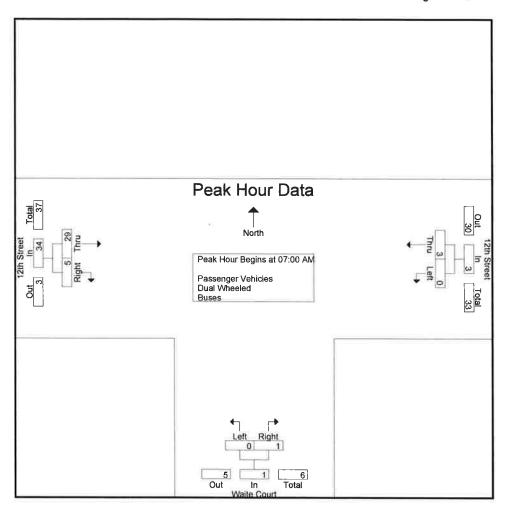
City of Long Beach N/S: Waite Court E/W: 12th Street Weather: Clear

 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

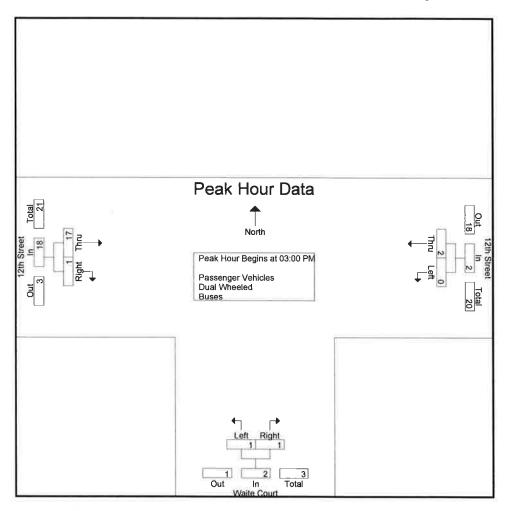
City of Long Beach N/S: Waite Court E/W: 12th Street Weather: Clear

 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

Existing Weekday -	AM	Thu Jul 5, 2018 14:46:23	Page 2-1
		***************************************	

					lxisti	ng Beac ng AM	h					
					7-5-	-18						
	-		Level O			~		<b>x</b>				
ICU 1			ycle Le ******									******
Intersection	#551	Pine	& 10th									
Cycle (sec): Loss Time (se Optimal Cycle		1	00			Critic	al Vol	./Car	5.(X):		0.3	381
Loss Time (se	ec):		10			Averag	e Dela	ay (se	ec/veh)	:	XXXX	XXX
Optimal Cycle	+++++,		28	*****	. <b></b>	Level	Of Sei	vice:			. بار بار بار بار ب	A
Approach:											est Bo	
Movement:	ь -	- T	– R	L -	- T	– R	L -	- T	– R	L -	- т	– R
										1		
Control:	I	Permi	tted	I	Permit	ted	I	Permit	ted	I	?ermi	tted
Rights:	0	Incl	ude	0	Inclu	ade	0	Inclu	ıde	0	Inclu	ıde
Min. Green: Y+R:	1 0	1 0	1 0	1 0	1 0	0	1 0	1 0	1 0	1 0	1 0	0 4.0
Lanes:												
							1			1		
Volume Module			1	1			1		1	'		1
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
Initial Bse:		65		15	80		6	232	13	32	287	26
Added Vol:		0		0	0	0	0		_	0	0	0
PasserByVol:				0	0		0	-	0	0	0	0
Initial Fut:				15	80	11	6	232	13	32	287	26
User Adj: PHF Adj:					1.00	1.00		1.00			1.00	
PHF Adj: PHF Volume:				1.00	1.00	1.00	1.00	232	1.00 13	1.00	1.00	1.00 26
Reduct Vol:				10	00	0		232			207	
Reduced Vol:				15		-	6	-	+		287	
PCE Adj:				-	1.00	1.00		1.00			1.00	
MLF Adj:					1.00	1.00		1.00			1.00	
FinalVolume:				15			6		13		287	
Saturation F.												
Sat/Lane:					1600			1600			1600	
Adjustment:					1.00				1.00		1.00	
Lanes: Final Sat.:					0.88	0.12 193			0.05 85		0.92	
Final Sat.:											1467	
Capacity Ana							(		- 1	<b>-</b>		
Vol/Sat:				0.01	0.06	0.06	0.00	0.15	0.15	0.02	0.20	0.20
Crit Moves:			010/				****				****	
********	* * * * *	* * * * *	******	* * * * * *	****	* * * * * * *	*****	* * * * *	******	* * * * *	****	******

Traffix 8.0.0715 (c) 2008 Dowling Assoc. Licensed to THE MOBILITY GROUP

Existing Wee}	kday -	AM T	nu Jul	5, 20	)18 14:	46:23				Page	3-1
					ng Beac .ng AM	h					
				7-5-						22	
		Taual	25.0								
ICU 1	(Loss as	s Cycle L			Computa thod (F				rnativ	ze)	
*****											*****
Intersection *********					*****	* * * * * *	****	*****	*****	*****	*****
Cycle (sec):		100			Critic					0.5	
Loss Time (se		10			Averag	e Dela	ay (se	ec/veh)	:	XXXX	
Optimal Cycle		34		6 als als de 1 als de 1	Level						A
		n Bound						ound		est Bo	
Movement:	L –	T – R	L ·	- Т	– R	L -	- T	- R	L -	- Т	- R
Control:		tected									
Rights:		nclude		Inclu			Inclu			Inclu	
Min. Green:		0 0			0			0		0	0
Y+R:		4.0 4.0					4.0	4.0	4.0	4.0	4.0
Lanes:		1 1 0			0 1			1 0		) 2	
Volume Module											
Base Vol:		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;		321 37	83	329	56	0	625	80	0	1037	105
Added Vol:	0	0 0	0	0	0	0	0	0	0	-	0
PasserByVol:		0 0	0	0	0	0	0	0	0	0	0
Initial Fut: User Adj:	1.00 1.	321 37 .00 1.00	83	329	56	1 00	625	80		1037	105
PHF Adj:	1.00 1.			$1.00 \\ 1.00$	$1.00 \\ 1.00$		1.00	1.00		1.00	1.00
PHF Volume:		321 37	83	329	56	1.00	625	80		1037	105
	0	0 0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125 3	321 37	83	329	56	0	625	80	0	1037	105
PCE Adj:	1.00 1.			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00 1.			1.00	1.00		1.00	1.00		1.00	1.00
FinalVolume:		321 37	83	329	56	~	625	80	-	1037	105
Saturation F											
Sat/Lane:	1600 10	- 00	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.			2.00	1.00		2.66			2.72	0.28
Final Sat.:				3200	1600		4255	545		4359	441
Capacity Ana											
	-	.11 0.11	0 05	0.10	0.04	0.00	0.15	0.15	0 00	0.24	0.24
Crit Moves:	****	v	0.00	****	V. VI	****	0.10	0.10	0.00	****	0.24
*****	* * * * * * * *	*****	*****	* * * * * *	*****	****	* * * * *	* * * * * * *	****	* * * * *	* * * * * *

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						ng Beac ing AM -18	h					
******	* * * * * *	as Cy *****	cle Le *****	ngth %	s) Met	Computa thod (F	uture	Volur	ne Alte:	rnativ	7e)	*****
Intersection #553 Long Beach & ************************************				* * * * *	****	Critic Averag Level	al Voi e Dela Of Sei	l./Cap ay (se rvice:	p.(X): ec/veh) :	0.510		
Approach: Movement:	Noi L -	rth Bo - T	ound - R	Sou L -	ith Bo - T	ound – R	Ea L -	ast Bo - T	ound - R	We L -	est Bo - T	ound - R
Control: Rights: Min. Green: Y+R: Lanes:	P1 0 4.0 1 (	rotect Inclu 4.0 0 1	ed ide 0 4.0 1 0	P1 0 4.0 1 (	rotect Inclu 0 4.0	2ed 1de 0 4.0 1 0	0 4.0 1 (	Permit Inclu 0 4.0	tted ude 0 4.0 1 0	0 4.0 1 (	ermin Inclu 0 4.0	tted ude 0 4.0 0 1
Volume Module Base Vol: Growth Adj: Initial Bse: Added Vol: PasserByVol: Initial Fut: User Adj: PHF Adj: PHF Volume: Reduct Vol: Reduced Vol: PCE Adj: MLF Adj: FinalVolume:	42 1.00 42 0 42 1.00 1.00 42 0 42 1.00 1.00 42 1.00 42 0 42 0 42 0 42 0 42 0 42 0 42 0 42 0 42 0 42 0 42 42 0 42 42 0 42 42 0 42 42 42 42 42 42 42 42 42 42	343 1.00 343 0 0 343 1.00 1.00 343 1.00 1.00 343	$\begin{array}{c} 42\\ 1.00\\ 42\\ 0\\ 42\\ 1.00\\ 1.00\\ 42\\ 0\\ 42\\ 1.00\\ 1.00\\ 42\end{array}$	121 1.00 121 0 0 121 1.00 1.00 121 1.00 1.00	324 1.00 324 0 324 1.00 1.00 324 0 324 1.00 1.00 324	16 1.00 16 1.00 16 1.00 16 1.00 16 1.00 1.00	49 1.00 49 0 0 49 1.00 1.00 49 1.00 1.00 49	262 1.00 262 0 262 1.00 1.00 262 0 262 1.00 1.00 262	$\begin{array}{c} 27\\ 1.00\\ 27\\ 0\\ 0\\ 27\\ 1.00\\ 1.00\\ 27\\ 0\\ 27\\ 1.00\\ 1.00\\ 27\end{array}$	53 1.00 53 0 0 53 1.00 1.00 53 1.00 1.00 53	279 1.00 279 0 279 1.00 1.00 279 0 279 1.00 1.00 279	100 1.00 00 100 1.00 1.00 1.00 1.00 1.0
Saturation Fi Sat/Lane:	low Ma 1600 1.00 1.00 1600	odule: 1600 1.00 1.78 2851	1600 1.00 0.22 349	1600 1.00 1.00 1600	1600 1.00 1.91 3049	1600 1.00 0.09 151	1600 1.00 1.00 1600	1600 1.00 0.91 1451	1600 1.00 0.09 149	1600 1.00 1.00 1600	1600 1.00 1.00 1600	1600 1.00 1.00 1600
Capacity Ana Vol/Sat: Crit Moves:	lysis		.e:		0.11		0.03		0.18	,	0.17	

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Existing week				5, 20	10 14.					raye	J 1
				Ixisti	ng Beac ng AM	h					
				7-5-	-18						
		Level O									
ICU 1	(Loss as C										
Intersection	#554 Long	Beach	& 7th								
Cycle (sec):		00			Critic					0.	
Loss Time (se	ec):		Average Delay (sec/veh): xxxxx								
Optimal Cycle				Level						А	
*********											
Approach: Movement:	North B L - T				– R					st B	ound - R
			1	- 1 	- K		- I 	- R	L -	- I	- R
Control:	Protec	ted	' Pi	cotect	ed	I	Permit	ted	E	Permi	
Rights:	Incl	ted ude		Inclu	ıde		Inclu	ıde		Incl	
Min. Green:	0 0		0		0		0	0	0	0	0
Y+R:	4.0 4.0			4.0				4.0		4.0	
Lanes:	1 0 2				0 1			0 0			0 1
 Volume Module						1					
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		
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	-
Initial Fut:		0	0	312	119	0	0	0		1157	
User Adj: PHF Adj:	1.00 1.00	1.00		1.00	1.00 1.00		1.00	1.00	1.00		
PHF Volume:	152 291	0.11	1.00	312	119	1,00	1.00	1.00	1.00	1157	
Reduct Vol:	0 0	-	0	012	0	0	õ	Ő	0	0	
Reduced Vol:	152 291	0	0	312	119	0	0	0		1157	
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
2	1.00 1.00			1.00	1.00		1.00	1.00	1.00		
FinalVolume:		-	0	312	119	0	0	0	-	1157	
Saturation F					[						
Sat/Lane:	1600 1600		1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:				1.00	1.00		1.00	1.00	1.00		
Lanes:	1.00 2.00			2.00	1.00		0.00	0.00	1.00		
Final Sat.:				3200	1600	0	0	0	1600		1600
Capacity Anal	-		0 00	0 10	0 07	0 00	0 00	0.00	0.05	o o ·	0 07
Vol/Sat: Crit Moves:	0.10 0.09	0.00	0.00	U.10 ****	0.07	0.00	0.00	0.00	0.05	0.24 ****	0.05
	*****	******	*****		* * * * * * *	*****	*****	* * * * * * *	*****		*****

Existing Wee	kday -	- AM	Th	u Jul	5, 20	18 14:	46:23				Page	6-1
					Existi	2	h					
					7-5-	- •						
		 T	evel 0	f Serv	vice C		tion F					
ICU 1	(Loss					*		-	ne Alte	rnativ	re)	
*****	****	* * * * * *	*****	* * * * * *	*****	*****	* * * * * *	*****	*****	* * * * * *	* * * * *	*****
Intersection												
**********	* * * * * *			* * * * * *	*****					*****		
Cycle (sec): Loss Time (se		10	.0			Critic			ec/veh)		0.0 xxxx	
Optimal Cycle			1			Level				•	~~~/	B
*******				*****						* * * * * *	****	
Approach:	No	rth Bc	und	Sou	ith Bo	und	Εā	ast Bo	ound	We	est Bo	ound
Movement:	L ·	- Т	– R	L -	- Т	- R	L -	- Т	– R	L -	·Т	– R
Control:	]	Permit		I			I		ted	E		
Rights:	0	Inclu		0	Inclu		0	Inclu		0	Inclu	
Min. Green: Y+R:		4.0	0	-	0	0			0 4.0		0	0 4.0
Lanes:			1 0			1 0			1 0			4.0 1 0
Volume Module	: e::									1		
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
Initial Bse:		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: Initial Fut:		0 405	0 15	0 68	0 379	0 111	0 62	0	0	0	0	0
	1.00		1.00		1.00	1.00		281 1.00	27 1.00	41 1.00	336	$105 \\ 1.00$
PHF Adj:		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
FinalVolume:			15	, 68	379	111	62		27	41		105
Saturation F												
Sat/Lane:		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
Lanes:			0.07		1.55	0.45		0.91	0.09		0.76	0.24
Final Sat.:		3086	114		2475	725		1460	140		1219	381
										1		
Capacity Ana	-					-	<b>.</b> -	_		_	_	_
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:		*****	. <b></b>	****		. <b></b>		. ـ ل ـ اب باب با	****			<b>ццц</b> цц

		I	Level (	)f Serv	vice (	Computa							
20	)00 нс	CM Uns	signali	zed Me	ethod	(Futur	e Volu	une Al	lternat	ive)			
* * * * * * * * * * * * * *					****	*****	*****	* * * * *	******	*****	* * * * *	****	
Intersection **************													
Average Delay	y (sec	c/veh)	:	0.6		Worst	Case I	Level	Of Sei	vice:	A[ 8	8.8]	
Approach: Movement:	L -	- Т	– R	L -	- Т	– R	ь- Б	азсь( - Т	– R	L -	- T	– R	
	Unc			Unc	contro	olled					Stop Sign		
Rights:	0		ıde	6	Inclu	ıde		Inclu	ıde		Inclu	ıde	
Ganes:	0 (	) 1!	0 0	0 (	J 1!	υ Ο .	0 (	) 1!	0 0	0 (	) ()	0 1	
Jolume Module													
Base Vol:		53	3	1	51	1	2	0	З	0	0		
Growth Adj:								-	-				
initial Bse:						1.00					0	1.0	
							0	0			-		
dded Vol: PasserByVol:	Õ	Ő	0	0	0	0	0	Ő	0	0			
nitial Fut:				1			2		3		0		
Jser Adj:	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			
PHF Volume:	2	53	3	1	51	1	2	0	3	0	0		
Reduct Vol:	0	0		0		0	0	0	0	0	0		
FinalVolume:	2	53	3	1	51	1	2	0	3	0	0		
Critical Gap													
Critical Gp:	4.1	XXXX	XXXXX	4.1	XXXX	XXXXX	7.1	6.5	6.2	xxxxx	xxxx	6.	
followUpTim:													
Capacity Modu							[						
Inflict Vol:		XXXX	xxxxx	56	XXXX	XXXXX	113	114	52	xxxx	vvvv	5	
Potent Cap.:								780			XXXX		
fove Cap.:											XXXX		
/olume/Cap:	0.00	XXXX	XXXX	0.00	XXXX	XXXX	0.00	0.00	0.00	XXXX	XXXX	0.0	
evel Of Serv													
Way95thQ:				0 0	xxxv	*****	VVVV	vvvv	<b>***</b> **	~~~~	~~~~	0.	
Control Del:													
OS by Move:				, A		*					*	0.	
Aovement:						- RT						– R1	
Shared Cap.:									XXXXX				
SharedQueue:													
									XXXXX				

\* \* \* \* \* \* Shared LOS: \* \* А \* ApproachDel: 8.8 8.5 XXXXXX XXXXXX ApproachLOS: \* \* Α А \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* \* Note: Queue reported is the number of cars per lane. \*\*\*\*\*

Existing wee	каау .	- AM	Tr	nu JUL	5, 20	118 14:	46:23				Page	8-1
					Exist	ng Beac ing AM	ch					
					7-5-							
			Level (			-		-				
2			signali								باب باب باب باب با	
Intersection												
****					*****	******	*****	*****	*****	*****	*****	*****
Average Dela ********												
Approach: Movement:	L	- т	ound - R	L -	- Т	- R	L -	- T	– R	L -	est Bo - T	- R
			ign							Una		
Rights:	÷					ıde		Incl			Inclu	ude
Lanes:			0 1			0 0					0 1	
Volumo Modul												
Volume Modul Base Vol:	e: 0	0	1	0	0	0	0	29	5	0	5	0
Growth Adj:	-	-	1.00		1.00	1.00		1.00		-	1.00	
Initial Bse:		0	1	0	0	0	0	29	5	0	5	
Added Vol:	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	1	0	0	0	0	29	5	0	5	0
2	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	
PHF Volume: Reduct Vol:	0	0	1 0	0	0	0	0	29 0	5 0	0	5 0	-
FinalVolume:			1	0	0	0	0	29	5	0	5	*
	1											
Critical Gap												
Critical Gp:												XXXXX
FollowUpTim:												xxxxx
Capacity Mod				11			[]					
Cnflict Vol:		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.:			1048	XXXX	XXXX	XXXXX	XXXX	XXXX	XXXXX	XXXX	XXXX	XXXXX
Volume/Cap:			0.00		XXXX			XXXX			XXXX	
Level Of Ser				11								
2Way95thQ:				VVVV	~~~~	VVVVV	WWWW			******		
Control Del:	XXXXX	XXXX	8.4									XXXXXX
LOS by Move:		*	A				*	*	*	*	*	
Movement:		- LTR	_		- LTR	- RT	LT	- LTR	- RT	LT	- LTR	– RT
Shared Cap.:	XXXX	XXXX	XXXXX	XXXX	XXXX	XXXXX	XXXX					xxxxx
SharedQueue:	XXXXX	XXXX	XXXXX	XXXXX	XXXX	xxxxx	XXXXX	XXXX	XXXXX	XXXXX		
Shrd ConDel:												
Shared LOS:	*	*	*	*		*	*	*	*	*		
ApproachDel: ApproachLOS:		8.4 A		X	××××× *		х	XXXXX *		X	XXXXX *	
Approachios:				*****		*****	*****		*****	* * * * * *		
Note: Queue												
****									*****	*****	****	*****

Level Of Service Computation ReportICU 1 (Loss as Cycle Length %) Method (Future Volume Alternative)***********************************
***********************************
Cycle (sec):100Critical Vol./Cap.(X):0.461Loss Time (sec):10Average Delay (sec/veh): $xxxxx$ Optimal Cycle:31Level Of Service:AApproach:North BoundSouth BoundEast BoundWest BoundMovement:LTRLTR
Movement:       L       -       T       -       R       L       -       T       -       R       L       -       T       -       R       L       -       T       -       R       R       -       T       -       R       L       -       T       -       R       R       -       T       -       R       L       -       T       -       R       R       -       T       -       R       R       -       T       -       R       -       T       -       R       -       T       -       R       -       T       -       R       -       -       T       -       R       -       T       -       R       -       T       -       R       -       -       T       -       R       -       -       T       -       R       -       -       T       -       R       -       -       T       -       R       R       -       T       -       R       R       -       T       -       R       R       -       T       -       R       R       -       T       -       R       R       R       R
Movement:       L       -       T       -       R       L       -       T       -       R       L       -       T       -       R       L       -       T       -       R       R       -       T       -       R       L       -       T       -       R       R       -       T       -       R       L       -       T       -       R       R       -       T       -       R       R       -       T       -       R       -       T       -       R       -       T       -       R       -       T       -       R       -       -       T       -       R       -       T       -       R       -       T       -       R       -       -       T       -       R       -       -       T       -       R       -       -       T       -       R       -       -       T       -       R       R       -       T       -       R       R       -       T       -       R       R       -       T       -       R       R       -       T       -       R       R       R       R
Control:PermittedPermittedPermittedPermittedRights:IncludeIncludeIncludeIncludeMin. Green:000000Y+R:4.04.04.04.04.04.04.0
Control:PermittedPermittedPermittedPermittedRights:IncludeIncludeIncludeIncludeMin. Green:000000Y+R:4.04.04.04.04.04.04.0Lapes:10101010
Rights:     Include     Include     Include     Include       Min. Green:     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       Lapes:     1     0     1     0     1     0     1     0     1
Min. Green:       0 <td< td=""></td<>
Y+R:     4.0 </td
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 1.0
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
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
PHF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
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 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 1.0
MLF Adj:         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 160
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
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: **** **** **** **** ****************

Existing Wee	-					018 14:	48:56				Page	3-1
				110	5 Lor	ng Beac Ing PM	h					
		 T	ovol 0	fCorr	ri go (	Computa						
ICU 1	(Loss					-		-	ne Alte	rnativ	re)	
* * * * * * * * * * * * *												*****
Intersection												
***********	*****			* * * * * *	*****							
Cycle (sec): Loss Time (se		10	0			Average	ar vo.	L./Cap	(X):		0.6	
Optimal Cycle		1	5			Averag Level	Of Sol	ay (Se cuice:	ec/veh)	•	XXXZ	B
**************************************										*****	*****	_
Approach:	No	rth Bc	und	Sou	ith Bo	ound	Ea	ast Bo	ound	We	est Bo	ound
Movement:	L	- T	– R	L -	- т	- R	L -	- т	- R	L -	- т	– R
	!											
Control:	P	rotect		Pi	cotect	zed	3	Permit	ted			
Rights:	0	Inclu 0		0		ıde	0	Inclu			Inclu	
Min. Green: Y+R:		4.0	-	4.0		0			0 4.0		0	0 4.0
Lanes:			1 0			0 1			1 0		2	
Volume Module			. ·				1			1		
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		1251	75	0	630	110
Added Vol:	0	-	0	0	0	0	0	0	0	0	0	0
PasserByVol: Initial Fut:		0 483	0	150	0	0	0	0	0	0	0	0
User Adj:		485	85 1.00	159	384 1.00	63 1.00		1251 1.00	75 1.00	1 00	630 1.00	110 1.00
PHF Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:			85	159	384	63		1251	75	0	630	110
Reduct Vol:	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
MLF Adj:		1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00
FinalVolume:			85	159		63	-	1251	75	-	630	110
 Saturation F												
Sat/Lane:		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
Lanes:			0.30		2.00	1.00		2.83			2.55	0.45
Final Sat.:			479		3200	1600		4529	271		4086	714
							1					
Capacity Anal	-			0 10	0 10	0.04	0 00	0.00	0 00	0.00	0 1 -	0 1 5
Vol/Sat: Crit Moves:	0.10	81.U ****	0.18	0.10 ****	0.12	0.04	0.00	0.28 ****	0.28	0.00	0.15	0.15
LFIL 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	1								
Cycle (sec): Loss Time (se Optimal Cycle	ec):	1( ] 	))) LO 18	* * * * * *	Critical Vol./Cap.(X): Average Delay (sec/veh): Level Of Service:							кхх В	
Approach:										est Bo			
Movement:													
Control: Rights: Min. Green: Y+R:	Pı	rotect Inclu	i ide	Pr	otect Inclu	red 1de	E	Permit Inclu	ted de	I	Permit Inclu	ted de	
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	
Y+R: Lanes:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
		, <u> </u>		1	, T 					1			
Volume Module													
Base Vol:			68		324		84			49			
Growth Adj:				1.00	1.00		1.00	1.00 380	1.00 27	1.00 49		1.00	
Initial Bse: Added Vol:	19	269	68 0	152			84 0		27		310 0	119 0	
				0						0		0	
PasserByVol: Initial Fut:	79	569	68	152	-	-	-		27	49	-	119	
	1.00		1.00	1.00	1.00	1.00		1.00		1.00	1.00	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	
Reduced Vol:			68	152	-		84			49		119	
PCE Adj:			1.00		1.00			1.00			1.00		
MLF Adj:			1.00 68	1.00	1.00	1.00 22	1.00	1.00	1.00 27	1.00 49	1.00	1.00 119	
FinalVolume:													
Saturation F						,	1			1		1	
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:						0.13			0.07		1.00	1.00	
Final Sat.:					2997				106		1600		
Capacity Ana Vol/Sat:	lysis	Modu	le:			,	·					10	
Crit Moves:			*****			*****			*****	****	****	****	
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	~ ~ ~ ~ ~ ~ ~	~ ~ ~ ~ *		~ ~ ~ ~ ~ ~	<u>, , , , , , , , , , , , , , , , , , , </u>	<del>.</del> <del>.</del> <del>.</del>	~ ~ ~ ~ ~ ~		~ ^ ^ <del>* * *</del> *	~ ~ ~ * *	~ ~ ~ ~ ~		

Existing Week											Page	5-1
				110	)5 Lor	ng Beac ng PM						
				1	7-5-							
			Level O			1		±				
ICU 1			ycle Lei									
Intersection						*****	*****	****	*****	*****	****	*****
*************					*****	*****	* * * * * *	****	*****	*****	****	* * * * * *
Cycle (sec):		10				Critic	al Vol	./Car	.(X):		0.	408
Loss Time (se	ec):	1	LO 29			Averag	e Dela	y (se	ec/veh)	:	XXX	xxx
Optimal Cycle	29			Level	Of Ser	vice:				А		
******								* * * * *	*****	* * * * * *	* * * *	* * * * * *
Approach:									bund		est B	
Movement:	L -	- T	- R .	L -	- T	- R .	L -	- Т	- R	L -	· T	– R
 Control:			 ced									
Rights:	PI		ide			ide				ł		
Ain. Green:	0		0			0			0	Include 0 0 0		
Y+R:			4.0									
Lanes:			0 0	0 (	) 2	0 1	0 (	) 0	0 0	1 (	) 3	0 1
Volume Module	∋:											
Base Vol:			0	0	383	50	0	0	0	82	575	
Growth Adj:			1.00	1.00		1.00		1.00	1.00	1.00		
Initial Bse:		553	0	0	383	50	0	0	0	82	575	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	
PasserByVol:		0	0	0	0	0	0	0	0	0	0	
Initial Fut:		553	0	0	383	50	0	0	0	82	575	
Jser Adj: 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 Adj: PHF Volume:	100	553	1.00	0.11	383	1.00 50	00.1	1.00	1.00	1.00	575	
	0	0	0	0	0	0	0	0	0	02	0	
Reduced Vol:			0	0	383	50	0	0	0	82	575	
PCE Adj:		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		
FinalVolume:			0		383	50			0	82		
									{			
Saturation F												
Sat/Lane:		1600			1600			1600		1600		
Adjustment:			1.00		1.00	1.00		1.00	1.00	1.00		
Lanes:		2.00	0.00		2.00	1.00		0.00		1.00		
Final Sat.:				0		1600	-	0	0	1600	4800	160
Capacity Ana	'			1								
	-		0.00	0 00	0 12	0 03	0 00	0 00	0 00	0 05	0 12	0.0
vor/buc.	****	0.1/	0.00	0.00	****	0.05	0.00	0.00	0.00	0.05	****	

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Existing Weekday - PM Thu Jul 5, 2018 14:48:56 Page 6-1

 $\sim 0.5$ 

<pre>me Alte ****** &gt;.(X): ec/veh) ****** &gt;.und - R</pre>	: xxx ********* West B	******* 669 XXXX B X*******		
<pre>me Alte ******* &gt;.(X): ec/veh) ******* &gt;.und - R</pre>	<pre>rnative) *********** ********** 0. : xxx *********************************</pre>	******** 669 XXXX B *******		
<pre>he Alte ******* &gt;.(X): ec/veh) ****** ound - R</pre>	**************************************	669 xxxx B x*******		
******* (X): c/veh) ******* ound - R	**************************************	669 xxxx B x*******		
. (X): c/veh) ******* - R	**************************************	669 xxxx B x*******		
).(X): ec/veh) ******* ound - R	0. : xxx ********* West E	669 xxxx B		
ec/veh) ******* ound - R	: xxx ********* West B	B		
****** ound - R	********* West E	B *******		
ound - R	West E			
- R	West E	lound		
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llea	Permitted Include			
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38				
		, v		
38				
0	0 0	) 0		
38	32 278	8 85		
1.00				
	1			
1600	1600 1600	1600		
0.31	0.02 0.23	3 0.23		
	* * * *			
	ted ide 0 4.0 1 0 	ted       Perminance         0       0         0       0         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       1         0       0         0       0         0       0         0       0         0       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         1       0         0       0      0		

1105 Long Beach Existing PM 7-5-18												
20	Level Of Service Computation Report 2000 HCM Unsignalized Method (Future Volume Alternative)											
											*****	*****
Intersection	* * * * * *	* * * * * *	* * * * * *	*****								
Average Delay	* * * * * *	****	* * * * * *	*****	*****	*****	*****	*****	*****	*****	*****	*****
Approach: Movement:	Noi	rth Bo	ound	Sou	ith Bo	bund	Εá	ast Bo	ound	₩e	est Bo	bund
Control:												
Rights:		Inclu	lde		Inclu	ıde		Inclu	ıde		Inclu	ıde
Lanes:	0 (	0 1!	0 0	0 1	L O	0 0	0 (	0 1!	0 0	0 (	) 1!	0 0
Volume Module		7.0	4	0	4.2	0	1	0	4	1	0	2
Base Vol:			4				1 00				0	-
Growth Adj:												
Initial Bse: Added Vol:		0	4 0	2	43 0	0						3 0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:						0						3
User Adj:												
PHF Adj:									1.00			
PHF Volume:									1.00			1.00 3
												0
Reduct Vol: FinalVolume:	2	79	4	2	43	0 0	1	0	4	0	0	3
Critical Gap						£						
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	
Capacity Mod												
Cnflict Vol:											132	81
Potent Cap.:	1579	XXXX	XXXXX	1527	XXXX	XXXXX	843	760	1033		762	
Move Cap.:	1579	XXXX	XXXXX	1527	XXXX	XXXXX	839			837		985
Volume/Cap:								0.00			0.00	
Level Of Ser	'									[		
2Way95thQ:				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		*	А			*				*	*
Movement:	LT	- LTR	- RT	LT ·	- LTR	- RT	LT	- LTR	- RT	LT ·	- LTR	– RT
Shared Cap.:						xxxxx			XXXXX			XXXXX
SharedQueue:						XXXXX			XXXXX		0.0	XXXXX
Shrd ConDel:				7.4	XXXX	XXXXX	xxxxx	8.7	xxxxx	xxxxx	8.8	XXXXX
Shared LOS:	*	*	*	A	*	*	*	A	*	*	А	*
ApproachDel:	X	XXXXX		X	XXXXX			8.7			8.8	
ApproachLOS:		*			*			A			А	
*******	****	****	*****	*****	****	*****	*****	****	*****	*****	****	*****
Note: Queue *********									* * * * * *	*****	* * * * *	* * * * * * *

Existing Weekday -	PM		14:48:56	Page 8-1

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						ng Beac Ing PM	ch					
					7-5-	-18						
2(		CM Uns	Level ( signali	zed Me	ethod	(Futur	re Volu	ime Al	lternat			
Intersection					*****	*****	*****	*****	******	******	*****	*****
**********	* * * * * *	*****	******	*****								
Average Delay	*****	*****	******	*****	*****	******	******	*****	*****			
Approach: Movement:	L -	- Т	– R	L -	- T	- R	L -	- T	– R	L -		– R
Control: Rights: Lanes:	St	top Si Inclu	ign 1de	St	top Si Inclu	ign 1de	Und	contro Inclu	olled ude	Unc	contro Inclu	olled 1de
Volume Module												
Base Vol:		0	1 00	0	0	0	0	17	1	-	7	0
Growth Adj: Initial Bse:			1.00	1.00	1.00	1.00	1.00	1.00	1,00	1.00	1.00	1.00 0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:		0	0	0	0	0	0	0	Ő	Õ	Ő	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
PHF Adj:			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		7	0
Reduct Vol: FinalVolume:		-	0	0		0	0	0 17	-		0 7	0
	,			11								_
Critical Gap			6.0									
Critical Gp: FollowUpTim:										XXXXX XXXXX		
Capacity Modu												
Cnflict Vol:		25	18			XXXXX			XXXXX			XXXXX
Potent Cap.: Move Cap.:			1067 1067			XXXXXX			XXXXXX			XXXXX
Volume/Cap:		0.00	0.00			XXXX			XXXXX			XXXXX XXXX
Level Of Serv												
2Way95thQ:												
Control Del::	×××××	XXXX *	XXXXX *	XXXXX *	XXXX *	XXXXX *	XXXXX *	XXXX *	* *	XXXXX	XXXX	XXXXX
LOS by Move: Movement:	т.т	- LTR				- RT		- LTR		т.т	- LTR	_ Bm
Shared Cap.:						XXXXX			XXXXX			- KI XXXXX
SharedQueue:										XXXXX		
Shrd ConDel:										xxxxx		
Shared LOS:	*	A	*	*	*	*	*	*	*	*	*	*
ApproachDel:		8.5		x	xxxxx		X	xxxxx		X	xxxxx	
ApproachLOS: ********	* * * * *	A * * * * *	* * * * * *	* * * * * *	* * * * *	* * * * * *	*****	* * * * *	* * * * * *	* * * * * * *	* * * * *	* * * * * * *
Note: Queue :									* * * * * *	*****	* * * * *	* * * * * * *

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		1105 Long Beac EWP - AM Peak Ho 7-5-18		
ICU 1(	Loss as Cycle Le	Of Service Computa ength %) Method (F	tion Report uture Volume Alter	native)
Intersection	#551 Pine & 10t)	ı	****	
Cycle (sec): Loss Time (se Optimal Cycle	100 ec): 10 e: 28	Critic Averag Level	al Vol./Cap.(X): e Delay (sec/veh): Of Service:	0.381 xxxxxx A
Approach: Movement:	North Bound L - T - R	South Bound L - T - R	East Bound L - T - R	West Bound L - T - R
Control: Rights: Min. Green: Y+R: Lanes:	Permitted Include 0 0 0 4.0 4.0 4.0 1 0 0 1 0	Permitted Include 0 0 0 4.0 4.0 4.0 1 0 0 1 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Permitted Include 0 0 0 4.0 4.0 4.0 1 0 0 1 0
Volume Module Base Vol: Growth Adj: Initial Bse: Added Vol: PasserByVol: Initial Fut: User Adj: PHF Adj: PHF Volume: Reduct Vol: Reduced Vol: PCE Adj: MLF Adj: FinalVolume:	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{bmatrix} 6 & 232 & 13 \\ 1.00 & 1.00 & 1.00 \\ 6 & 232 & 13 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 6 & 232 & 13 \\ 1.00 & 1.00 & 1.00 \\ 1.00 & 1.00 & 1.00 \\ 6 & 232 & 13 \\ 0 & 0 & 0 \\ 6 & 232 & 13 \\ 1.00 & 1.00 & 1.00 $	$\begin{array}{cccccccccccccccccccccccccccccccccccc$
Saturation Fl Sat/Lane: Adjustment: Lanes: Final Sat.:	Low Module:           1600         1600           1.00         1.00           1.00         0.57           1600         904	1600 1600 1600 1.00 1.00 1.00 1.00 0.88 0.12 1600 1409 191	1600 1600 1600 1.00 1.00 1.00 1.00 0.95 0.05	1600160016001.001.001.001.000.920.0816001467133
Vol/Sat: Crit Moves:	* * * *	* * * *	0.00 0.15 0.15	* * * *

										Alternative) ************************************		
						-						
	sec):       10       Average Delay (sec/veh):       xxxxxx         le:       35       Level Of Service:       A         ************************************											
		т.	evel 0									
ICU 1	Loss					-		~		rnativ	/e)	
*****	*****	*****	* * * * * *	* * * * * *	*****	*****	* * * * * *	****	* * * * * *	* * * * * *	****	*****
		1.0	0			a	7 7 7 7	10			<u> </u>	- 0.1
Cycle (sec):		10	0			Critic	al Voj	./Cap	).(X):		0.5	521
Loss Time (se	ec):	1	0			Averag	e nets	iy (se	ec/ven)	:	XXXX	XXX
Optimal Cycle	; ; ;	د ****	2 2	*****	*****	Level	UI Sei ******	vice:	*****	*****		A
Approach:												
Control:	Pr	otect	ed	Pi	cotect	ed	H	Permit	ted	1	Permit	ted
Rights:		Inclu	de		Inclu	ıde		Inclu	ıde		Inclu	ıde
Ain. Green:	0	0	0	0	0	0	0	0	0	0	0	(
ζ+R:												
Lanes:												
 Volume Module												
		321	37	83	329	56	Ο	625	80	0	1037	105
												1.00
Initial Bse:												10
Added Vol:	-	-	-				-			-		+ 0 4
PasserByVol:		0	0	0	0	0	0			-		(
Initial Fut:		327	37	83	332	56	0	631	83	0	1039	10
Jser 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	1
Reduced Vol:	126	327	37	83	332	56	0	631	83	0	1039	10
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
FinalVolume:												10
Saturation F. Sat/Lane:				1600	1600	1600	1600	1600	1600	1600	1600	1.00
Adjustment:												
Lanes:						1.00						
Final Sat.:					3200	1600	0.00		558	0.00		
Capacity Anal	*					1			1			
Vol/Sat:	0.08	0.11	0.11	0.05	0.10	0.04	0.00	0.15	0.15	0.00	0.24	0.2
Crit Moves:					****		****				****	

Approach:       North Bound       South Bound       East Bound       West Bound         Approach:       L - T - R       L - T - R       L - T - R       L - T - R         Approach:       L - T - R       L - T - R       L - T - R       L - T - R         Approach:       Protected       Protected       Permitted       Permitted         Control:       Protected       Protected       Permitted       Permitted         Rights:       Include       Include       Include       Include         Min. Green:       0       0       0       0       0       0         Canes:       1       0       1       0       1       0       1       0       1       0         Volume Module:       Base Vol:       42       343       42       121       324       16       49       262       27       53       279         Growth Adj:       1.00												
ICU 1		I	evel O	f Serv	vice C	Computa	tion F	Report				
*********	*****	*****	*****	*****	****							*****
	*****				*****							
		1	0									
								-		•	~~~	Д
				* * * * * *	****					*****	****	
Approach:	Noi	rth Bo	und	Soi	ith Bo	ound	Ea	st Bo	ound	We	st Bo	ound
Movement:				L -	- T	– R	L -	- T	– R			
							1					
Control:												
Rights:												
Min. Green:	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 (	) 1	1 0	1 (	) 1	1 0	1 (	) ()	1 0	1 0	1	0 1
Volume Module	е:											
Base Vol:	42	343	42	121	324	16	49	262	27	53	279	100
2												1.00
					-							100
Added Vol:	-	-	0	-	3	-	0	_	0	0	0	0
-		-	-	-	-	-	-	-				0
						-				53	279	100
2												1.00
2												1.00
						-	-					100
	-	-	-	-	-	_	_	•	_	-	-	-
											-	
2												
2												
						{						
Saturation F				1 6 0 0	1 6 0 0	1 600	1 600	1 6 0 0	1 ( 0 0	1 600	1 60.0	1 60 0
Sat/Lane:		1600	1600		1600	1600		1600	1600	1600		
2	1.00		1.00		1.00	1.00		1.00		1.00		
Lanes:	1.00		0.22		1,91	0.09		0.91		1.00		
Final Sat.:		2852	348		3051				149	1600		1600
Capacity Ana						!						
Vol/Sat:				0 00	0 11	0.11	0 03	0.18	0.18	0.03	0 17	0.06
vui/bal:	0.03	∪.⊥∠ ****	0.12	U.U8 ****	0.11	0.11	0.03	U.18	0.10	U.U3 ****	0.1/	0.00

EWP Weekday -						)18 16:1		177 ( M. 7-174)			Page	
				110	5 Lor	ng Beach Peak Hou	l					
		L	evel O	f Serv	rice (	Computat	ion F	leport				
ICU 1	(Loss					thod (Fi		*		rnativ	re)	
* * * * * * * * * * * * *												*****
Intersection	#554	Long	Beach	& 7th								
**********	* * * * * *				****	******	* * * * * *	****	******	*****	* * * * *	******
Cycle (sec):		10	0 0			Critica	al Vol	./Cap	D.(X):		0.5	
Loss Time (se	ec):	1	0			Average	e Dela	ay (se	ec/veh)	:	XXXX	XXX
Optimal Cycle		3	5			Level (						A.
* * * * * * * * * * * *												
Approach:						ound					est Bo	
Movement:			- R						- R			- R
Control												
Control:	Pı			Pi		ted						
Rights:	0	Inclu		0	Inclu			Inclu			Inclu	
Min. Green:		0			0				0		0	0
Y+R:						4.0			4.0			4.0 0 1
Lanes:			0 0			0 1				L (	) 3	U I
Volume Module							1					
Base Vol:		201	0	0	312	119	0	0	0	87	1157	72
Growth Adj:			1.00		1.00	1.00	-	1.00	1.00	1.00		
Initial Bse:			0	0		119	0	0	0		1157	72
	0	1	0	0	2	1	0	0	0	0	0	0
PasserByVol:	-	0	0	0	0	0	0	Ő	0	0	Ő	Ő
Initial Fut:		292	0	0	314	120	Ő	Ő	Õ		1157	72
User Adj:			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
PHF Volume:		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
						1						
Saturation F												
Sat/Lane:			1600		1600			1600			1600	
Adjustment:					1.00			1.00			1.00	
Lanes:		2.00		0.00				0.00			3.00	
Final Sat.:		3200			3200		-	0	-		4800	
							1					
Capacity Ana	-			0 00	0 10	0.00	0 00	0 00	0.00	0.05	0.01	0.05
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:												

a di

				110 EWP -	)5 Lon - AM F 7-5-	ig Beac Peak Ho 18	h ur					
		L	evel O			Computa			;			
									ne Alte			
* * * * * * * * * * * * *					*****	*****	*****	* * * * *	******	* * * * * *	*****	****
Intersection ***********					- + + + + + +	*****	* * * * * *		ىلە بىلە بىلە بىلە بىلە ،		بر مار مار مار مار م	ن بله بله بله بله ه
Cycle (sec):									o.(X):			
Loss Time (sec).		10	0					_	ec/veh)			
Optimal Cycle		4				Level				•	~~~/	B
**************************************				*****						*****	****	
Approach:	Noi	rth Bo	und	Soi	ith Bo	und	Ea	st Bo	ound	We	est Bo	hund
									- R		- T	
				1		(						
Control: Rights:	ł	Permit	ted	I	Permit	ted	E	Permit	ted	·	Permit	ted
Rights:		Inclu	lde		Inclu	ıde		Inclu	ıde		Inclu	ıde
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	
Ύ+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0 1 0	4.0	4.0	4.
Volume Module												
Base Vol:		405	15	68	379	111					336	10
Growth Adj:			1.00		1.00	1.00		1.00			1.00	1.0
Initial Bse:		405	15	68	379	111	62	-	27	41	336	10
Added Vol: PasserByVol:	0	0	0	0	0	0	0	1 0	_	0	0	
Initial Fut:	0	0 405	0 15	68	379	111	62	282	0 28	0 41	0 336	10
	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.0
PHF Adj:	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.0
PHF Volume:	67	405	15	68	379	111	62	282	28	41	336	10
	0		0	0	0	0	0	0	0	0	0	7.0
Reduced Vol:			15	68	379	111	62	-	28	41		10
PCE Adj:	1.00		1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.0
MLF Adj:	1.00	1.00	1.00	1.00	1:00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
FinalVolume:			15	68		111		282	28		336	10
							J		1			
Saturation Fl												
	1600		1600		1600	1600		1600	1600		1600	160
Adjustment:			1.00		1.00	1.00		1.00	1.00		1.00	1.0
Lanes:												
Final Sat.:									145			
Capacity Anal				0.04	0 1 =	0 15	0.04	0 1 0	0 1 0	0 02	0 20	0 0
Vol/Sat: Crit Moves:	0.04	0.13	0.13	0.04	0.15	0.15	0.04	0.19	0.19	0.03	0.∠8	0.2

						ng Beac						
				EWP -		Peak Ho	our					
					7-5-	-18						
		1	Level C					enort				
20	оо но		signali			-		~		ive)		
******			2							,	*****	*****
Intersection	#556	Locus	st & Al	ley								
******	* * * * * *	*****	*****	* * * * * *	*****	* * * * * *	*****	* * * * *	* * * * * *	* * * * * *	*****	*****
Average Delay												9.1]
	Noi					ound					est Bo	
T-T			– R			– R						
Control:												
Rights:		Inclu	ıde		Inclu	ıde		Inclu	ıde		Inclu	ıde
			0 0									
Volume Module			0		5.4			-	-			
Base Vol:		53		1			2				0	
Growth Adj:									1.00			
Initial Bse:		53 0	3 1	1		1 0	2 0	0		0	0 1	1
Added Vol: PasserByVol:			0	0		0	0	0	0		1	0
Initial Fut:			4	1	51	1	2	0	-	2	1	1
User Adi:			1.00			-	_	-	1.00	_		1.00
5	1.00	- 15 C	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
FinalVolume:		53		T	21	T	2	0	3			
Critical Gap				4 1			7 1	<i>C</i>	6.0	7 1	C F	6.0
Critical Gp: FollowUpTim:						XXXXXX			6.Z 3.3		6.5 4.0	6.2 3.3
Capacity Mod							1 1			1 1		1
Cnflict Vol:		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:						XXXX		0.00			0.00	0.00
Level Of Ser				0.0								
2Way95thQ:						XXXXX						
Control Del: LOS by Move:	7.3 A		XXXXX *	7.3 A		XXXXX *	XXXXXX	XXXX *	XXXXX *	XXXXX *	XXXX *	XXXXX *
Movement:			- RT		- LTR			- LTR			LTR	- RT
Shared Cap.:						XXXXX			XXXXX			XXXXX
SharedQueue:									XXXXX			XXXXX
Shrd ConDel:									XXXXX			XXXXX
Shared LOS:	*	*	*	*	*	*	*	A	*	*	A	*
ApproachDel:	x	xxxxx		x	xxxxx			8.8			9.1	
ApproachLOS:		*			*			A			A	
*******									* * * * * *	* * * * * *	* * * * *	* * * * * * *
Note: Queue												
********	****	*****	*****	* * * * * *	****	*****	* * * * * *	****	*****	*****	*****	******

											rage	
				EWP -	- AM H 7-5-		our					
						Computa						
		CM Uns	signali	zed Me	ethod	(Futur	re Volu	ime Al	lternat			
*****	* * * * * *	*****	******	*****	*****	*****	*****	*****	******	*****	*****	*****
Intersection *****					* * * * * *	*****	*****	*****	*****	* * * * * *	*****	* * * * * *
Average Dela												
Approach: Movement:	L -	- Т	- R	L -	- Т	– R	L -	- Т	– R	L -	- Т	- R
Control:									 blled			
Rights:	51	Incli	ide	0.	Incli	ıde	0110	Inclu	ide		Inclu	
Lanes:						0 0					LO	
Volume Modul	e:											
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
Initial Bse:		0	1	0	-	0	0	29		0	5	0
	21	0	9	0		0	0	0	5	6	0	0
PasserByVol:		0	0	0		0	0	0		0	0	0
Initial Fut:		0	10	0	0	0	0	29		6	5	0
User Adj:			1.00		1.00			1.00			1.00	
PHF Adj: PHF Volume:		1.00	1.00 10	1.00	1.00	1.00	1.00	1.00 29			1.00	1.00
Reduct Vol:	21 0	0	10	0	-	0	0		10 0	6 0		0
FinalVolume:	21	0	10	0		0	0		10		5	0
Critical Gap												
Critical Gp:			6.2	*****	xxxx	XXXXX	xxxxx	xxxx	XXXXX	4 1	XXXX	XXXXX
FollowUpTim:									XXXXX			XXXXX
Capacity Mod	1											1
Cnflict Vol:		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:						XXXX			XXXX			XXXX
Level Of Ser	1											
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:			- RT			- RT			- RT			- RT
Shared Cap.:						XXXXX			XXXXX			XXXXX
SharedQueue:						XXXXX						XXXXX
Shrd ConDel: Shared LOS:	XXXXX *	8.8 A		XXXXX *		XXXXX *	XXXXX			/.3 A		XXXXX *
ApproachDel:	Ŷ	A 8.8	î		xxxxx	^		^ xxxxx			^ xxxxx	~
ApproachLOS:		0.0 A		X	* * * × ×		X	* xxxxx *		х.	* * × × ×	
**********	*****			*****	****	*****	*****	****	******	*****	*****	******
Note: Queue ************									*****	*****	*****	******

				-,	18 16:	10.54				Page	2-1
			EWP -	- PM E 7-5-	eak Ho 18	ur					
				*****	*****	*****	*****	*****	* * * * * *	****	*****
				له ماه ماه ماه م	بالد ماد باد باد باد ب	لد علد علد علد مله مله			ل من بار بار من من	ور ور ور ور ور	ب بابر مابر مابر مابر م
(c)	1	0			Averag	ai voj e Dela	av (se	$(\Delta)$ .		V. 4	vv
:	3	1			Level	Of Sei	vice:	.c, ven,	•	ΛΛΛΛ	A
• *****	- * * * * * *	******	* * * * * *	****	*****	*****	*****	*****	* * * * * *	*****	*****
Noi	rth Bo	ound	Sou	ith Bo	ound	Ea	ast Bo	ound	We	est Bo	ound
H	Permit	ted	F	Permit	ted	I	Permit	ted	E	Permit	ted
_	Inclu	ıde		Inclu	ıde		Inclu	ıde		Inclu	ıde
0	0	0	0	0	0	0	0	0	0	0	0
			4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
						[					
	122	30	31	99	15	15	317	23	10	3/3	32
											1.00
			11								32
		_	-								0
-	_	_	-	0			-				Õ
12	123	32	34	100		-	-	-	-	-	32
		1.00	1.00	1.00	1.00	1.00		1.00			1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
12		32	34	100	15	15	317	23	19	343	32
0	0	0	0	0	0	0	0	0	0	0	0
12	123	32	34	100	15	15	317	23	19	343	32
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
		32			15			23	19	343	32
					(						
			1600	1600	1600	1600	1600	1600	1 600	1 600	1 ( 0 0
											0.09
										1403	13/
									1		
-			0.02	0.07	0.07	0.01	0.21	0.21	0,01	0.23	0.23
0.01	****	0.10	****	5.07	0.07	****	V. C T	0.21	0.01	****	0.20
	Loss ****, #551 ****, Non L	Loss as Cy ********** #551 Pine ************************************	Level O: Loss as Cycle Level O: ************************************	EWP - Level Of Serv Loss as Cycle Length % ************************************	EWP - PM E 7-5- Level Of Service O Loss as Cycle Length %) Met ************************************	EWP - PM Peak Ho 7-5-18 Level Of Service Computa Loss as Cycle Length %) Method (F ************************************	Level Of Service Computation F Loss as Cycle Length %) Method (Future ************************************	EWP - PM Peak Hour 7-5-18 Level Of Service Computation Report Loss as Cycle Length %) Method (Future Volum ************************************	EWP - PM Peak Hour 7-5-18           Level Of Service Computation Report           Loss as Cycle Length %) Method (Future Volume Alte           ***********************************	EWP - PM Peak Hour 7-5-18           Level Of Service Computation Report           Loss as Cycle Length %) Method (Future Volume Alternative #551 Pine & 10th           100 Critical Vol./Cap.(X): c): 10 Average Delay (sec/veh): : 31 Level Of Service:           North Bound South Bound East Bound We L - T - R L - T - R L - T - R L Permitted Permitted Permitted F Include Include Include 0 0 0 0 0 0 0 0 0 0 0 0 0 0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0 4.0	EWP - PM Peak Hour 7-5-18           Level Of Service Computation Report Loss as Cycle Length %) Method (Future Volume Alternative)           #551 Pine & 10th           #51 Pine & 10th           Morth Bound South Bound East Bound West Bound           L - T - R L - T - R L - T           Permitted Permitted Permitted Inclue

						ng Beac Peak Ho -18					
ICU 1	(Loss	as Cy	cle Le	ngth 🖁	b) Met	Computa thod (F	uture	Volum	e Alte	rnative)	***
Intersection						ىلە بەلە بەلە بىلە بەلە بىلە ،					
Cycle (sec): Loss Time (se Optimal Cycle	ec):	10 1 4	0 0 5			Critic Averag Level	al Vol e Dela Of Sei	./Cap ay (se cvice:	.(X): c/veh)	0. : xxx	658 xxx B
Approach: Movement:	L -	т	– R	L -	- T	- R	L -	- Т	– R	West B L - T	-
Y+R:	Pr 0 4.0	rotect Inclu 0 4.0	ed de 0 4.0	Pr 0 4.0	rotect Inclu 0 4.0	ted Ide 0	0 4.0	Permit Inclu 0 4.0	ted .de 0 4.0	Permi Incl 0 0 4.0 4.0	tte ude
Volume Module											
Base Vol: Growth Adj: Initial Bse: Added Vol: PasserByVol: Initial Fut: User Adj:	1.00 162 3 0 165	483 5 0		159 0 0 159	384 10 0	63 1.00 63 0 63 1.00	1.00 0 0 0	1251 5 0 1256	1.00 75 12 0	$\begin{array}{cccc} 0 & 630 \\ 1.00 & 1.00 \\ 0 & 630 \\ 0 & 9 \\ 0 & 0 \\ 0 & 639 \\ 1.00 & 1.00 \end{array}$	1
Reduct Vol: Reduced Vol:	0 165	488 0 488	1.00 85 0 85 1.00	1.00 159 0 159 1.00	394 0 394	1.00 63 0 63 1.00	0 0 0	1256 0 1256	-	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	
MLF Adj: FinalVolume:	165	488	85	1.00 159	394	63	0	1256	87	1.00 1.00 0 639	
Saturation FI Sat/Lane: Adjustment: Lanes: Final Sat.:	low Mo 1600 1.00 1.00 1600	dule: 1600 1.00 1.70 2725	1600 1.00 0.30 475	1600 1.00 1.00 1600	1600 1.00 2.00 3200	1600 1.00 1.00 1600	1600 1.00 0.00 0	1600 1.00 2.81 4489	1600 1.00 0.19 311	1600 1600 1.00 1.00 0.00 2.56 0 4095	1 1 (
Capacity Ana Vol/Sat:	lysis	Modul	.e:						0.29		

EWP Weekday -						)18 16:					Page	
				110	)5 Lor	ng Beac Peak Ho -18	h ur					
						Computa	tion H	Report				
ICU 1									ne Alte			
Intersection	#553	Long	Beach	& 10th	1							
Cycle (sec):		1(	00 LO			Critic	al Vol	./Car	p.(X): ec/veh)		0.0	684
Loss Time (se Optimal Cycle	е:	ć	18			Level	Of Sei	rvice				В
Approach: Movement:	No	rth Bo	ound	Sou	ith Bo	ound	Εā	ast Bo		We	est Bo	
Control: Rights:	P	rotect		Pi	cotect	ted	1	Permit	tted ude	I		tted
	0		0		0	0	0	0	0			0
Y+R: Lanes:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				4.0
Volume Module Base Vol:	e: 79	569	69	152	224	22	84	380	27	4.0	210	110
Growth Adj:			68 1.00		324	1.00		1.00		49	310	$119 \\ 1.00$
Initial Bse:		569	68	152		22	84		27	49		119
Added Vol:	0	3	0	5		0	0	1		0	2	
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
PHF Volume:	79	572	68	157	326	22	84	381	27	49	312	119
Reduct Vol:	0		0	0	_	0	0		0	0		0
Reduced Vol:			68	157	326	22	84			49		119
PCE Adj:		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
FinalVolume:			- 68	157			84				312	
Saturation F				1		!						
			1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:					1.00			1.00			1.00	
Lanes:												
Final Sat.:	1600	2860	340	1600	2998	202	1600	1494	106	1600	1600	1600
Capacity Ana												
Vol/Sat:				0,10	0.11	0.11	0.05	0.25	0.26	0,03	0.20	0,07
Crit Moves:	0.00	****		****	0.11	V. T.T	0.00	0.20		****	0.20	0.07
********	* * * * *	****	* * * * * * *	****	****	******	****	****	* * * * * * *	****	****	******

			EWP -	• PM P 7-5-		ur				i,	
ICU 1(	Loss as Cy		f Serv ngth %	rice C 5) Met	omputa hod (F	tion H uture	Report Volum	Ne Alte	rnativ	e)	******
Intersection	#554 Long	Beach	& 7th								
******************* Cycle (sec): Loss Time (se Optimal Cycle ************	10 ec): 1 e: 2	0 .0 :9			Critic Averag Level	al Vol e Dela Of Sei	L./Cap ay (se cvice:	).(X): ec/veh)	:	0.4 xxxx	408 xxx A
Approach: Movement:	North Bo L - T	ound - R	Sou L -	ith Bo - T	und - R	Eá L -	ast Bo - T	ound - R	We L -	st Bo T	ound - R
	Protect Inclu 0 0 4.0 4.0 1 0 2	ed ide 0 4.0 0 0	Pr 0 4.0 0 (0	rotect Inclu 0 4.0 ) 2	ed de 4.0 0 1	0 4.0 0 (0	Permit Inclu 0 4.0	ted ide 0 4.0	0 4.0 1 0	ermi Incl 0 4.0 3	tted ude 0 4.0 0 1
Initial Bse: Added Vol: PasserByVol: Initial Fut: User Adj:	<pre>&gt;: 109 553 1.00 1.00 109 553 0 2 0 0 109 555 1.00 1.00 1.00 1.00 109 555 0 0 109 555 1.00 1.00 1.00 1.00 1.00 1.00 1.00 555</pre>	$\begin{array}{c} 0\\ 1.00\\ 0\\ 0\\ 0\\ 0\\ 1.00\\ 1.00\\ 0\\ 0\\ 1.00\\ 1.00\\ 0\\ 0\end{array}$	0 1.00 0 0 1.00 1.00 1.00 1.00 1.00 0	383 1.00 383 2 0 385 1.00 1.00 385 1.00 1.00 385	$50 \\ 1.00 \\ 50 \\ 1 \\ 0 \\ 51 \\ 1.00 \\ 1.00 \\ 51 \\ 0 \\ 51 \\ 1.00 \\ 1.00 \\ 51 \\ 1.00 \\ 1.00 \\ 51 \\ 1.00 \\ 1.$	0 1.00 0 0 0 1.00 1.00 1.00 1.00 0 0 0	0 1.00 0 0 1.00 1.00 0 0 1.00 1.00 0 0	$\begin{array}{c} 0\\ 1.00\\ 0\\ 0\\ 0\\ 0\\ 1.00\\ 1.00\\ 0\\ 0\\ 0\\ 1.00\\ 1.00\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ 0\\ $	82 1.00 82 0 0 82 1.00 1.00 82 0 82 1.00 1.00 82 1.00 82	575 1.00 575 1 0 576 1.00 576 0 576 1.00 1.00 576	108 1.00 108 0 0 108 1.00 1.00 1.00 1.00
Saturation Fl Sat/Lane: Adjustment:	Low Module: 1600 1600 1.00 1.00 1.00 2.00 1600 3200 	1600 1.00 0.00 0 .e: 0.00	1600 1.00 0.00 0	1600 1.00 2.00 3200 0.12 ****	1600 1.00 1.00 1600   0.03	1600 1.00 0.00 0	1600 1.00 0.00 0	1600 1.00 0.00 0 	1600 1.00 1.00 1600 	1600 1.00 3.00 4800  0.12 ****	1600 1.00 1.00 1600   0.07

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						ng Beac Peak Ho -18						
ICU 1		as Cy	vcle Le	ngth §	b) Met	Computa thod (F	'uture	Volum	ne Alte			*****
Intersection *********					*****	*****	*****	*****	*****	* * * * * *	*****	*****
Cycle (sec): Loss Time (se Optimal Cycle	ec): e:	10 1 4	) () _ () _ ()			Critic Averag Level	al Vol e Dela Of Ser	L./Cap ay (se rvice:	o.(X): ec/veh)	:	0.0 xxxx	571 xxx B
Movement:	L ·	- T	– R	г -	- T	ound - R	L -	- Т	– R	L -	- Т	– R
Control: Rights: Min. Green: Y+R: Lanes:	0 4.0 1 (	Permit Inclu 0 4.0 0 1	ted ude 0 4.0 1 0	0 4.0 1 (	Permit Inclu 0 4.0	ted ade 0 4.0 1 0	0 4.0 1 (	Permit Inclu 0 4.0	ted ide 0 4.0 1 0	0 4.0 1 (	Permit Inclu 0 4.0	ted de 0 4.0
Volume Module							Į <b>-</b>		(			
Base Vol: Growth Adj: Initial Bse: Added Vol:	1.00 28	488	48 1.00 48 0	1.00	534 1.00 534 0	130 1.00 130 0		453 1.00 453 1	38 1.00 38 1	32 1.00 32 0	1.00	85 1.00 85 0
PasserByVol: Initial Fut: User Adj:	0 29	0 488	0 48 1.00	0 120	0 534 1.00	0 130 1.00	0 98	0 454 1.00	0 39 1.00	0 32	0	0 85 1.00
PHF Adj: PHF Volume: Reduct Vol:			1.00 48 0	1.00 120 0	1.00 534 0	1.00 130 0	1.00 98 0	1.00 454 0	1.00 39 0	32	1.00 279 0	1.00 85 0
	1.00 1.00	1.00	48 1.00 1.00	1.00	534 1.00 1.00	130 1.00 1.00	1.00	454 1.00 1.00	39 1.00 1.00	1.00	279 1.00 1.00	85 1.00 1.00
FinalVolume:			48		534	130 		454	39 	32		85 
Saturation Fl				- -								
Adjustment: Lanes:	1.00 1.00	1.00 1.82	0.18	1.00	1600 1.00 1.61	0.39	1.00 1.00	1600 1.00 0.92	1.00 0.08	1.00 1.00	1600 1.00 0.77	1.00
Final Sat.:					2573			1473			1226	374
Capacity Anal Vol/Sat: Crit Moves:	lysis	Modu	le:		0.21							,
**************************************	****		* * * * * * *			******	*****		* * * * * *		* * * * * :	******

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				)5 Lor	ng Beac						
					Peak Ho						
				7-5-	-10						
	CM Uns		zed Me	ethod	(Futur	e Volu	ume Al	lternat			
*************				****	******	*****	*****	*****	*****	*****	*****
Intersection #556	*****	*****	*****								
Average Delay (se					******	*****	*****	*****			
Approach: No Movement: L	– Т	– R	Sou L -	- T	– R	Eá L -	- Т	– R	L -	est Bo - T	- R
Control: Ur											
Rights:	Inclu	ıde	,	Inclu	ıde		Inclu	ıde		Inclu	ıde
Lanes: 0	0 1!	0 0	0 1	L 0	0 0	0 (	) 1!	0 0	0 (	) 1!	0 0
 Volume Module:											
	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	3	0	0	0	0		-			0
	0	0	0		0	0	0	-	-	0	0
initial fut: 2		7	2		0	1	1		-	1 00	3
User Adj: 1.00 PHF Adj: 1.00		1.00	1.00	1.00	1.00		1.00			$1.00 \\ 1.00$	$1.00 \\ 1.00$
PHF Volume: 2		1.00	2		0.11	1.00				1.00	1.00
Reduct Vol: (		0			-			0			0
FinalVolume: 2	79	7	2	43	0	1	1	4	3	1	3
Critical Gap Modu											
Critical Gp: 4.1		XXXXX	4.1	xxxx	xxxxx	7 1	6.5	62	7 1	65	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:									1		
Cnflict Vol: 43	XXXX	XXXXX							136	134	83
Potent Cap.: 1579					XXXXX			1033	840	761	983
Move Cap.: 1579					XXXXX					759	983
Volume/Cap: 0.00					XXXX		0.00			0.00	
Level Of Service											
2Way95thQ: 0.0			0.0	xxxx	XXXXX	XXXX	xxxx	xxxxx	XXXX	XXXX	XXXXX
Control Del: 7.3	xxxx	XXXXX	7.4	xxxx	xxxxx			XXXXX			
LOS by Move: A		*	А		*	*	*	*	*	*	*
	- LTR				- RT			- RT		- LTR	
Shared Cap.: xxxx					XXXXX	XXXX		XXXXX	XXXX		XXXXX
SharedQueue:xxxxx Shrd ConDel:xxxxx			_		XXXXX XXXXX			XXXXX XXXXX			XXXXX XXXXX
Shared LOS:	*	*	/.4 A	*	*	*	о.9 А	*	*****	9.1 A	*
	xxxxx			xxxxx			8.9			9.1	
ApproachLOS:	*			*			A			A	
****	*****	*****	*****	****	* * * * * *	* * * * * *	* * * * *	*****	*****	* * * * *	******
Note: Queue repo:					-			* * * * * * *	* * * * * *	* * * * *	* * * * * * *

1105 Long Beach EWP - PM Peak Hour
ZWP - 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 SignStop SignUncontrolledUncontrolledRights:IncludeIncludeIncludeIncludeLanes:0010000
Base Vol: 1 0 1 0 0 0 0 17 1 0 7
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Added Vol: 17 0 7 0 0 0 0 0 20 25 0
PasserByVol: 0 0 0 0 0 0 0 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
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
Reduct Vol:         0 <th< td=""></th<>
Critical Gap Module:
Critical Gp: 6.4 6.5 6.2 XXXXX XXXX XXXXX XXXX XXXX XXXX 4.1 XXXX XXXX
Cnflict Vol: 85 85 28 xxxx xxxx xxxx xxxx xxxx xxxx
Potent Cap.: 922 809 1054 xxxx xxxx xxxx xxxx xxxx xxxx 1585 xxxx xxxx
Move Cap.: 911 797 1054 xxxx xxxx xxxx xxxx xxxx xxxx 1585 xxxx xxxx
Volume/Cap: 0.02 0.00 0.01 xxxx xxxx xxxx xxxx xxxx xxxx
Level Of Service Module:
2Way95thQ: XXXX XXXX XXXX XXXX XXXX XXXX XXXX X
Control Del:xxxxx xxxx xxxx xxxx xxxx xxxx xxxx x
Movement: LT = LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxx 950 xxxxx xxxx xxxx xxxx xxxx xxxx
SharedQueue:xxxxx 0.1 xxxxx xxxxx xxxx xxxxx xxxx xx
Shrd ConDel:xxxxx 8.9 xxxxx xxxxx xxxxx xxxxx xxxxx xxxx
Shared LOS: * A * * * * * * * * * A *
ApproachDel: 8.9 xxxxxx xxxxx xxxxx
ApproachLOS: A * * *
***************************************
Note: Queue reported is the number of cars per lane.

FWOP Weekday	- AM	Th	u Jul 	5, 20	)18 15:	06:26				Page	2-1
			110 FWOP	)5 Lor - AM 7-5-	ng Beac Peak H -18	h our					
		Level O									
ICU 1	(Loss as C	/cle Le	ngth 8	s) Met	hod (F	uture	Volur	ne Alte	rnativ	ve)	
******	* * * * * * * * * * *	******	* * * * * *	*****	*****	****	* * * * * *	*****	*****	****	* * * * * *
Intersection											
***********					<u> </u>						
Cycle (sec): Loss Time (se	1 (	10			Critic Averag Level	al Vo.	L./Car	D.(X):		0.3	
Optimal Cycle		29			Averag	e Dela	ay (se	ec/veh)	:	XXXX	
**************************************			*****	*****	Level	UI Sei	cvice:	• • • • • • • •	<b></b>		A
	North Bo								We		
Movement:		– R	L -	.с. р - Т	– R	T	- Т	- R	т		– R
					1						
Control:	Permit	ted	I	Permit	ted		Permit	ted	·	Permit	tted
Rights:	Inclu	ıde		Inclu	ıde		Inclu	ıde		Inclu	ude
Min. Green:	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 0
Volume Module											
Base Vol:	5 65		15	80	11	6			32		
Growth Adj:				1.03	1.03			1.03		1.03	
Initial Bse:		52	15	82		6		13	33		27
Added Vol: PasserByVol:	0 4	3	0	2	0	0	12		1		(
Initial Fut:		0 55	0 15	0 84	0	_	0	-	0	0	0
User Adj:		1.00		1.00	11 1.00	1 00	251 1.00	13 1.00	34 1.00	305	27
PHF Adj:		1.00		1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume:		55	15	84	11	1.00	251	13	34	305	27
Reduct Vol:		0	0	0	0	0	2.51	10	0	0	2 /
Reduced Vol:		55	15	84	11	6	251	13	34	305	27
PCE Adj:		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
FinalVolume:	5 71	55	15	84	11	6	251	13	34		27
Saturation F											
Sat/Lane:				1600	1600		1600	1600		1600	
Adjustment:		1.00		1.00	1.00		1.00	1.00		1.00	
	1.00 0.57	0.43		0.88	0.12		0.95			0.92	
Final Sat.:		695		1411				81		1471	
Capacity Apa											
Capacity Ana Vol/Sat:			0 01	0 06	0 06	0 00	0 17	0 17	0.02	0 21	0 0'
Crit Moves:	****	0.00	****	0.00	0.00	****	0.1/	0.1/	0.02	U.ZI	0.21
**************************************											

FWOP Weekday	- AM 		u Jul 	5, 20	18 15:	06:26				Page	3-1
			110	5 Lon	g Beac Peak H	h our	×.				
		Level O				tion F	Report				
ICU 1	(Loss as Cy	vcle Le	ngth 🖁	) Met	hod (F	uture	Volum	e Alte	rnativ	re)	
*******					*****	* * * * * *	*****	*****	*****	****	****
Intersection											
***********											
Cycle (sec): Loss Time (se Optimal Cycle	1(	0			Critic	al Vol	L./Cap	· (X):		0.5	65
Loss Time (se	ec):	.0			Averag	e Dela	ay (se	c/veh)	:	XXXX	XX
Uptima⊥ Cycie ************	,	· * * * * * * * *	* * * * * *		Level	or sei	corce:	ىلى بىلا بىلا يەر بىلا بىلا			A
Approach: Movement:	North Bo L - T										
Control:											
Rights:	Inclu	ide	. 1	Inclu	ide	-	Inclu	ide		Inclu	ide
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	
Lanes:											
Volume Module	9:										
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
2	1.00 1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00
PHF Volume:		42	103	397	89	0	720	87		1127	115
Reduct Vol:		0	0	0	0	0	0	0	-	0	0
Reduced Vol:		42	103		89	-	720	87	-	1127	115
PCE Adj:		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
FinalVolume:		42		397	89	0	-	87	-	1127	115
Catumatian E						1					
Saturation F			1 600	1 6 0 0	1 000	1000	1 ( 0 0	1 ( 0 0	1 000	1	1 6 0 0
Sat/Lane: Adjustment:		1.00		1600 1.00	1600		1600			1600	1600
2	1.00 1.00			2.00	1.00 1.00		1.00		1.00	2.72	1.00
Final Sat.:				2.00		0.00			0.00		445
Sal.:										4555	440
Capacity Anal						1			1		
Vol/Sat:	-		0.06	0.12	0.06	0.00	0 17	0 17	0 00	0 26	0 26
Crit Moves:		0.14			0.00			0.11		****	0.20
	* * * * * * * * * * *										

FWOP Weekday											Page	4-1
				11( FWOP	)5 Lor - AM 7-5-	ng Beac Peak H	h our					
						Computa						
ICU 1	(Loss	as Cy	cle Le	ngth %	3) Met	chod (F	uture	Volun	ne Alte	rnativ	re)	
******						******	*****	*****	*****	* * * * * *	*****	******
Intersection	#553	Long	Beach	& 10tł	1							
*********	* * * * * *	1.0	0			~						
Cycle (sec): Loss Time (se Optimal Cycle		10 1 3	0 8	****		Critic Averag Level	e Dela Of Sei	ay (se rvice:	ec/veh)	:		XXX A
Approach:						ound						
Movement:											est Bo - T	
						1	[ <b>-</b>			1		
Control: Rights:	Pı	rotect Inclu	ed de	Pi	rotect Inclu	ted Ide 0	3	Permit Inclu	ted de	1	Permit Inclu	ted ide
Min. Green: Y+R:	1 0	1 0	4 0	1 0	1 0	4.0	0	0	0	0	0	0
			1 0			4.0						
Volume Module			'			1	ļ		1	1		1
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:			9	11	52	1	5	18	2	5	9	1
PasserByVol:			0	0	0	0	0	0	0	0	0	0
Initial Fut:		426	52	136	386	17	55		30	60	296	104
2	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00
	1.00		1.00 52		1.00	1.00		1.00	1.00		1.00	1.00
PHF Volume: Reduct Vol:	44	426 0	52	136 0	386 0	17 0	55 0	288 0	30 0	60 0	296 0	104 0
Reduced Vol:			52	136	386	17	55		30	60	296	104
PCE Adj:			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
FinalVolume:		426	52		386			288	30	60		104
										1		
Saturation F	low Mo	odule:										
Sat/Lane:			1600		1600			1600			1600	1600
Adjustment:			1.00		1.00	1.00		1.00			1.00	1.00
Lanes:			0.22		1.91	0.09		0.91			1.00	1.00
Final Sat.:			349		3061				150		1600	1600
Capacity Apa				1								
Capacity Anal Vol/Sat:	-			0 00	0 12	0 1 2	0 03	0 20	0 20	0.04	0 10	0 07
Crit Moves:	0.03		0.15		0.13	0.10	0.03	U.ZU ****	0.20	U.U4 ****	0.19	0.07
**********	* * * * * *	*****	*****	*****	*****	*****	****	****	*****		*****	******

FWOP Weekday	- AM	Th	u Jul	5, 20	)18 15:	06:26				Page	5-1
			110 FWOP	5 Lor - AM 7-5-	ng Beac Peak H	h our					
		Level O					Report				
ICU 1	(Loss as C	ycle Le	ngth 🖁	) Met	hod (F	uture	Volum	e Alte	rnativ	ze)	
********				*****	******	* * * * * *	*****	*****	*****	*****	* * * * * *
Intersection ******				****		+++++	. + + + + + +	****	*****		
					Critic					0.5	
Cycle (sec): Loss Time (s Optimal Cycl	- -	10			Averag	ai vui a Dala	/Cap	C(A):		V V V V	202
Optimal Cycl	a.	3 Q			Averag Level	Of Son	vice:	c/ven/		~~~~	7
************				* * * * * *	******	*****	· * * * * * *	*****	*****	*****	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Approach:	North B										
Movement:	L - T	- R	L -	- T	- R	L -	- Т	– R	L -	- т	– R
Control:											
Min. Green: Y+R:	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 (	) 2	0 1	0 (	) ()	0 0	1 (	) 3	0 1
									{		
Volume Modul											
Base Vol:			0	312	119	0	0	0	87	1157	72
Growth Adj:			1.03		1.03		1.03	1.03		1.03	1.03
Initial Bse:		-	0	321	123	0	0	0		1192	74
Added Vol:		-	0	56	3	0		0		55	1
PasserByVol:			-	0	0	0		0	-	0	0
Initial Fut:			0	-	126	0	-	0		1247	75
2	1.00 1.00		1.00		1.00		1.00	1.00		1.00	1.00
2	1.00 1.00		1.00		1.00		1.00	1.00		1.00	1.00
PHF Volume:		_	0	377	126	0	0	0		1247	75
Reduct Vol:		-	0	0	0	0	0	0	-	0	0
Reduced Vol:		-	0		126	0	-	0		1247	75
PCE Adj:			1.00		1.00			1.00		1.00	1.00
MLF Adj: FinalVolume:			1.00	377	1.00 126		1.00	1.00 0		1.00	1.00 75
Finalvorune:								-	106		
Saturation F			1			1		1	1		
Sat/Lane:	1600 1600	-	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:				1.00	1.00		1.00	1.00		1.00	1.00
Lanes:			0.00		1.00		0.00	0.00		3.00	1.00
Final Sat.					1600		0.00	0.00		4800	1600
Capacity Ana					1			1			
Vol/Sat:			0.00	0.12	0.08	0.00	0.00	0.00	0.07	0.26	0.05
Crit Moves:				****						****	
* * * * * * * * * * * *	* * * * * * * * * *	******	*****	****	******	*****	*****	*****	* * * * *	* * * * * *	******

FWOP Weekday	- AM	Th	u Jul	5, 20	18 15:	06:26				Page	6-1
			110	5 Lor	ng Beac Peak H	h					
		Level O	of Serv	rice (	Computa	tion H	Report				
ICU 1	(Loss as	Cycle Le	ngth %	) Met	hod (F	uture	Volum	ne Alte	rnativ	/e)	
******	******	*****	*****	****	*****	* * * * * *	* * * * * *	*****	*****	*****	*****
Intersection											
*********	*****	******	*****							*****	*****
Cycle (sec): Loss Time (se		100			Critic	al Voi	l./Cap	o.(X):		0.6	549
Loss Time (se	ec):	10			Averag	e Dela	ay (se	ec/veh)	:	XXXX	XXX
Optimal Cycle		44			Level	Of Se:	rvice:				В
*********											
Approach:	North	Bound	Sou	ith Bo	ound	Ea	ast Bo	ound	We		
Movement:										- T	
Control											
Control: Rights:	Term	lude			ide		Inclu			Inclu	
Min. Green:				0	iue 0	0	Incit	1de 0	0	INCIL	lae 0
Y+R:		0 4.0			4 0	4 0	1 0	4 0	4 0	1 0	
Lanes:		1 0									
Volume Module			1		I	1			1		
Base Vol:	67 40	5 15	68	379	111	62	281	27	41	336	105
Growth Adj:	1.03 1.0	3 1.03	1.03	1.03	1.03	1.03	1.03	1.03		1.03	1.03
Initial Bse:			70	390	114	64		28	42	346	108
Added Vol:	1 5	0 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:		7 17	70	427	115	70	315	30	43	359	108
User Adj:	1.00 1.0	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
	1.00 1.0	0 1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	70 46	7 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	427	115	70	315	30	43	359	108
PCE Adj:		1.447.1	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
FinalVolume:			70			70		30	43		108
					)						
Saturation F			1 ( ) (	1 600	1.000	1 6 9 6	1 6 9 6	1.000	1 6 9 5	1	4 .= 0 =
Sat/Lane:			1600		1600		1600	1600		1600	1600
Adjustment: Lanes:			1.00		1.00		1.00	1.00		1.00	1.00
Lanes: Final Sat.:	1.00 1.9			1.57	0.43		0.91			0.77	0.23
Final Sat.:			1600		680			138		1230	370
Capacity Anal			1					[			
	0.04 0.1		0 04	0.17	0 17	0 04	0 22	0.22	0 03	0 20	0.29
Crit Moves:	****	S U.IJ	0.04	U.I/	V. 17	****		0.22	0.03	U.29 ****	0.29
	******	******	*****	++++	*****						

						)18 15:					Page	
				11(	)5 Lor	ng Beac Peak H	h					
2******		CM Uns	signali	zed Me	ethod		tion H	Report ume Al	: Lternat		****	*****
Intersection ***********												
Average Dela	y (sea	c/veh)	:	0.5		Worst	Case 1	Level	Of Ser	vice:	A[ 8	3.9]
************ Approach: Movement:	Noi L -	rth Bo - T	ound - R	Sou L -	ith Bo - T	ound - R	Ea L -	ast Bo - T	ound - R	We L	est Bo T	ound - R
Control: Rights: Lanes:	Uno 0 (	contro Inclu 0 1!	olled 1de 0 0	Unc 0 (	contro Inclu ) 1!	olled ude 0 0	St 0 (	top Si Inclu ) 1!	ign 1de 000	St 0 (	top Si Inclu ) 0	ign 1de 0 1
Volume Modul Base Vol: Growth Adj: Initial Bse: Added Vol: PasserByVol: Initial Fut: Jser Adj: PHF Adj: PHF Volume: Reduct Vol: FinalVolume:	e: 2 1.03 2 0 0 2 1.00 1.00 1.00 2 0 2	53 1.03 55 14 0 69 1.00 1.00 1.00 69 0 69	3 1.03 3 0 0 3 1.00 1.00 3 0 3	1 1.03 1 0 0 1 1.00 1.00 1.00 1.00	51 1.03 53 6 0 59 1.00 1.00 1.00 59 0 59	1 1.03 1 0 0 1 1.00 1.00 1.00 1.00	2 1.03 2 0 0 2 1.00 1.00 1.00 2 0 2	0 1.03 0 0 0 1.00 1.00 1.00 0 0 0	3 1.03 3 0 0 3 1.00 1.00 3 0 3	0 1.03 0 0 0 1.00 1.00 1.00 0 0	0 1.03 0 0 0 0 1.00 1.00 1.00 0 0 0	1 1.03 0 0 1 1.00 1.00 1.00 1 0
Critical Gap Critical Gp: FollowUpTim:	Modu 4.1 2.2	le: xxxx xxxx	xxxxx xxxxx	4.1	xxxx xxxx	xxxxx xxxxx	7.1	6.5 4.0	6.2 3.3	xxxxx xxxxx	xxxx xxxx	6.2 3.3
Capacity Mod Cnflict Vol: Potent Cap.: Move Cap.: Volume/Cap:	ule: 60 1557 1557 0.00	xxxx xxxx xxxx xxxx	xxxxx xxxxx xxxxx xxxx	72 1541 1541 0.00	xxxx xxxx xxxx xxxx	XXXXX XXXXX XXXXX XXXXX	136 840 838 0.00	137 758 756 0.00	59 1012 1012 0.00	XXXX XXXX XXXX XXXX	xxxx xxxx xxxx xxxx	70 998 998 0.00
Level Of Ser 2Way95thQ: Control Del: LOS by Move: Movement: Shared Cap.:	0.0 7.3 A LT	XXXX XXXX + LTR	xxxxx xxxxx - RT	7.3 A LT	XXXX * - LTR	XXXXX + - RT	xxxxx *	XXXX * LTR	XXXXX XXXXX - RT XXXXX	XXXXX * LT	×××× * - LTR	
SharedQueue: Shrd ConDel: Shared LOS: ApproachDel:	××××× ××××× *	XXXX	xxxxx	××××× ××××× *	XXXX	xxxxx	XXXXX	0.0 8.9	××××× ××××× *	XXXXX	XXXX	XXXXX

						ng Beac Peak H						
				TWOI	7-5-		Our					
		т		f Com								
20	)00 нс	CM Uns	ignali	zed Me	ethod	Computa (Futur	e Volu	ime Al	lternat	ive)		
* * * * * * * * * * * *	*****	****	*****	* * * * * *	* * * * * *	*****	*****	****	*****	*****	*****	****
ntersection *********	#557	12th	& Alle	ey ******	*****	*****	*****	*****	******	*****	*****	****
verage Delay ******	/ (sec	/veh)	:	0.2		Worst	Case I	Level	Of Ser	vice:	A[ 8	3.4]
oproach:												
ovement:						– R					est Bo - T	
			·									
ontrol:	St	op Si	.gn	St	top Si	ign	Unc	contro	olled	Unc	contro	olled
ights: anes:		Inclu			Inclu	ude 00		Inclu			Inclu	
olume Module			'			1	1			1		
ase Vol:	0	0	1	0	0	0	0	29	5	0	5	
rowth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.0
nitial Bse:		0	1	0	0	0	0		5	0	5	
ded Vol:		0	0	0		0	0		+	0	11	
asserByVol:			0	0	0	0	0	0	0	0	0	
nitial Fut:		0	1 00	1 00	0 1.00	0	0	30		0	16	1 0
ser Adj: HF Adj:	1.00		1.00		1.00	$1.00 \\ 1.00$		1.00	1.00		1.00	
HF Volume:	0	0	1.00	0	0	1.00	1.00	30	1.00	00	16	1.0
educt Vol:	-			0	0	0	0	0		-		
inalVolume:			1			0	0	30		0		
ritical Gap ritical Gp:>			6 2			XXXXX						
ollowUpTim:						XXXXX						
apacity Modu	le:											
nflict Vol:			32	XXXX	XXXX	XXXXX	XXXX	XXXX	XXXXX	XXXX	XXXX	XXXX
otent Cap.:			1047			XXXXX			XXXXX		XXXX	
ove Cap.: olume/Cap:			$1047 \\ 0.00$			XXXXX XXXX			XXXXX XXXX		XXXX XXXX	
evel Of Serv	vice N	Aodule	e:									
Way95thQ:												
ontrol Del:>	XXXXX	XXXX	8.4	XXXXX	XXXX	XXXXX	XXXXX					XXXX
DS by Move:									*			
ovement: nared Cap.:						- RT						
naredQueue:												
ard ConDel:>												
nared LOS:		*				*		*		*		
pproachDel:		8.4			xxxxx		X	xxxxx		X	xxxxx	
oproachLOS: ********		А			*			*			*	

FWOP Weekday	- PM		Th	u Jul	5, 20	)18 15:	07 <b>:</b> 46				Page	2-1
						10	our					
		]	Level O	f Serv	vice (	Computa						
						chod (F						
* * * * * * * * * * * * * *					*****	******	* * * * * *	****	*****	* * * * * *	****	*****
Intersection												
* * * * * * * * * * * * * * * * * * * *	*****			*****	*****							
Cycle (sec):		T	00			Critic	ai voi	./Car	).(X):		0.4	
Loss Time (se		-				Average Level	e Dela	iy (se	ec/ven)	:	XXXX	
Optimal Cycle												A
						ound			ound		est Bo	
Movement:			– R			– R						
						1				1		
						ted						
Rights:		Inclu		-		ıde	-	Inclu	ıde	-	Incl	
Min. Green:	0		0	0		0			0	0	0	(
Y+R:		4.0				4.0						4.0
Lanes:	1 (	0 C	1 0			1 0			1 0			1 0
				[		!						
Volume Module	2:											
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	(
PasserByVol:		0	0	0	0	0	0	0	0	0	0	(
Initial Fut:	12	129	35	35	107	15	15	339	24	23	368	33
2	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
PHF Volume:	12	129	35	35	107	15	15	339	24	23	368	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	(
Reduced Vol:	12		35	35	107	15	15	339	24	23	368	3:
PCE Adj:		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
FinalVolume:		129	35	35	107	15		339	24	23	368	33
 Saturation F				1		)						
Sat/Lane:		1600		1600	1600	1600	1600	1600	1600	1600	1600	1 600
Adjustment:		1.00	1.00		1.00	1.00		1600 1.00	1600		1600	1600
Lanes:		0.79	0.21		0.87	0.13		0.93	$1.00 \\ 0.07$		1.00	1.00
Final Sat.:		1258			1398	202		1495	105		1469	13
Sat.:											1409	13.
Capacity Ana							1			1		
	-			0.02	0.08	0.08	0.01	0.23	0 23	0 01	0.25	0.25
Crit Moves:	0.01	****	0.10	****	0.00	0.00	****	0.20	0.25	0.01	****	0.2.
***********	+++++		* * * * * * *		* * * * *	******			ل ال ال ال ال ال ال			

FWOP Weekday	– PM	Tł	nu Jul	5, 20	)18 15:	07:46			P	age	3-1
			11( FWOP	)5 Lor - PM 7-5-	ng Beac Peak H -18	h our					
тсп 1		Level ( s Cycle Le	Of Serv	vice (	Computa	tion H	Report				
*******											* * * * * *
Intersection	#552 Lo	ong Beach	& Anal	neim							
**********											
Cycle (sec):		100			Critic	al Vol	L./Cap	).(X):		0.7	30
Loss Time (se	ec):	10			Averag	e Dela	ay (se	ec/veh)	:	XXXX	XX
Cycle (sec): Loss Time (se Optimal Cycle	e:	54			Level	Of Sei	rvice:				С
**********	* * * * * * * *	*******	*****	* * * * * *	*****	*****	*****	*****	******	****	*****
		h Bound									
Movement:	, L -	'1' - R	L -	- T	– R .	L -	- T	- R .	L -	Т	– R .
Control	Drod	togtod	 D.								
Control: Rights:	PIO Tr	nclude	Ρ.	Inclu	ıde	1	Inclu	. Lea	re T	nclu	de
Min. Green:	0		0		Jue	0	THCT	IDE		neru	.ae 0
Y+R:	1 0	4.0 4.0	1 0	1 0	1 0	1 0	4 0	1 0	1 0	1 0	
Lanes:											
Lanes.											-
Volume Module			1 1		I	ţ		1			1
Base Vol:		483 85	159	384	63	0	1251	75	0	630	110
Growth Adj:				1.03	1.03		1.03		1.03 1		1.03
Initial Bse:		497 88	164	396	65		1289	77		649	113
Added Vol:		89 4	17	106	24		90	10	0	92	14
PasserByVol:		0 0	0	0	0		0	0		0	0
Initial Fut:		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
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
											1
Saturation F	low Mod	ule:									
Sat/Lane:		600 1600	1600	1600	1600	1600	1600	1600	1600 1	600	1600
Adjustment:				1.00			1.00		1.00 1		1.00
Lanes:				2.00			2.82		0.00 2	.56	0.44
Final Sat.:				3200		0			0 4		704
Capacity Ana	-			_							
Vol/Sat:										.18	0.18
Crit Moves:		* * *							****		
******	* * * * * * *	******	* * * * * *	* * * * *	* * * * * * *	****	* * * * * *	* * * * * * *	******	****	*****

FWOP Weekday					07:46		Page		
			1105 Lo FWOP - PN	ong Beac	h				
	I	evel O	f Service	Computa	tion Report	_			
ICU 1	(Loss as Cy	cle Le	ngth %) Me	ethod (F	uture Volur	ne Alte:	rnative)		
********				******	*******	*****	*******	*****	
Intersection				*******	****		*****	*****	
Loss Time (s	ec): 1	0		Averag	e Delav (se				
Cycle (sec): 100 Loss Time (sec): 10 Optimal Cycle: 57				Level	C C				
*******	* * * * * * * * * * *	*****	* * * * * * * * *	******	*****	- * * * * * * * *	* * * * * * * * * * *	******	
Approach:	South 1								
Movement:	vement: L - T - R		L – T –		L – T	- R	L – T – R		
		·!							
Control:	Protected Include		Prote	cted	Permit	ted	Permitted		
Min Green:	Include 0 0 0 4.0 4.0 4.0		Include			ae	Include 0 0 0		
MIN. GIEEN. Y+R•	4 0 4 0	4 0	4 0 4		4 0 4 0	1 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 Modul									
Base Vol:	79 569	68	152 32	4 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	
Initial Bse:		70	157 33		87 391	28	50 319	123	
Added Vol:		9 0	10 9		4 14	1	12 20	4	
PasserByVol: Initial Fut:		79	167 42	• •	0 0 91 405	0 29	0 0 62 339	0 127	
	1.00 1.00	1.00	1.00 1.0		1.00 1.00	1.00	1.00 1.00	1.00	
2	1.00 1.00	1.00	1.00 1.0		1.00 1.00	1.00	1.00 1.00	1.00	
PHF Volume:		79	167 42		91 405	29	62 339	127	
Reduct Vol:		0	0	0 0	0 0	0	0 0	0	
Reduced Vol:		79	167 42	9 2.4	91 405	29	62 339	127	
PCE Adj:		1.00	1.00 1.0		1.00 1.00		1.00 1.00	1.00	
MLF Adj:		1.00	1.00 1.0				1.00 1.00	1.00	
FinalVolume:		79	167 42		91 405		62 339	127	
Saturation F			1						
Sat/Lane:		1600	1600 160	0 1600	1600 1600	1600	1600 1600	1600	
Adjustment:		1.00	1.00 1.0		1.00 1.00		1.00 1.00	1.00	
2	1.00 1.79	0.21	1.00 1.9		1.00 0.93		1.00 1.00		
Final Sat.:		338	1600 303		1600 1494		1600 1600		
<b>-</b> -									
Capacity Ana	-								
	0.05 0.23	0.23		4 0.14	0.06 0.27		0.04 0.21	0.08	
Crit Moves: ******				******				* * * * * * *	

				5 Lor	ng Beacl Peak Ho -18	n our							
	I	evel 0	f Serv	vice (									
				*****	******	* * * * * *	****	*****	* * * * * *	* * * * *	*****		
****			*****	*****									
(sec): 100					Critic	11  Vol./Cap.(X):				0.468			
Loss Time (sec): 10				Average Delay (sec/veh)					: XXXXXX				
											A		
ь -	T.	- к	ь - Г-	- T.	- K	ь- ,	- 'T'	- к	ь - ,	- T	– K		
		Protected			Permitted			Permitted					
							Include 0 0 0						
				1 0	4 0	4 0	1 0	1 0	4 0				
		1				1		1	1				
	553	0	0	283	50	Ο	0	Ω	82	575	108		
											1.03		
											111		
			-					-	-		3		
							-				0		
	_	-	-		-	-	-			-	114		
			-			-		-	-		1.00		
											1.00		
											114		
		_	-			-	-	-			0		
-		-	-		*	-	-	-			114		
			-				-	-			1.00		
											1.00		
		0									114		
		-											
ow Mo	odule	8						'					
1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600		
1.00	1.00	1.00			1.00			1.00			1.00		
					1.00						1.00		
					1600			0			1600		
ysis	Modu	le:											
-			0.00	0.16	0.04	0.00	0.00	0.00	0.08	0.14	0.07		
****				****						****			
	***** #554 ***** c): : ***** Non L  Pr 0 4.0 1 ((  : 109 1.03 112 124 1.00 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.24 1.00 1.00 1.24 1.00 1.00 1.24 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0	Loss as Cy *********** #554 Long ************************************	Loss as Cycle Ler ************************************	Loss as Cycle Length % ************************************	Level Of Service O Loss as Cycle Length %) Met ************************************	Level Of Service Computations as Cycle Length %) Method (Final Loss as Cycle Length %) Method (Final South Structures and the service of the	Level Of Service Computation F Loss as Cycle Length %) Method (Future ************************************	Level Of Service Computation Report Loss as Cycle Length %) Method (Future Volum ************************************	Level Of Service Computation Report Loss as Cycle Length %) Method (Future Volume Alte #554 Long Beach & 7th ************************************	Level Of Service Computation Report Loss as Cycle Length %) Method (Future Volume Alternativ ************************************	Level Of Service Computation Report Loss as Cycle Length %) Method (Future Volume Alternative) #554 Long Beach & 7th ************************************		

FWOP Weekday											Page	
				110	)5 Lor	ng Beac Peak H	h					
		тт	orrol O	f Com	ri oo (	Computa	tion T	lonont				
TCH 1(	Loss					chod (F		-		rnativ		
***********												*****
Intersection	#555	Atlar	tic & 1	10th								
*******												
Cycle (sec):		10	0			Critic	al Vol	./Car	o.(X):		0.7	21
Loss Time (se	ec):	1	.0			Averag	e Dela	iy (se	ec/veh)	:	XXXX	XXX
Cycle (sec): Loss Time (se Optimal Cycle	:	5	3			Level	Of Sei	vice:				С
*******	****	*****	******	* * * * * *	*****	*****	*****	*****	*****	* * * * * *	*****	*****
Approach:						ound					est Bo	
Movement:												
Control:	]	Permit	ted	I	Permit	ude 0 4.0	ł	Permit	ted	F	Permit	ted
Rights:		Inclu	ıde		Inclu	ıde		Inclu	ıde		Inclu	ıde
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	, T (	) T	1 0	(	0 0	T U	(	0 0	I O
Volume Module									{			
	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
Initial Bse:			49	124	550	134	101	467	39	33	286	88
Added Vol:			2	0	68	2	5	23	2	2	32	0
PasserByVol:			0	Ő	0	0	Ő	0	0	0	0	0
Initial Fut:			51	124	618	136	106		41	35	-	88
	-	1.00	1.00		1.00	1,00		1.00	1.00		1.00	1.00
2	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
PHF Adj: PHF Volume: 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:			51	124		136	106		41	35		88
Saturation Fl				1 6 0 0	1 60.0	1 600	1 6 0 0	1 60.0	1 600	1 600	1 60 0	1 60 0
Sat/Lane:					1600			1600			1600	
Adjustment: Lanes:			1.00 0.17		1.00			1.00			1.00	1.00
					2623						1255	345
Final Sat.:									124			340
Capacity Ana							1					
Vol/Sat:				0.08	0.24	0.24	0.07	0.33	0.33	0.02	0.25	0.25
Crit Moves:	0.02	****	0.10			0.2.4		****	0.00	****	0.20	0.20
*********	* * * * *	****	******	****				****	* * * * * * *	*****	* * * * *	* * * * * * *

						ng Beac						
				FWOP		Peak H	lour					
					7-5-	-18						
		1	Level (	)f Serv	vice (	lomputa	tion F	Report	-			
20	000 но		signali			-		-		ive)		
* * * * * * * * * * * *											*****	*****
Intersection												
* * * * * * * * * * * * *												
Average Delay												
	No							ast Bo			est Bo	
Movement:				T	асн во - Т	ound – R						
							1			1		
Control:	Uno	contro	olled	Unc	contro	olled	St	top S:	lgn	St	op Si	lgn
Rights:		Inclu	ude 0 0		Inclu	ıde		Inclu	ıde		Inclu	ıde
Lanes:	0 0	) 1!	0 0	0 1	LΟ	0 0	0 (	) 1!	0 0.	0 0	) 1!	0 0
Volume Module			4	0	4.0	0	1	0		1	0	0
Base Vol: Growth Adj:			4				1		4 1.03			-
Initial Bse:			1.03			1.03 0	1.03			1.03		1.03 3
Added Vol:				0		0	0		_		-	0
PasserByVol:	0	0	0	0	0		Ő	-			Ő	Ő
Initial Fut:			4		62	0	1	0		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
	2		4	2		0	1	0		1		3
Reduct Vol:	0	0	0 4	0	0	0	0	0	0			0
FinalVolume:						0			-		0	3
Critical Gap				1			l			l r		1
Critical Gp:	4.1	XXXX	XXXXX	4.1	XXXX	XXXXX	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:											4.0	3.3
Capacity Mod												
Cnflict Vol:												92
Potent Cap.: Move Cap.:						XXXXXX					733 731	970 970
Volume/Cap:						XXXXX		0.00			0.00	
Level Of Ser												
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					XXXX	XXXXX
LOS by Move:	A		*	A		*	*	*	*	*	*	*
Movement:		- LTR			- LTR			- LTR			- LTR	
Shared Cap.: SharedQueue:						XXXXX	XXXX		XXXXX			XXXXX
Shrd ConDel:						XXXXX XXXXX			XXXXX XXXXX			XXXXX XXXXX
Shared LOS:	*	*	*	7.4 A		*	*	0.0 A		*	0.9 A	*
ApproachDel:	X	xxxxx			xxxxx			8.8			8.9	
ApproachLOS:		*			*			А			A	
*******									* * * * * *	* * * * * *	*****	* * * * * * *
Note: Queue												
*******	* * * * *	****	*****	* * * * * *	* * * * *	* * * * * * *	*****	****	*****	*****	* * * * *	* * * * * * *

					- PM 7-5-	ng Beac Peak H -18	lour					
					vice (	Computa	ation H	Report	2			
20 *****	)00 HC	CM Uns	signali	.zed Me	ethod	(Futur	re Volu	ime Al	lternat	cive)		
ntersection					****	*****	*****	*****	*****	*****	*****	****
******	*****	*****	*****	- x : * * * * * * *	*****	*****	*****	*****	*****	******	*****	****
verage Delay	/ (sec	c/veh)	:	0.4		Worst	Case I	Level	Of Ser	rvice:	A[ 8	3.5]
**********												
pproach: ovement:	NO1	стп ВС - т	ouna _ p	SOL	17N B0	ound	т	ist Bo	bund	W e	est Bo	bund
		- 1 	- K		- 1	- K	- u 	- 1	- к	- L 	- T	- R
ontrol:	St	i2 ao:	_qn	St	zop Si	ian	Und	contro	olled	Unc	contro	blled
ights:		Inclu	ide		Inclu	ıde		Inclu	ıde		Inclu	ıde
anes:	0 0	) 1!	0 0	0 (	0 (	1de 0 0	0 (	) ()	1 0	0 (	) 1	0 0
									·	!		
olume Module												
ase Vol:									1		7	
rowth Adj:												
nitial Bse:				0	0	0	0	18			7	1
dded Vol: asserByVol:	0	0	0	0	0	0 0	0	0	0	0	14	
						0	0	0	0	0		1
nitial Fut:				0			0			0	21	1 0
ser Adj: HF Adj:	1.00	1.00	1.00	1.00						1.00		1.0
HF Volume:			1.00	1.00 0			1.00			1.00		1.0
educt Vol:										0		
inalVolume:	1	0	1	0 0	0	0		18		0		
ritical Gap												
ritical Gp:	6.4	6.5	6.2	XXXXX	XXXX	XXXXX	xxxxx	XXXX	XXXXX	xxxxx	XXXX	XXXXX
ollowUpTim:	3.5	4.0	3.3	XXXXX	XXXX	XXXXX	XXXXX	XXXX	XXXXX	XXXXX	XXXX	XXXX
										<b>-</b>		
apacity Modu												
nflict Vol:						XXXXX					XXXX	
otent Cap.:						XXXXX			XXXXX		XXXX	
ove Cap.: olume/Cap:			1066			XXXXX XXXX					XXXX	
									XXXX		XXXX	
evel Of Serv												
Way95thQ:			xxxxx	XXXX	XXXX	xxxxx	XXXX	xxxx	xxxxx	XXXX	XXXX	XXXX
ontrol Del:>												
OS by Move:	*	*	*	*	*	*	*	*	*	*	*	
ovement:	LT =	LTR	- RT	LT ·	- LTR	- RT	LT =	LTR	- RT	LT ·	- LTR	- RT
hared Cap.:	xxxx	1020	XXXXX	XXXX	xxxx	XXXXX	XXXX	xxxx	xxxxx	XXXX	xxxx	XXXX
haredQueue:>	xxxx					XXXXX						
hrd ConDel:>		8.5			XXXX	XXXXX	XXXXX	xxxx	xxxxx	XXXXX	xxxx	XXXX
hared LOS:	*	А	*	*	*	*	*	*	*	*	*	
pproachDel:		8.5		X	XXXXX		X	XXXXX		XX	XXXXX	
pproachLOS: **********	المنابيك بكريا	A		<u>ан на звата се с</u>	*		hallanda at the	*			*	

						g Beac eak Ho 18						
ICU 1(	Loss	as Cy	cle Le	ngth 8	b) Met	Computa hod (F	uture	Volum	e Alte	rnativ	ve)	
**************************************	#551	Pine	& 10th									
Cycle (sec): Loss Time (se Optimal Cycle	c):	10 1 2	0 .0 .9			Critic Averag Level	al Vol e Dela Of Sei	L./Cap ay (se cvice:	0.(X): ec/veh)	:	0.4 xxxx	100 XXX A
Approach: Movement:	Nor L -	th Bo T	ound - R	Sou L -	ith Bo - T	ound – R	Ea L -	ast Bo - T	ound - R	₩e L -	est Bo - T	ound - R
Rights: Min. Green: Y+R: Lanes:	P 0 4.0 1 0	Permit Inclu 0 4.0	ted ide 0 4.0 1 0	0 4.0 1 (	Permit Inclu 0 4.0	ted ide 0 4.0 1 0	0 4.0 1 (	Permit Inclu 0 4.0	ted ide 0 4.0 1 0	0 4.0 1 (	Permit Inclu 0 4.0	ted 1de 0 4.0 1 0
Volume Module Base Vol: Growth Adj: Initial Bse: Added Vol: PasserByVol: Initial Fut: User Adj: PHF Adj: PHF Volume: Reduct Vol: Reduced Vol: PCE Adj: MLF Adj: FinalVolume:	5 1.03 5 0 0 5 1.00 1.00 5 1.00 1.00 5 1.00 5 5	65 1.03 67 5 0 72 1.00 1.00 72 0 72 1.00 1.00 1.00 72	$50 \\ 1.03 \\ 52 \\ 3 \\ 0 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 0 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 1.00 \\ 1.00 \\ 55 \\ 1.00 $	15 1.03 15 0 0 15 1.00 1.00 1.00 1.00 1.00 1.00	80 1.03 82 2 0 84 1.00 1.00 84 0 84 1.00 1.00 84	11 1.03 11 0 0 11 1.00 1.00 11 1.00 1.00 1.00 1.1	6 1.03 6 0 6 1.00 1.00 6 1.00 1.00 6	232 1.03 239 12 0 251 1.00 1.00 251 1.00 1.00 251	13 1.03 13 0 13 1.00 1.00 13 1.00 1.00 1.00 1.00 1.3	32 1.03 33 1 0 34 1.00 1.00 34 0 34 1.00 1.00 34	287 1.03 296 9 0 305 1.00 1.00 305 1.00 1.00 305	26 1.03 27 0 27 1.00 1.00 27 0 27 1.00 1.00 27
Saturation Fl	ow Mc 1600 1.00 1.00 1600  ysis 0.00	dule: 1600 1.00 0.57 910 	1600 1.00 0.43 690   e: 0.08	1600 1.00 1.00 1600 (	1600 1.00 0.88 1411 0.06	1600 1.00 0.12 189 	1600 1.00 1.00 1600 1 0.00 ****	1600 1.00 0.95 1519 0.17	1600 1.00 0.05 81 0.17	1600 1.00 1.00 1600 	1600 1.00 0.92 1471	1600 1.00 0.08 129

EWP Weekday -	- AM	Th	u Jul	5, 20	18 15:	37:03				Page	3-1
			110 FWP-	05 Lon • AM P 7-5-	g Beac eak Ho	h ur					
	I	evel O									
	Loss as Cy										
*************** Intersection	#552 Long	Beach	& Anab	neim							
************											
Cycle (sec): Loss Time (se Dptimal Cycle	1	0			Averag	al voi a Dala	./Cap	(X):		0.5	
Loss Ilme (Se		.0			Averag	e nera	ly (Se	ec/ven)		XXXX	A
**************************************	*********	)0 :*****	*****	*****	T6A6T	******	*****	******	*****	*****	
	North Bo										
Movement:											
		1	1		1				1		
Control: Rights:	Protect	ed	Pı	rotect	ed	E	Permit	ted	1	Permit	ted
Rights:	Inclu	ıde		Inclu	ıde		Inclu	ıde		Inclu	ıde
Aights: Ain. Green: (+R:	0 0	0	0	0	0	0	0	0	0	0	C
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
	1 0 1										
								t			
Volume Module						0	605				4.0-
Base Vol:			83	329	56	0	625			1037	105
Growth Adj:				1.03	1.03		1.03			1.03	1.03
Initial Bse:		38	85	339	58	0	644	82		1068	108
Added Vol:		4	18 0	61 0	31 0	0	82 0	8	-	61	7
PasserByVol: Initial Fut:		0 42	103	400	89	0	726	0 90	0	0 1129	0 115
	1.00 1.00	42		1.00	1.00		1.00	1.00	-	1.00	1.00
2	1.00 1.00	1.00	1.00		1.00		1.00	1.00		1.00	1.00
PHF Volume:		42	103	400	89	1.00	726	90		1129	115
Reduct Vol:	0 0	-2	0	001	0	0	,20	0		0	11.
Reduced Vol:		42	103		89		726		-	1129	115
PCE Adi:		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
FinalVolume:		42		400	89		726			1129	11!
Saturation F	Low Module:	:									
Sat/Lane:				1600	1600		1600			1600	
Adjustment:				1.00	1.00		1.00			1.00	
Lanes:				2.00	1.00		2.67			2.72	
Final Sat.:				3200		0				4356	444
Capacity Ana Vol/Sat:	-		0 06	0 1 2	0.06	0 00	0 17	0 17	0 00	0.26	0 24
Crit Moves:		0.14		U.IZ				0.1/		U.20	0.20
LILC MOVES:								* * * * * * *			

FWP	Weekday	-	AM

rwr weekday -						10 10:					Page	
				110	)5 Lor	ng Beac Peak Ho	h					
						Computa						
									ne Alte			
***********						* * * * * *	* * * * * *	*****	******	*****	****	* * * * * *
Intersection *********						*****	* * * * * *	(*****	*****	* * * * * *	****	* * * * * *
Cycle (sec):		10							o.(X):		0.5	
Loss Time (se	ec):							~				
Optimal Cycle	е:	3	8			Level	Of Sei	vice:				A
*****												
Approach:	NO:	rth Bc	ound	Sou	ith Bo	ound	Ea	ist Bo	bund	We	est Bo	ound
Movement:	· با ا	T.	- R	- L 	- T	- K	- L 	- T	- R	ь –	· 'T'	- R
Control:	P	rotect	.ed	י – – די	rotect	.ed	1	Permit	ted		Permi	tted
Rights:		Inclu	ide		Inclu	ıde	-	Inclu	ted ide	L	Incl	ude
Min. Green:		0	0		0			0			0	0
Y+R:	4.0	4.0	4.0						4.0		4.0	4.0
Lanes:			1 0						1 0			0 1
						(						
Volume Module Base Vol:	e: 42	343	42	121	324	16	49	262	27	53	279	100
Growth Adj:			1.03		1.03	1.03		1.03		1.03		100 1.03
Initial Bse:		353	43	125	334	16	50	270	28	55	287	103
Added Vol:	1		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:			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
PHF Adj: PHF Volume:	1.00	1.00 427	1.00	1.00	1.00	1.00		1.00	1.00	1.00		1.00
Reduct Vol:	44		52 0	142	389 0	17 0	55 0	289 0	30 0	60 0	296 0	104 0
Reduced Vol:			52	142	389	17	55	289	30	60	296	104
	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:			52	142		17		289		60		
							!					
Saturation F. Sat/Lane:		odu⊥e: 1600	1600	1600	1600	1600	1600	1600	1600	1600	1 6 0 0	1 ( 0 0
Adjustment:			1.00		1600	1600 1.00		1600 1.00		1600 1.00		
Lanes:			0.22		1.91	0.09		0.91		1.00		
Final Sat.:			349		3062			1450		1600		
									I			
Capacity Ana												
Vol/Sat:			0.15						0.20		0.19	0.07
Crit Moves:								****	* * * * * * *	****		

rwr weekday -			'T'N	u Jul	5, 20	118 12:	37:03				Page	5-1
						ng Beac Peak Ho -18						
TCU 1	LOSS		Level O			-		-	t ne Alte	rnatiz		
******												* * * * * * *
Intersection ********					*****	*****	* * * * * *	****	* * * * * * *	* * * * * *	****	* * * * * * *
Cycle (sec):			00						p.(X):		0.	
Loss Time (se Optimal Cycle			10 39			Averag Level		-	ec/veh)	:	XXX	
***********				* * * * * *						*****	****	A * * * * * * *
Approach:											est B	
Movement:	L -	<b>-</b> T	- R	L -	- T	- R	L -	- Т	- R	L -		- R
Control:												
Rights:	r	Incl	ted ide	r.	Inclu	ide	1	Inclu	ıde	1	ermi? Incl	
Min. Green:	0		0	0		0		0	0	0		
Y+R:			4.0		4.0				4.0		4.0	
Lanes:			0 0			0 1			0 0			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	
Initial Bse: Added Vol:	157 12	300 82	0 0	0	321 58	123	0	0	0		1192	
PasserByVol:	12		0	0	58	4 0	0	0	0 0	16 0	55 0	
Initial Fut:		382	0	0	379	127	0	Õ	0		1247	-
User Adj:		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	
PHF Volume: Reduct Vol:	169 0	382 0	0 0	0	379 0	127 0	0	0	0	106 106	1247	
Reduced Vol:	_	-	0	0	379	127	0	0	0		1247	0
PCE Adj:		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	
FinalVolume:			0	0		127	0	0	0		1247	75 l
Saturation F				1			1		[	1		
Sat/Lane:	1600	1600		1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:		1.00	1.00		1.00	1.00		1.00			1.00	
Lanes: Final Sat.:		2.00	0.00		2.00 3200	1.00 1600	0.00	0.00			3.00	
			-							1	4000	
Capacity Ana	lysis	Modu	le:	,								1
Vol/Sat:	0.11	0.12	0.00	0.00	0.12	0.08	0.00	0.00	0.00	0.07	0.26	
Crit Moves:	***										***	

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	4 11 1										Laye	U 1
				110	)5 Lor	ng Beac Peak Ho	h					
		 La	evel O	f Sert	vice (	Computa	tion F	Report				
ICU 1		as Cy	cle Le	ngth 🖁	s) Met	chod (F	uture	Volur	ne Alte			*****
Intersection	#555 Æ	Atlan	tic &	10th								
Cycle (sec): Loss Time (se Optimal Cycle	ec):	10 1 4	0	****		Critic	al Vol e Dela	l./Cap ay (se	o.(X): ec/veh)		0.0 xxxx	650
*****												
Movement:	L –	Т	- R	L -	- т	- R	г -	- T	ound – R	ь –	st Bo T	– R
Control: Rights:	P€	ermit	 ted de	I	Permit	 tted ude	]	Permit	 ted ude	F	ermit Inclu	tted
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Y+R: Lanes:	1 0	1	4.0 1 0	1 (	4.0 ) 1	1 0	1 (	0 C	1 0	1 0		4.0 1 0
Volume Module												
Base Vol:	67	405	15	68	379	111	62	281	27	41	336	105
Growth Adj: Initial Bse:		1.03 417	1.03 15	1.03	1.03 390	$1.03 \\ 114$	1.03 64	1.03	1.03 28	1.03		1.03
Added Vol:	69 1	417 50	15	0	390	1	64 6	289	28	42 1	346 14	108 0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:		467	17	70	427	115	70	316	31	43	360	108
User Adj:	1.00 1		1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00 1		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: Reduced Vol:	0 70	0 467	0 17	0 70	0 427	0 115	0 70	0 316	0	0 43	0	0
	1.00 1		1.00		427	1.00		1.00	31 1.00	43	360	108 1.00
MLF Adj:	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 F.												
Sat/Lane:	1600 1	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
Lanes:	1.00		0.07		1.57			0.91		1.00		
Final Sat.:			115 		2520	680 		1458	142	1600	1230	370
Capacity Ana	lysis N	Modul	e:						,			
	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: ****		****	* * * * * *	*****		* * * * * * *		* * * * *	* * * * * * *	*****		*****

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I'WI WEEKUAY -	- AM		11	iu Jui	5, 20	10 10:					-	
						ng Beac Peak Ho	ch					
						Computa						
		CM Uns	signali	zed Me	ethod	(Futu	re Volu	ıme Al	lternat			
* * * * * * * * * * * * *	* * * * * *	****	*****	*****	*****	******	*****	*****	*****	*****	*****	*****
Intersection												
* * * * * * * * * * * * * *												
Average Delay	* * * * * *	****	*****	******	*****	*****	*****	*****	*****	*****	*****	*****
Approach:	Nor	th Bo	ound	Sou	ith Bo	ound	Εa	ast Bo	ound	We	est Bo	ound
Movement:	L -	- T	- R	L -	- T	- R	L -	- Т	- R	L -	- T	- R
Control:	Unc									St	cop S:	lgn
Rights: Lanes:	0 0	Inclu		0 0		ide	0	Inclu	lae	0 (	Inclu	ide
	U (	/ I !	0 0		) 1:	0 0		) 1!	0 0		11	0 0
Volume Module							11					
Base Vol:	2	53	3	1	51	1	2	0	3	0	0	1
Growth Adj:									1.03		1.03	_
Initial Bse:			3	1.05	53	1.05				1.05		1.03
Added Vol:		14	1	0		0	0		0	2		0
PasserByVol:			0	0		0	0	-	0			C
Initial Fut:			4	1		1	2	0	3	2	1	1
Jser Adj:					1.00				1.00		1.00	_
PHF Adj:					1.00			1.00			1.00	1.00
PHF Volume:			4	1		1			3	2		1
Reduct Vol:	0	0	0	0	0	0	0	0				0
FinalVolume:	2	69			59	1			3	2		1
Critical Gap												
Critical Gp:	4.1	XXXX	XXXXX	4.1	XXXX	XXXXX	7.1	6.5	6.2	7.1		
FollowUpTim:									3.3			3.3
 Capacity Modu												
Cnflict Vol:				73			137	138	59	137	136	71
Potent Cap.:											758	998
Nove Cap.:											757	998
/olume/Cap:								0.00			0.00	
level Of Serv	vice N	lodule	9:							• •		
2Way95thQ:	0.0	xxxx	XXXXX	0.0	xxxx	XXXXX	XXXX	XXXX	XXXXX	XXXX	XXXX	XXXXX
Control Del:			XXXXX						XXXXX			
LOS by Move:	А	*	*	A	*	*	*	*	*	*	*	×
lovement:			- RT			- RT		- LTR	- RT	LT	- LTR	- RT
Shared Cap.:									XXXXX	XXXX	848	XXXXX
haredQueue:									XXXXX		0.0	XXXXX
Shrd ConDel:									XXXXX	XXXXX		XXXXX
Shared LOS:	*	*	*	*	*	*	*	n	*	*	A	ł
ApproachDel:	XX	XXXX		X	XXXXX			8.9			9.3	
		*			*			A			А	
ApproachLOS:	<b></b>	د ب ب ب	المالم الجريان بال	ا ، عام علم علم علم عل	د بد باد باد	المراجع المراجع الم	· · · · · · · · ·			Electron A. A.		
ApproachLOS:								* * * * *	* * * * * * *	*****	* * * * *	* * * * * *

тыр меекдау	- AM		Tr	iu Jul	э, 2l	18 12:					Page	
						ng Beac Peak Ho -18	ch					
			orre 1 . (									
20	000 но		Level ( signali			~		-	: Lternat	ive)		
*****											*****	*****
Intersection												
* * * * * * * * * * * * * *												
Average Delay												
Approach:			ound								est Bo	
Movement:	L -	- Т	– R	L -	- т	– R	Ц -	- Т	- R	L -	- T	- R
									olled	Und		
Rights:			ıde			ıde			ıde	<u> </u>	Inclu	
Lanes:									1 0		L O	
Volume Module										1		
Base Vol:	e: 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
Initial Bse:		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
2	1.00		1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
2	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
	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:		0	1.0	0	0	0	0	30		6	16	0
Critical Gap	'			1 1			1.1					
Critical Gp:			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 Mod												
Cnflict Vol:			35			XXXXX			XXXXX			XXXXX
Potent Cap.:		832	1044			XXXXX			XXXXX			XXXXX
Move Cap.: Volume/Cap:		828	1044 0.01			XXXXX			XXXXX			XXXXX
								XXXX				××××
Level Of Ser				1 1			1 1					
2Way95thQ:			xxxxx	XXXX	XXXX	XXXXX	XXXX	xxxx	XXXXX	0.0	xxxx	xxxxx
Control Del:												XXXXX
LOS by Move:	*	*	*	*	*	*	*	*	*	А	*	*
Movement:	LT ·	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT	LT	- LTR	- RT
Shared Cap.:			XXXXX			XXXXX			XXXXX			XXXXX
SharedQueue:									XXXXX			XXXXX
Shrd ConDel:	XXXXX *		XXXXX *	××××× *	XXXX *	XXXXX *	XXXXX *	XXXX *	xxxxx *			XXXXX
Shared LOS:	*	A o o	*			*			*	A		*
ApproachDel: ApproachLOS:		8.8 A		X	XXXXX *		X	XXXXX *		х	*****	
************	****		*****	*****		*****	*****	*****	*****	*****		*****
Note: Queue												
*****									*****	*****	****	*****

FWP Weekday -												
						g Beac						
				EWP -	- PM P 7-5-	eak Ho	ur					
			evel O									
ICU 1	(Loss		cle Le			-		-		rnativ	ve)	
* * * * * * * * * * * *												*****
Intersection	#551	Pine	& 10th									
* * * * * * * * * * * * *	*****											
Cycle (sec):		10	0			Critic	al Vol	./Car	).(X):		0.4	186
Loss Time (se Optimal Cycle	ec):	1	0			Averag	e Dela	ay (se	c/veh)	:	XXXX	XXX
		3	0 0 3			Level	Of Sei	vice:				A
* * * * * * * * * * * * *		*****	* * * * * *	* * * * * *	*****	*****	*****	*****	*****	*****	*****	****
Approach:	Noi	cth Bo	und	Sou	ith Bo	und	Εa	ast Bo	ound	Ŵ€	est Bo	ound
Movement:	L -	- T	- R	_ L -	- T	- R	L -	- T	– R	L -	- T	– R
				I		·						
Control:				ł	rermit	tea	1	ermit	ted	ł	ermit	ted
Rights:	0	Inclu	.de	0	inciu	ide 0	0	Inclu	ide	0	Inclu	ide
Min. Green: Y+R:	1 0	4 0	1 0	1 0	1 0	1 0	1 0	1 0	4 0	1 0	0	4
I+R: Lanes:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1
_anes:	L (	J U	I U		) ()	TU	1 (	0	I U	L (	0 0	T U
Volume Module			1	[		[	1			1		
		122	32	34	99	15	15	317	23	19	343	3
Growth Adj:				1.03					1.03			
Initial Bse:			33	35					24			3
Added Vol:			2	0			0	12		3		
		0	0		0	0	Ő	0		0		
PasserByVol: Initial Fut:	12	130	35	35		15	15		24	23	369	3
Jser Adj:			1.00		1.00	1.00		1.00			1.00	1.0
PHF Adj:			1.00		1.00	1.00		1.00			1.00	1.0
PHF Volume:			35	35	107	15	15			23	369	3
Reduct Vol:			0	0			0		0	0		0
Reduced Vol:			35		107	15					369	3
PCE Adi.	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	
FinalVolume:				35		15					369	
Saturation F				•					'			
Sat/Lane:				1600	1600	1600	1600	1600	1600	1600	1600	160
Adjustment:			1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.0
Lanes:	1.00	0.79	0.21			0.13			0.07			0.0
Final Sat.:									105		1469	
			!									
Capacity Ana			e:									
Vol/Sat:	0.01		0.10		0.08	0.08		0.23	0.23	0.01		0.2
Crit Moves:		* * * *		* * * *			* * * *				* * * *	

				FWP -	PM 1 7-5-		ur						
		I	evel 0			Computa							
						hod (F							
* * * * * * * * * * * * * *						*****	*****	*****	*****	* * * * * *	*****	*****	
Intersection ***********						******	+++++		++++++	*****			
Cycle (sec):		10							. (X) :		0.7		
Loss Time (sec).		1	0			Averag	a Dola	w (se	c/veh)				
Optimal Cvcle		-	5			Averag Level	Of Sei	vice.	c/ven/	•	~~~/		
***************		*****	******	*****	****	******	*****	- V I C C . * * * * * *	*****	*****			
Approach:						ound							
Movement:													
Control:													
Rights:		Inclu	ıde		Incl	ıde		Inclu	ıde	Permitted 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 (	) 1	1 0	1 (	) 2	0 1	0 (	) 2	1 0	0 (	2	1 0	
						{							
Volume Module													
Base Vol:			85		384		0			0	630	110	
Growth Adj:						1.03						1.03	
Initial Bse:		497	88	164	396		-	1289		-		113	
Added Vol:			4	17		24	-	95		0		14	
PasserByVol:			0	0	0	0		0	0	0	-	0	
Initial Fut:			92	181	512	89		1384		-	750	127	
5		1.00	1.00		1.00	1.00			1.00			1.00	
2	1.00		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
PHF Volume:			92	181	512	89		1384	99	0		127	
Reduct Vol: Reduced Vol:			0 92	0 181	0 512	0 89	-	0 1384	0 99	0	750	127	
PCE Adi:		1.00				1.00		1.00		-	1.00	127 1.00	
5		1.00				1.00		1.00			1.00	1.00	
FinalVolume:			92		512			1384	99	0.11		127	
Saturation Fl				1		1	,		1				
Sat/Lane:				1600	1600	1600	1600	1600	1600	1600	1600	1600	
Adjustment:						1.00		1.00					
Lanes:						1.00		2.80					
Final Sat.:						1600				0			
										1			
Capacity Anal	Lysis	Modu	le:										
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	

	РМ				•	18 15:4					_	4-1
				FWP -	• РМ Р 7-5-	g Beach eak Hou 18	ır					
				f Serv	vice C	omputat	tion F	Report			. <b></b> .	
LCU L (						hod (Fi						*****
Intersection												
***********						*****	* * * * * *	*****	*****	*****	****	*****
Cycle (sec):		10	0			Critica	al Vol	./Car	).(X):		0.7	753
Loss Time (se	c):	1	0			Average	e Dela	iv (se	c/veh)	:	XXXX	xxx
Optimal Cycle		5	8			Critica Average Level (	Df Sei	vice:	/			С
*****	****	*****	*****	*****	*****	*****	* * * * * *	*****	*****	* * * * * *	*****	*****
Approach:	Noi	th Bo	und	Sou	ith Bo	und	Ea	ast Bo	ound	We	est Bo	ound
Novement:												
Control:	Pı	rotect	ed	Pr	otect	ed	F	Permit	ted	ł	Permit	ted
Rights:		Inclu	de		Inclu	ıde		Inclu	ıde	Permitted Include 0 0 (		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	(
Ύ+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.(
			1 0	1 (	) 1	1 0	1 (	0 (	1 0	1 (	) 1	0 1
						l						
Volume Module												
Base Vol:		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
Initial Bse:			70	157	334	23	87	391	28	50	319	123
Added Vol:			9	15	97	1	4	15	1	12	22	4
PasserByVol:			0	0	0	0	0	0	0	0	0	(
Initial Fut:			79	172	431	24	91		29	62	341	12
2	1.00		1.00		1.00	1.00		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:		673	79	172	431	24	91		29	62	341	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	1.07
Reduced Vol:			79	172	431	24	91		29	62		12
2	1.00		1.00		1.00	1.00		1.00			1.00	1.00
MLF Adj: FinalVolume:		1.00 673	1.00 79		1.00 431	1.00 24	91	1.00	1.00 29	1.00	1.00	1.0
ernarvorume:												۲۲ 
Saturation F				1								
Sat/Lane:		1600		1600	1600	1600	1600	1600	1600	1600	1600	160
Adjustment:		1.00	1.00		1.00	1.00		1.00			1.00	
Lanes:		1.79			1.90	0.10			0.07		1.00	
Final Sat.:			336		3033	167		1494	106		1600	
Capacity Anal												
Vol/Sat:				0.11	0.14	0.14	0.06	0.27	0.27	0.04	0.21	0.0

FWP	Weekday	-	PM

				110	5 Lon	g Beac eak Ho	h						
					7-5-								
4	_		evel 0										
			cle Le										
*******					*****	*****	* * * * * *	****	*****	*****	*****	*****	
[ntersection ************													
Cycle (sec): Loss Time (se Optimal Cycle		IC.	0			Critic	ai voi	/Cap	· (X):				
Loss Time (se	ec):	1	0			Averag	e Dela	ıy (se	c/veh)	:			
)ptimal Cycle	) <b>:</b>	: 	2			Level	Of Ser	vice:					
Approach:											West Bound L - T - R		
Movement:	ь -	- T	– R .	<u>ь</u> -	- T	– R .	. L -	- T	- R .	_ L -	- T	– R	
Control:	Pr	rotect	ea	Protected Permitted Include Include						20 H	rermit	_lea	
Rights:		Inclu								Include 0 0			
Ain. Green:				0		0							
(+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.	
Janes:	T (	) 2	0 0	. 0 0	) 2	0 1	. 0 (	) ()	0 0	. 1 (	) 3	0 1	
			!			1							
Volume Module			0	0	202	5.0	0	0	0	0.0		1.0	
			0		383	50		0		82	575	10	
Growth Adj:				1.03		1.03			1.03			1.0	
Initial Bse:		570	0	0		52	0	0	0	84	592	11	
Added Vol:		94	0		104	6	0	0		36	58		
PasserByVol:		0	0	-	0	0	0	0	0	0	0	1 1	
Initial Fut:		664	0	0	498	58	0	0	0	120	650	11.	
	1.00		1.00	1.00		1.00		1.00	1.00		1.00	1.0	
PHF Adj:			1.00	1.00		1.00		1.00	1.00		1.00	1.0	
PHF Volume:			0	0	498	58	0	0	0	120	650	11	
	0	0	0	0	0	0	0		0	0	0	1 1	
Reduced Vol:		664	0		498	58	0				650	11	
PCE Adj:			1.00	1.00		1.00		1.00			1.00	1.0	
-	1.00		1.00	1.00	498	1.00		1.00	1.00		1.00	1.0	
FinalVolume:			0	-		58			-		650	11	
Saturation F			'				1			1	<u></u>		
Sat/Lane:				1600	1600	1600	1600	1600	1600	1600	1600	160	
Adjustment:			1.00		1.00	1.00		1.00	1.00		1.00	1.0	
Lanes:													
Final Sat.:			0.00			1600	0.00		0.00		4800		
Sat.:							-	-					
Capacity Anal				1			1						
Vol/Sat:	-		0.00	0 00	0 16	0 04	0 00	0 00	0.00	0 0.8	0.14	0.0	
UII Dal.	0.00	U.ZI	0.00	0.00	0.10	0.04	0.00	0.00	0.00	0.00	U.14	0.0	

FWP Weekday	_	PM
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					7-5-							
		L	evel O	f Serv	vice (	Computa	tion H	Report				
LCU 1	(LOSS *****	as cy *****	CIE LE:	ngtn %	5) Me1 *****	:hod (H	uture	Volum	e Alter	rnativ	e) *****	++++
Intersection												
*****					*****	******	*****	*****	* * * * * * *	* * * * * *	* * * * *	****
Cycle (sec):		10	0			Critic	al Vol	./Cap	(X):		0.7	21
Cycle (sec): Loss Time (se Optimal Cycle	∋c):	1	0			Averag	re Dela	ay (se	c/veh)	:	XXXX	xx
Optimal Cycle			Level	Of Sei	vice:	. ,			С			
* * * * * * * * * * * * * *	* * * * * *	*****	*****	*****	*****	*****	*****	*****	* * * * * * *	* * * * * *	* * * * *	****
Approach:	Noi	rth Bo	und	Sou	ith Bo	ound	Εā	ast Bc	und	West Bound L - T - F		
Movement:	L -	- Т	- R	L -	- Т	- R	L -	- Т	– R	L –	Т	- F
							1			1		- <b>-</b>
Control:	I	Permit	ted	I	Permitted			Permit	ted	Permitted		
Rights:		Inclu	de		Include 0 0 0			Inclu	.de	Include		
Min. Green:	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 1 0	4.0	4.0	4.
Lanes:	1 (	) 1	1 0	1 (	) 1	1 0	1 (	) ()	1 0	1 0	0	1 0
I a la ser a Marcha la									·			
Volume Module Base Vol:		100	48	120	E 2 4	130	0.0	450	38	20	278	8
Growth Adj:												
			49				101		39			т. С 8
Initial Bse: Added Vol:	2.5	54				2		24	2			C
PasserByVol:			0				-		0			
Initial Fut:	32		51			136		491	41		319	6
User Adj:			1.00		1.00			1.00	1.00	1.00		
PHF Adj:			1.00		1.00			1.00	1.00			1.0
PHF Volume:			51		618		106		41		319	2.1
Reduct Vol:		0	0		0_0			0	0		0	
Reduced Vol:			51	-	-	136	-	491	41	35	319	8
PCE Adj:									1.00			
MLF Adj:									1.00			
FinalVolume:	32	557	51	124	618	136	106	491	41	35	319	8
				}								
Saturation F				1.600	4 6 9 5	1 60 5	1 6 9 5	1.605		1 5 5 5		
Sat/Lane:						- 1600			1600			
Adjustment:												
Lanes:												
Final Sat.:						577			124			
Capacity Ana				,								
Vol/Sat:				0.08	0.24	0.24	0.07	0.33	0 33	0 02	0 25	0 3
Crit Moves:	0.02	U	V . 1 J		0.24	0.24	0.07		0.55	****	0.20	0.2

ù,

I'MI WEEKddy					5, 20						tage	, T		
						ng Beac Peak Ho •18								
**********														
0.0			level C			-		-		· >				
\\ *********									lternat		*****	*****		
Intersection														
****					*****	* * * * * * *	*****	* * * * * *	* * * * * *	* * * * * *	*****	*****		
Average Delay														
Approach:	Noi	cth Bo	ound	Sou	ith Bo	ound	Ea	ast Bo	ound	We				
Movement:									– R		- Т			
Control: Rights:	Und	Inclu	nde	Und	Tral	ide	SI	Inclu	lgn Ido	St	Stop Sign Include			
Lanes:	0 (									0 0 1! 0 0				
Volume Module			1	1		1				I		I		
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:		90	7	2	62	0	1	-	4	-	1	3		
User Adj:			1.00		1.00	1.00		1.00			1.00			
PHF Adj:			1.00		1.00	1.00		1.00			1.00	1.00		
PHF Volume:	2		7	2	62	0	1	1		3	1	3		
Reduct Vol: FinalVolume:		-	0 7	0 2	0	0	0 1		-	0	-	0		
Finalvolume:						0			4	3	1	3		
Critical Gap			'							1 1				
Critical Gp:			xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2		
FollowUpTim:								4.0			4.0	3.3		
Capacity Mod														
Cnflict Vol:								168		167		94		
Potent Cap.:						XXXXX		728				968		
Move Cap.:						XXXXX		726				968		
Volume/Cap:						XXXX					0.00			
Level Of Ser														
2Way95thQ:				0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx		
Control Del:	-		XXXXX						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			XXXXX			XXXXX		
Shrd ConDel:						XXXXX			XXXXX			XXXXX		
Shared LOS:	*	*	*	A		*	*	11	*	*	11	*		
ApproachDel:	Х	××××× *		X	××××× *			9.0			9.3			
ApproachLOS: *******	****		******	*****		*****	*****	A * * * * *		* * * * * *	A ****	*****		
Note: Queue	repor	ted i	s the m	number	of c	ars pe	r lane	S						
and a second			and the state of the											

FWP Weekday	– PM		Tł	nu Jul	5, 20	)18 15:	41:14				Page	8-1	
						ng Beac							
				FWP -	- PM H 7-5-	Peak Ho -18	Dur						
2	000 нс					Computa (Futur		T	: Lternat	ive)			
*******					*****	*****	*****	****	* * * * * * *	*****	*****	* * * * * * *	
Intersection *****					*****	*****	*****	*****	* * * * * * *	*****	* * * * * *	*****	
Average Dela	y (sec	c/veh)	:	3.8		Worst	Case 1	Level	Of Ser	vice:	A[ 9	9.0]	
									ound				
Movement:	L -	- Т	- R	Ц -	- Т	– R	L -	- Т	– R	L -	- Т	- R	
Control:										Uncontrolled			
Rights:						ıde			ıde				
Lanes:									1 0		1 0		
Volume Modul													
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	
Initial Fut:		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	
PHF Adj: PHF Volume:	1.00	1.00	1.00	1.00	1.00	1.00	00,1	1.00		1.00	1.00	1.00	
Reduct Vol:	10	0	0	0	0	0	0	10	21 0	25 0	21	0	
FinalVolume:		0	8	0	0	0	0	18	21	25	21	0	
Critical Car													
Critical Gap Critical Gp:			6 2	~~~~~	~~~~	~~~~~	~~~~	~~~~	XXXXX	1 1	~~~~~	xxxxx	
FollowUpTim:									*****			XXXXXX	
Capacity Mod Cnflict Vol:		99	28	~~~~	~~~~	xxxxx	VVVV	VVVV	xxxxx	30	~~~~	XXXXX	
Potent Cap.:			1053			XXXXX			×××××			*****	
Move Cap.:		782	1053			XXXXXX			XXXXXX			XXXXX	
Volume/Cap:	0.02		0.01			XXXX	XXXX	XXXX	XXXX	0.02	xxxx	XXXX	
Level Of Ser	1												
2Way95thQ:				xxxx	xxxx	xxxxx	xxxx	xxxx	XXXXX	0.0	××××	XXXXX	
Control Del:												XXXXX	
LOS by Move:		*	*	*	*	*	*	*	*	А		*	
Movement:	LT -	- LTR	- RT	LT ·	- LTR	- RT	LT	- LTR	- RT	LT ·	- LTR	- RT	
Shared Cap.:						XXXXX			XXXXX	XXXX	XXXX	XXXXX	
SharedQueue:						XXXXX						XXXXX	
Shrd ConDel:						XXXXX						XXXXX	
Shared LOS:	*	A Q Q	*	*	*	*	*	*	*	A		*	
ApproachDel: ApproachLOS:		9.0 A		X	* ×××××		X	* * ××××		X	XXXXX *		
***********	*****		*****	* * * * * *		* * * * * *	*****		* * * * * * *	* * * * * *		*****	
Note: Queue *********	report	ted is	s the m	number	of c	ars pe	r lane						
												~ ~ ~ ~ * * *	