

# **Appendix G**

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## **Vehicle Miles Traveled Memorandum**

This document is designed for double-sided printing to conserve natural resources.

# **TRAFFIC OPERATIONS REPORT**

## **SoCalGas – Office Building Project**

**City of Pico Rivera**

*Prepared for:*  
*SoCalGas*  
*8101 Rosemead Boulevard*  
*Pico Rivera, CA 90660*

**July 19, 2022**

*Prepared by:*  
*Jacob Swim, TE*  
*Dawn Wilson, P.E., T.E.*

# CERTIFICATION

July 19, 2022

SoCalGas  
8101 Rosemead Boulevard  
Pico Rivera, CA 90660

RE: Traffic Operations Report, Beverly Boulevard Warehouse, Pico Rivera, CA

We are pleased to submit herewith our Traffic Operations Report for the proposed Gas Operations Control Center Project which we have prepared at your request. We certify the following report has been prepared under the supervision of a registered traffic engineer.

If you have any questions regarding this report, please contact the undersigned for clarification.

Sincerely,

## MICHAEL BAKER INTERNATIONAL



Jacob Swim, T.E.  
Senior Transportation Planner



Dawn Wilson, P.E., T.E.  
Traffic Engineer





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# 1 EXECUTIVE SUMMARY

## 1.1 PROJECT DESCRIPTION

The Project is located at 8101 Rosemead Boulevard in the City of Pico Rivera. The purpose of this study is to document the projected traffic conditions associated with the new approximately 70,000 square-foot Office Building located on the southeast corner of the existing Southern California Gas (SoCalGas) property.

## 1.2 RESULTS SUMMARY

The study scenarios as requested by City staff are listed below. The Plus Project scenarios include full buildout of the Project site.

- Existing Year (2021) (E)
- Existing Year (2021) Plus Project (E + P)
- Opening Year (2023) (E + Ambient Growth, A)
- Opening Year (2023) Plus Project (E + A + P)
- Cumulative Conditions (2023) (E + A + Cumulative Projects, C)
- Cumulative Conditions (2023) Plus Project (E + A + C + P)
- Build-out Year (2040)
- Build-out Year (2040) Plus Project

This traffic operations report has been prepared in accordance with the City of Pico Rivera *Traffic Impact Analysis Guidelines* dated July 2020. The scope of this traffic study was coordinated with City staff. The analysis of the proposed Project assumes 1,146 daily site trips which includes 150 AM Peak Hour trips and 148 PM Peak Hour trips during a typical weekday.

Traffic operations analysis was conducted for the following study intersections:

1. Paramount Boulevard & Washington Boulevard
2. Rosemead Boulevard & Washington Boulevard
3. Slauson Avenue & Telegraph Road
4. Slauson Avenue & Paramount Boulevard
5. Slauson Avenue & Rosemead Boulevard
6. Rosemead Boulevard & SoCalGas Driveway
7. Telegraph Road & Paramount Boulevard
8. Telegraph Road & Rosemead Boulevard
9. Paramount Boulevard & I-5 NB Ramps
10. Paramount Boulevard & I-5 SB Ramps
11. Lakewood Boulevard & I-5 NB Ramps
12. Lakewood Boulevard & I-5 SB Ramps

### **Traffic Operations Analysis Results – Intersections**

The results of the intersection operations analysis show that all City of Pico Rivera study intersections are projected to operate at levels which do not exceed threshold differences in v/c under all scenarios with the exception of the Rosemead Boulevard / SoCalGas Driveway Intersection (#6) which is projected to exceed the delay and LOS thresholds under the Plus Project conditions for all study scenarios during the AM and PM peak hour. Therefore, improvements are recommended at the SoCalGas Driveway in order to improve operations at the intersection.

### **Recommended Improvements**

The analysis results indicate that the intersection of Rosemead Boulevard & SoCalGas Driveway is projected to exceed the delay threshold (change in 1 second) during the AM and PM Peak Hour under the Existing Year 2021 Plus Project, Opening Year 2023 Plus Project, Forecast Cumulative 2023 Plus Project, and Build-out Year 2040 Plus Project conditions. This is a worst-case scenario, assuming that SoCalGas is not utilizing telecommute and/or alternative work week options for their employees. The installation of a traffic signal would improve operations at the intersection to an acceptable level of service (D or better) under the Build-out Year (2040) Plus Project condition. However, given the unknown factors surrounding the actual number of employees anticipated to use this intersection at peak periods, the installation of a traffic signal is not recommended at this time. As discussed above, future travel behaviors of employees to this facility has yet to be determined in terms of flexible working hours (i.e. not all employees will work a standard 8 AM to 5 PM shift) and/or number of employees telecommuting. Flexible work week employees would likely avoid the typical AM and PM peak hour. These considerations would further reduce peak hour traffic volumes entering and exiting Rosemead Boulevard & SoCalGas Driveway. It may also be noted there is one right-turn lane and one left-turn lane exiting the site. Exiting the site, the majority of traffic volumes make right turns (77) and the number of left-turn movements (50) alone do not justify the installation of a signal at this location since a minimum of 100 vehicles are required on a minor street approach. For these reasons, it is recommended the intersection be evaluated after one year in operation to determine if traffic control is warranted at the intersection of Rosemead Boulevard & SoCalGas Driveway. Examples of traffic control could be a signal or roundabout. If the City determines traffic control is warranted, the applicant will be fully responsible for funding and constructing the improvement(s).

The following findings are based on the operations analysis results:

**Threshold Exceeded** – Rosemead Boulevard & SoCalGas Driveway Intersection (#6) exceeds the delay and LOS thresholds under the Plus Project Conditions for all study scenarios during the AM and PM peak hour.

**Proposed Improvement** – The intersection of Rosemead Boulevard & SoCalGas Driveway will be evaluated after one year in operation to determine if traffic control such as a signal or roundabout is warranted. If new traffic control is warranted, the applicant will be fully responsible for funding and constructing the improvement.

### **Signal Warrant Evaluation**

A Peak Hour Signal Warrant was evaluated for the Rosemead Boulevard & SoCalGas Driveway intersection under the Existing Plus Project conditions for both AM and PM peak hours. The signal warrant was met during both the AM and PM peak hour at this location. However, meeting a signal warrant does not provide sufficient justification for the installation of a traffic signal. Other factors such as turning volumes, location, and potential safety concerns should also be considered.

### **CEQA VMT Assessment**

The VMT assessment for the proposed Project is contained in a separate document.

## 2 INTRODUCTION

### 2.1 PROJECT DESCRIPTION

The proposed Project would include construction of a new two-story office building at the southeast corner of the SoCalGas facility. The new approximately 70,000 square foot office building would provide functionality for SoCalGas facility operations and ancillary support staff at the property. The new office building would house office space, operations equipment, increased server/storage needs, and operations training and simulation facilities. Pedestrian and vehicular access to the Project site would be restricted to employees and visitors (as authorized by SoCalGas) at existing facility entrances, similar to existing conditions.

### 2.2 PROJECT LOCATION

Regionally, the Project site is located within the central portion of the City of Pico Rivera (City), within the County of Los Angeles (County). Locally, the approximate 4.5-acre Project site is situated in the southeastern corner of the existing 34.34-acre SoCalGas facility, located at 8101 Rosemead Boulevard. The SoCalGas facility is bound by an existing Union Pacific Railroad (UPRR) alignment to the north, an elementary school to the west, Maxine Street to the south, and Manzanar Avenue and Rosemead Boulevard (State Route 19) to the east. Regional access to the site is provided via Interstate 5 (I-5) located 0.5 miles south and Interstate 605 (I-605) located 1.4 miles northeast. Additionally, State Route 60 (SR-60) is located 4.5 miles northwest. Vehicle access to the site is provided from Rosemead Boulevard to the east (the main entrance) and from Crossway Drive, a secondary north-west entrance used exclusively after hours. A guard booth is provided at the main east entrance.

**Exhibit 1** shows the Project location within the region. Surrounding land uses in proximity to the Project site are primarily comprised of industrial, commercial and residential uses.

### 2.3 SITE PLAN

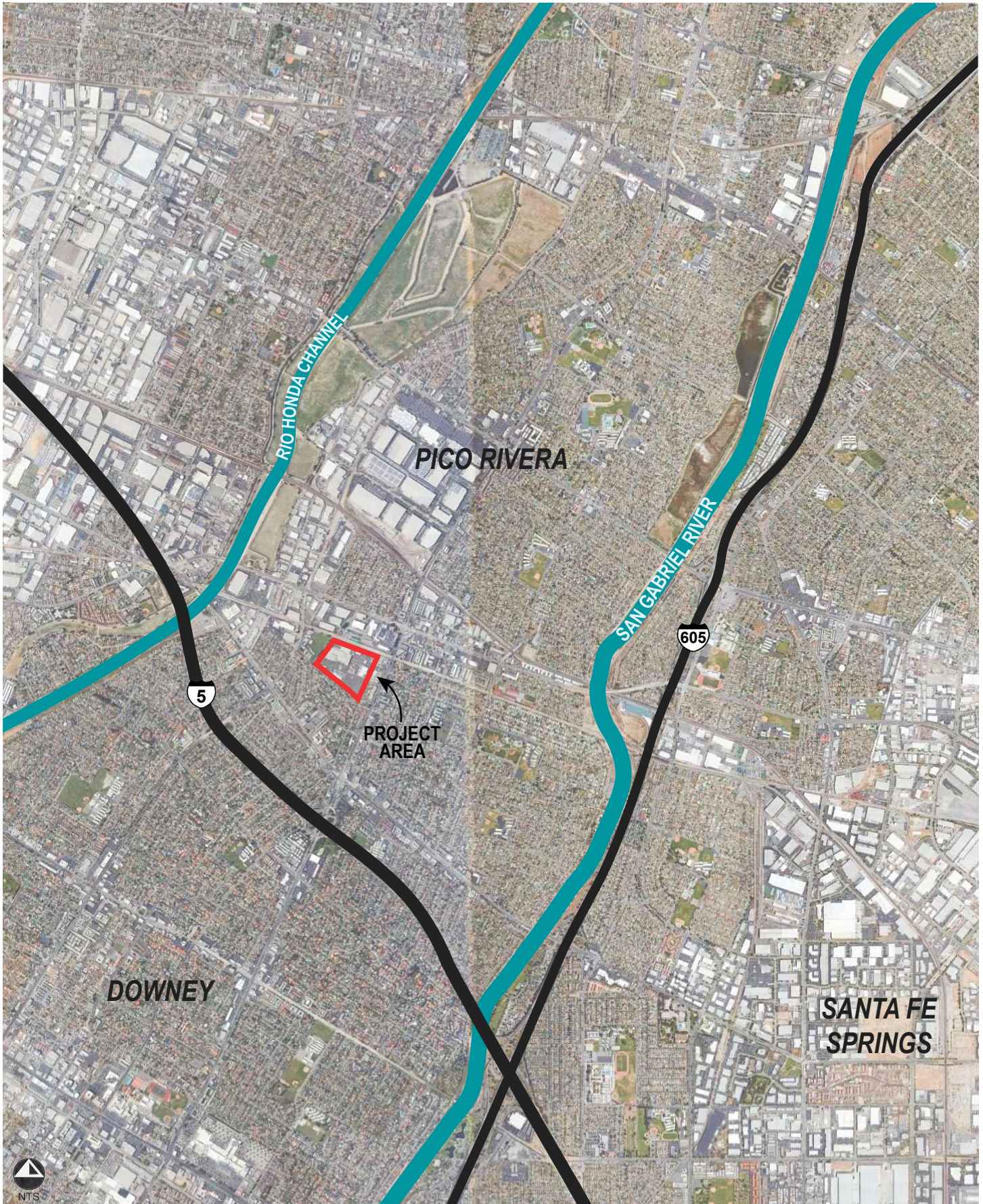
The Project site plan is shown in **Exhibit 2**. The total office area includes approximately 70,000 square feet.

### 2.4 STUDY INTERSECTIONS

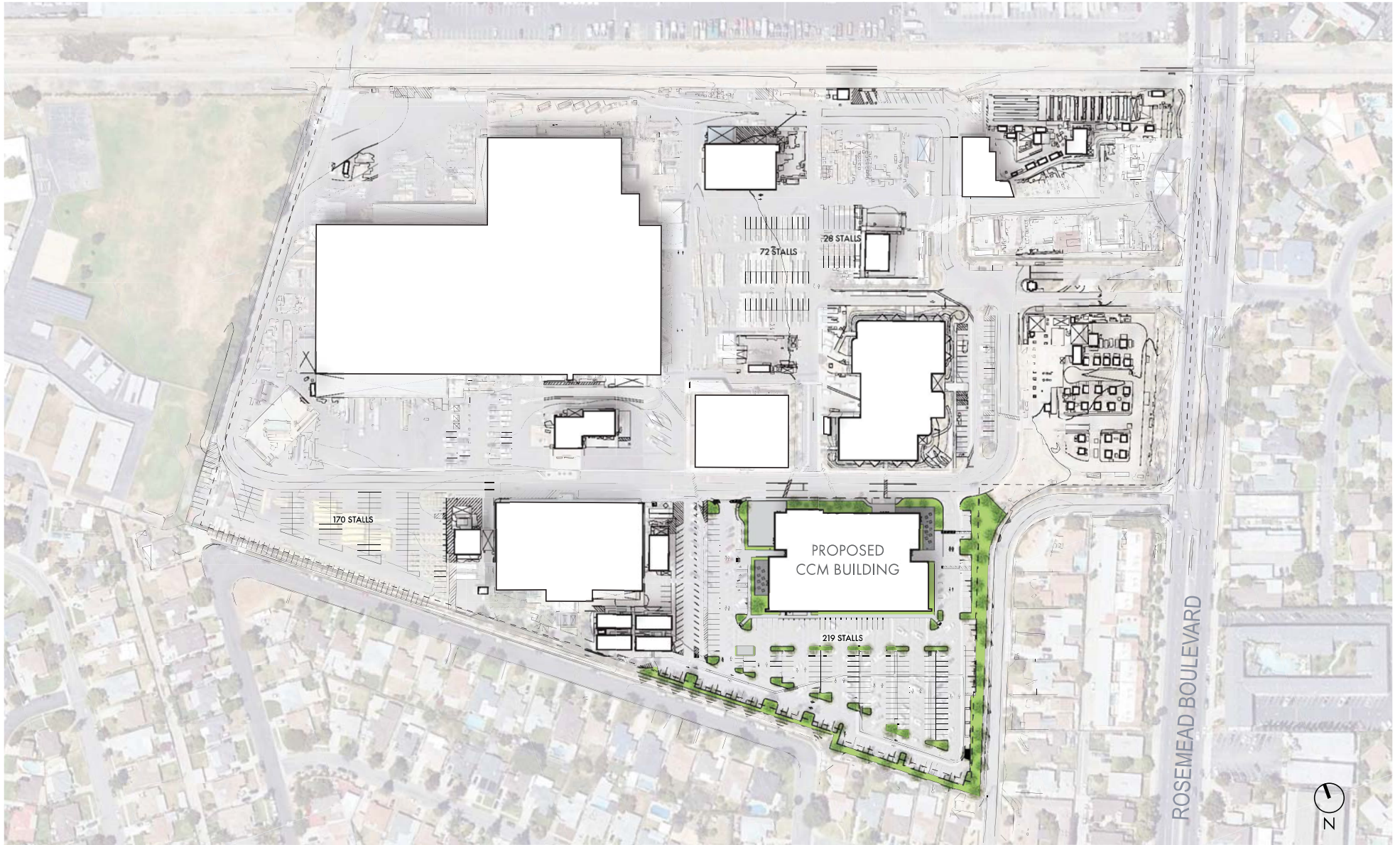
The study intersections examined in this report are as follows:

- 1) Paramount Boulevard & Washington Boulevard
- 2) Rosemead Boulevard & Washington Boulevard
- 3) Slauson Avenue & Telegraph Road
- 4) Slauson Avenue & Paramount Boulevard
- 5) Slauson Avenue & Rosemead Boulevard
- 6) Rosemead Boulevard & SoCalGas Driveway
- 7) Telegraph Road & Paramount Boulevard
- 8) Telegraph Road & Rosemead Boulevard
- 9) Paramount Boulevard & I-5 NB Ramps
- 10) Paramount Boulevard & I-5 SB Ramps
- 11) Lakewood Boulevard & I-5 NB Ramps
- 12) Lakewood Boulevard & I-5 SB Ramps









SITE

OVERALL

Source: DGAArchitecture



## 3 AREA CONDITIONS & PLANS

### 3.1 SURROUNDING ROADWAY NETWORK

The characteristics of the roadway system near the Project site are described below:

**Rosemead Boulevard** is a divided roadway within the City that travels north to south from the northern city limits, near Gallatin Road, to the southern city limits, near Telegraph Road. The roadway is a four-lane divided roadway within the project vicinity, with two travel lanes in each direction. Under the General Plan Circulation Element, Rosemead Boulevard is classified as a Major Arterial roadway. The posted speed limit is 40 mile per hour (mph). On Rosemead Boulevard, from the project driveway to Manzanar Avenue, there is a 100-foot section that permits parking with restrictions, the remainder prohibits parking via red curb. The parking restrictions along the project frontage includes “No Parking” of vehicles over 6 feet in height and “No Parking” from 1:00 a.m. to 5:00 a.m. on Mondays and Thursdays.

**Manzanar Avenue** is a two-lane roadway within the City that connects with Shade Lane and travels north to south into the City of Downey (just north of Interstate 5 [I-5]). The roadway has one lane in each direction. Under the General Plan Circulation Element, Manzanar Avenue is classified as a Collector Street. The posted speed limit is 25 mph. On Manzanar Avenue along the project frontage, parking is permitted except on Fridays from 10:00 a.m. to 3:00 p.m. for street sweeping.

**Maxine Street** is a two-lane roadway within the City that travels east to west. The roadway has one lane in each direction. Under the General Plan Circulation Element, Maxine Street is classified as a Collector Street. The posted speed limit is 25 mph.

**Paramount Boulevard** is a four-lane roadway within the City. It travels north to south from the northern city limits, near Whittier Boulevard to the south near I-5. The roadway has two travel lanes in each direction. Under the General Plan Circulation Element, Paramount Boulevard is classified as a Major Arterial roadway. The posted speed limit is 40 mph within the study area. Parking is allowed along Paramount Boulevard at various locations within the study area.

**Washington Boulevard** is a six-lane roadway within the project vicinity. The roadway travels east to west from Paramount Boulevard to the I-605 interchange. Under the General Plan Circulation Element, Washington Avenue is classified as a Major Arterial roadway. The posted speed limit is 40 mph.

**Slauson Avenue** is a six-lane roadway within the project vicinity. It travels east to west from the western City limit, near Paramount Boulevard in the west, to the San Gabriel River in the east. The roadway has three travel lanes in each direction. Under the General Plan Circulation Element, Washington Avenue is classified as a Major Arterial roadway. The posted speed limit is 40 mph.

**Interstate 5 (I-5)** is an interstate highway that runs northwest and southeast along the southern border of the City connecting to the Interstate 710 further north and connecting to the Interstate 605 to the south. Within the project vicinity, the Lakewood Boulevard interchange provides access to the project site to the north. The posted speed limit is 65 mph.

**Interstate 605 (I-605)** is an interstate highway that runs north-south within Southern California from the City of Irwindale in the north to the City of Seal Beach in the south. Within the project vicinity, I-605 is 10-lane facility with 5 lanes in each

direction. Interchange access to/from I-605 northbound is provided via hook ramps on Slauson Avenue that connects with Rosemead Boulevard near the project site. The posted speed limit is 65 mph.

### 3.2 PEDESTRIAN & BICYCLE FACILITIES

Along Rosemead Boulevard within the Project vicinity, non-buffered sidewalks are provided on both sides of the roadway. The closest marked crosswalk across Rosemead Boulevard is at the signalized intersection of Rosemead Boulevard and Slauson Avenue which is approximately 1,000 feet path of travel from the Project site. Class II bicycle lanes are not provided on Rosemead Boulevard within the Project study area.

### 3.3 TRANSIT SERVICE

Public transit access to the project site is provided by the Montebello Bus Lines (MBL) and the Los Angeles Metro (LA Metro). The MBL provides service via bus route 50 at the intersection of Rosemead Boulevard and Washington Boulevard. The LA Metro provides service via bus route 266 (Route 266) near the project site along Rosemead Boulevard, as shown in **Exhibit 3**. There are two Route 266 transit stops near the main entrance to the project site. The closest Route 266 service bus stop is located on the west side of Rosemead Boulevard, approximately 70 feet south of the SoCalGas main driveway. The second Route 266 transit stop is located on the east side of Rosemead Boulevard approximately 50 feet north of Aero Drive.

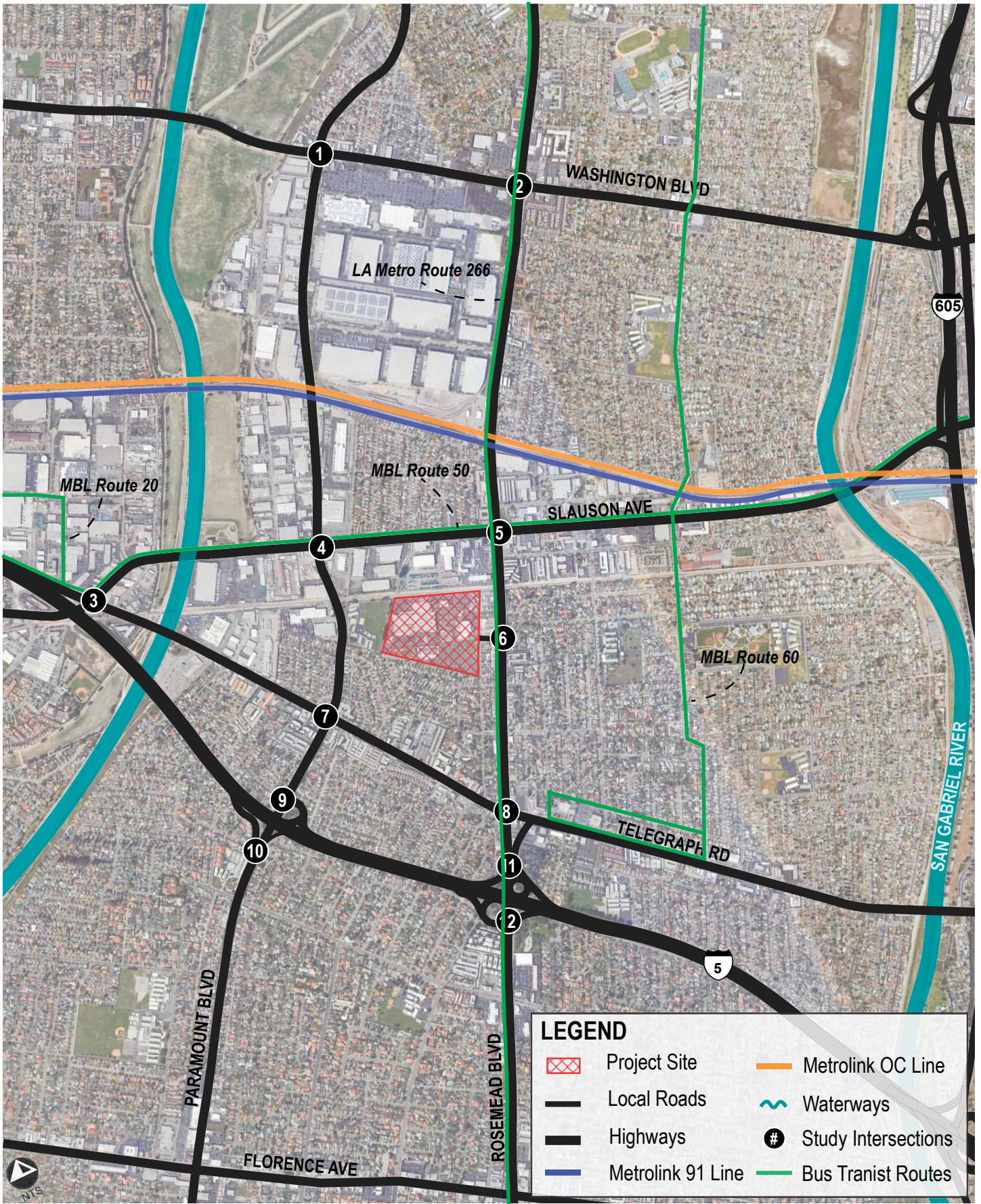
### 3.4 AREA PLANS

The City of Pico Rivera General Plan Circulation Element (October 2014) lists Rosemead Boulevard as Major Arterial as shown in **Exhibit 4**.

### 3.5 EXISTING LANE CONFIGURATIONS

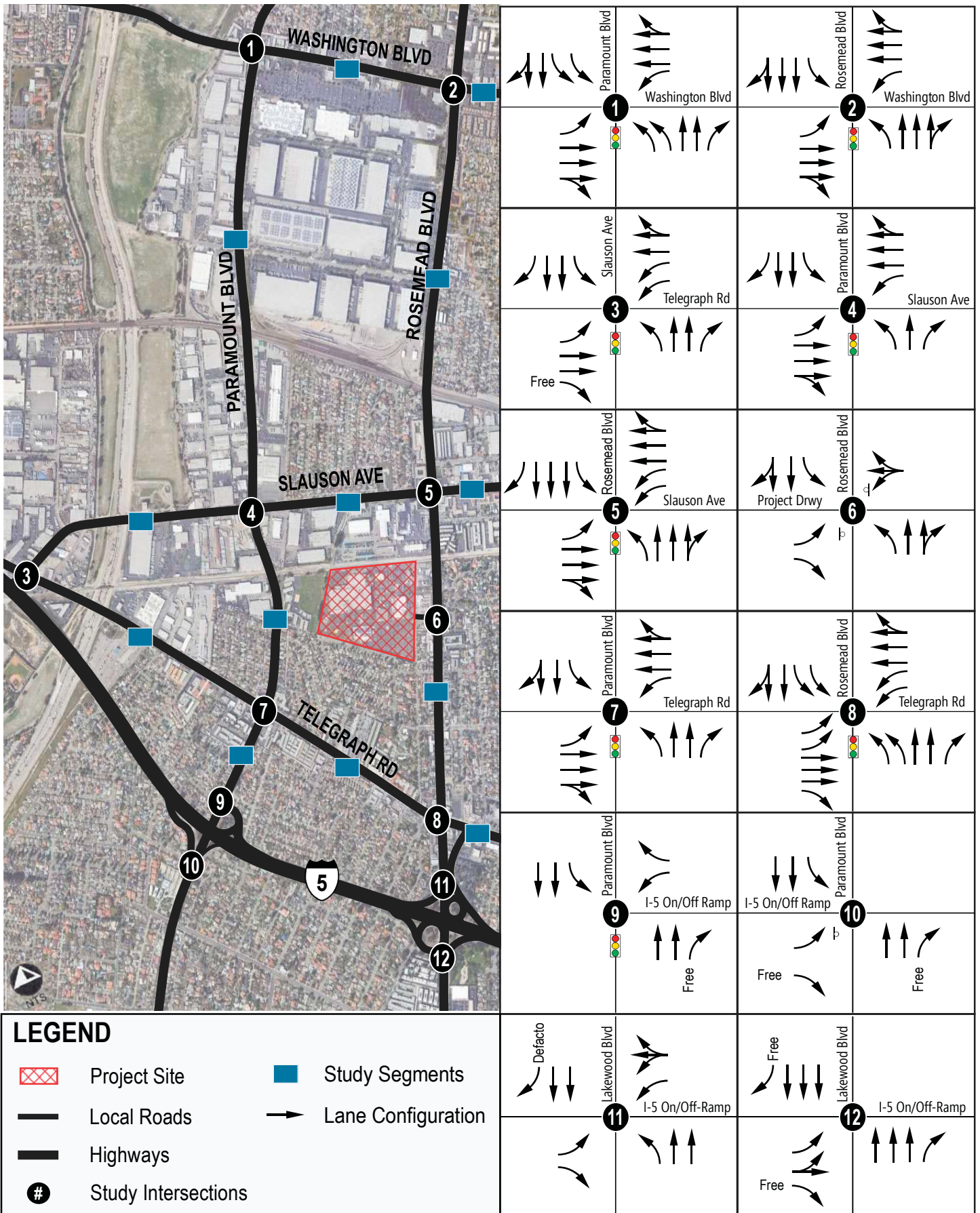
**Exhibit 5** shows the Existing study intersection lane geometry and traffic control.











**LEGEND**

- Project Site
- Study Segments
- Local Roads
- Highways
- Study Intersections
- Lane Configuration

## 4 OPERATIONS ANALYSIS METHODOLOGY

### 4.1 ANALYSIS SCENARIOS

The study scenarios are listed below. The Plus Project scenarios include full buildout of the Project site.

- Existing Year (2021) (E)
- Existing Year (2021) Plus Project (E+P)
- Opening Year (2023) (E + Ambient Growth, A)
- Opening Year (2023) Plus Project (E + A + P)
- Cumulative Conditions (2023) (E + A + Cumulative Projects, C)
- Cumulative Conditions (2023) Plus Project (E + A + C + P)
- Build-out Year (2040)
- Build-out Year (2040) Plus Project

### 4.2 STUDY FACILITIES

Twelve (12) study intersections were evaluated as listed in **Table 1** along with their existing traffic control and the controlling jurisdiction. The study area is shown in **Exhibit 6**.

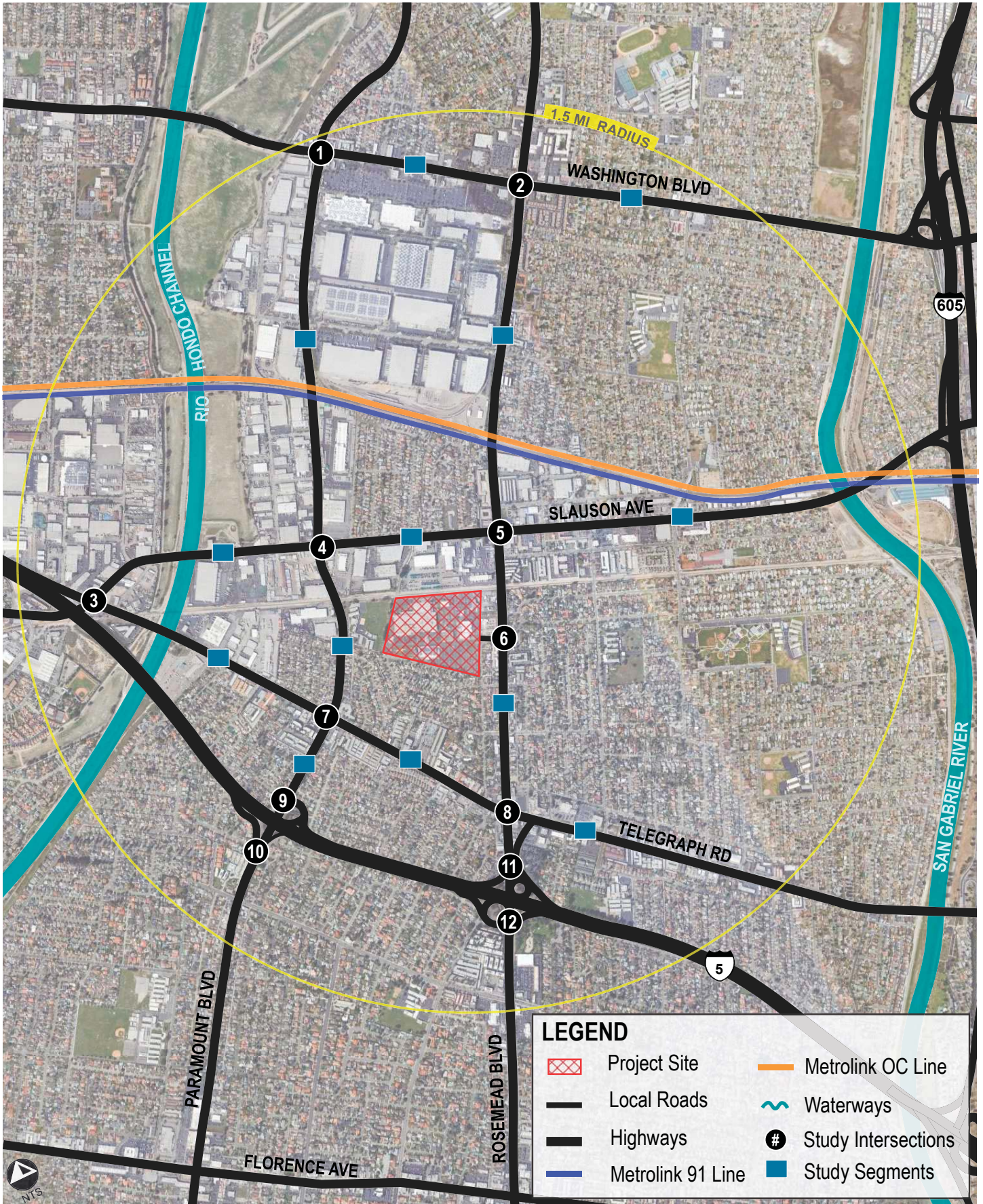
**TABLE 1: STUDY INTERSECTIONS**

ID	Study Intersection	Existing Traffic Control	Jurisdiction
1	Paramount Blvd & Washington Blvd	Signalized	Pico Rivera
2	Rosemead Blvd & Washington Blvd	Signalized	Pico Rivera
3	Slauson Ave & Telegraph Rd	Signalized	Pico Rivera
4	Slauson Ave & Paramount Blvd	Signalized	Pico Rivera
5	Slauson Ave & Rosemead Blvd	Signalized	Pico Rivera
6	Rosemead Blvd & SoCalGas Driveway	Two Way Stop-Controlled	Pico Rivera
7	Telegraph Rd & Paramount Blvd	Signalized	Pico Rivera
8	Telegraph Rd & Rosemead Blvd	Signalized	Pico Rivera
9	Paramount Blvd & I-5 NB Ramps	Signalized	Caltrans
10	Paramount Blvd & I-5 SB Ramps	One Way Stop Controlled	Caltrans
11	Lakewood Blvd & I-5 NB Ramps	Signalized	Caltrans
12	Lakewood Blvd & I-5 SB Ramps	Signalized	Caltrans

### 4.3 ASSUMPTIONS AND METHODOLOGIES

The Project's location and study intersections fall within the jurisdiction of City of Pico Rivera and California Department of Transportation (Caltrans). The traffic analysis conducted to determine existing and projected capacities utilizes the various methodology guidelines of the following jurisdictions: City of Pico Rivera and Caltrans.







### 4.3.1 Pico Rivera Methodology

Per the *City of Pico Rivera Traffic Impact Analysis Guidelines*, the intersection capacity utilization (ICU) method based on a volume-to-capacity ratio (v/c) is to be utilized to conduct the operations analysis for signalized intersections. All unsignalized intersections are evaluated using the *Highway Capacity Manual, 6<sup>th</sup> Edition (HCM 6)* methodology using a computer program, Synchro 10. **Table 2** provides the City of Pico Rivera's Level of Service (LOS) thresholds based on v/c. The acceptable LOS for intersections within the City of Pico Rivera is LOS D or better. Therefore, any intersections operating at a LOS E or F will be considered deficient.

**TABLE 2: CITY OF PICO RIVERA ICU INTERSECTION LEVEL OF SERVICE THRESHOLDS**

Level of Service	V/C Ratio
LOS A	$x \leq 0.60$
LOS B	$0.61 \leq x \leq 0.70$
LOS C	$0.71 \leq x \leq 0.80$
LOS D	$0.81 \leq x \leq 0.90$
LOS E	$0.91 \leq x \leq 1.00$
LOS F	$x \geq 1.00$

Source: *Highway Capacity Manual, 6<sup>th</sup> Edition*

### 4.3.2 Caltrans Methodology

In accordance with Caltrans guidelines, the traffic operations analysis conducted should be based on the *HCM 6*. Using *HCM 6* methodologies, results are typically presented as a LOS. LOS is a qualitative measure that describes traffic operational conditions provided by a transportation facility. It can range from LOS A (free-flow conditions) to LOS F (severely congested conditions). Caltrans' target LOS is C or better with a delay of less than 35 seconds per vehicle for intersections and ramp terminals. If the existing facility operates less than the target LOS, then the existing LOS should be maintained. The *HCM* analysis methodology describes the operation of an intersection based on the corresponding average stopped delay experienced per vehicle as shown in **Table 3**.

**TABLE 3: HCM INTERSECTION LEVEL OF SERVICE & DELAY THRESHOLDS**

Level of Service	Signalized Intersection Average Delay (seconds/vehicle)	Two-Way Stop-Controlled & All-Way Stop-Controlled (seconds/vehicle)
LOS A	$x \leq 10$	$x \leq 10$
LOS B	$10 < x \leq 20$	$10 < x \leq 15$
LOS C	$20 < x \leq 35$	$15 < x \leq 25$
LOS D	$35 < x \leq 55$	$25 < x \leq 35$
LOS E	$55 < x \leq 80$	$35 < x \leq 50$
LOS F	$80 < x$	$50 < x$

Note: If the volume-to-capacity ratio (v/c) > 1.0, LOS = F.

Source: *Highway Capacity Manual, 6<sup>th</sup> Edition*.

LOS is reported for the average stopped delay per vehicle for the overall intersection (all movements) for signalized intersections and all-way stop-controlled intersections. For one-way or two-way stop-controlled intersections, LOS is reported for the worst stop-controlled approach using the HCM 6 analysis methodology.



#### 4.3.3 Analysis Software

The ICU analysis using an Excel spreadsheet was supplemented with Synchro (version 10) software operations analysis based on *HCM 6*, published by the Transportation Research Board in 2016. For two-way stop-controlled intersections, Synchro was used to report the ICU and LOS, specifically at Rosemead Blvd & SoCalGas Driveway (Int. #6).

#### 4.3.4 Segment Analysis Methodology

This study does not include a roadway segment analysis. The daily traffic volumes for each study scenario have been calculated and provided on an exhibit for informational purposes only.

#### 4.3.5 Operational Criteria – Intersections

The jurisdiction's operational criteria have been referenced in this evaluation. **Table 4** shows the City of Pico Rivera's operational thresholds for this Project.

**TABLE 4: CITY OF PICO RIVERA OPERATIONAL THRESHOLDS – INTERSECTIONS**

With Project LOS	Significant Impact Threshold (V/C Increase)
C	$\geq 0.04$
D	$\geq 0.02$
E/F	$\geq 0.01$

The City does not have operational thresholds for unsignalized intersections reporting delay. For purposes of this analysis, intersections where project traffic degrades the LOS from acceptable LOS A-D without the project to a deficient LOS E or F with the project, improvements are recommended. If the intersection is currently operating at a deficient LOS E or F without the project and project traffic increases the delay by more than 1 second, improvements are recommended.

#### 4.3.6 Traffic Signal Warrant Analysis Methodologies

The *California Manual on Uniform Traffic Control Devices* (CA MUTCD), 2014 Edition includes nine (9) signal warrants:

- 1) Warrant 1, Eight-Hour Vehicular Volume
- 2) Warrant 2, Four-Hour Vehicular Volume
- 3) Warrant 3, Peak Hour
- 4) Warrant 4, Pedestrian Volume
- 5) Warrant 5, School Crossing
- 6) Warrant 6, Coordinated Signal System
- 7) Warrant 7, Crash Experience
- 8) Warrant 8, Roadway Network
- 9) Warrant 9, Intersection Near a Grade Crossing

The Peak Hour (Warrant 3) was utilized in this study. This signal warrant is intended for use at a location where traffic conditions are such that for a minimum of one hour of an average day, the minor-street traffic suffers undue delay when entering or crossing the major street. The Peak Hour (Warrant 3) was the focus of this analysis in order to determine the potential influence of the planned Project given the minimal existing volumes entering/exiting the SoCalGas Project driveway (Study Intersection #6).

#### 4.3.7 City Coordination

Coordination was conducted with City staff regarding the study process. Concurrence on the traffic study scoping agreement was obtained from the City in August 2021. The approved study scoping agreement is in **Appendix A**.

## 5 EXISTING CONDITION TRAFFIC VOLUMES

### 5.1 TRAFFIC COUNTS

New traffic counts were collected on Wednesday, October 6, 2021 when schools were back in session. AM peak hour traffic counts were collected from 7:00 to 9:00 AM and PM peak hour count were collected from 4:00 to 6:00 PM with the highest peak hour used for analysis.

Traffic count data is contained in **Appendix B**. Both intersection turning movement count data and 24-hour segment data were obtained for this analysis. Bicycle and pedestrian counts were collected for each study intersection.

**Exhibit 7** shows the Existing Year (2021) daily and peak hour traffic volumes.

**EXHIBIT 7: EXISTING YEAR (2021) DAILY AND AM/PM PEAK HOUR TRAFFIC VOLUMES**

## 6 PROJECT TRAFFIC VOLUMES

### 6.1 TRIP GENERATION

The number of Project site trips was estimated using the Institute of Transportation Engineers' (ITE) *Trip Generation Manual* (10<sup>th</sup> Edition). Land use code 715 (Single Tenant Office Building) was used to estimate project trips. **Table 5** shows the ITE trip generation rates used for this analysis. **Table 6** shows the estimated trips generated by the Project assuming 259 employees.

**TABLE 5: TRIP GENERATION RATES**

Land Use	Daily Trip Rate	AM Peak Hour			PM Peak Hour		
		Total	In	: Out	Total	In	: Out
Land Use 715 (Single Tenant Office Building)	4.42 / employee	0.58 / employee	89%	: 11%	0.57 / employee	15%	: 85%

Source: Institute of Transportation Engineers *Trip Generation Manual*, 10<sup>th</sup> Edition using the Fitted Curve Equation.

**TABLE 6: PROJECT TRIP GENERATION**

Land Use	Intensity	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			Total	In	: Out	Total	In	: Out
Land Use 715 (Single Tenant Office Building)	259 employees	1,146	150	133	: 17	148	22	: 126
<b>Total Project Trip Generation</b>		<b>1,146</b>	<b>150</b>	<b>133</b>	<b>: 17</b>	<b>148</b>	<b>22</b>	<b>: 126</b>

As shown, the Project is expected to generate 1,146 daily vehicle trips with 150 AM peak hour trips and 148 PM peak hour trips during a typical weekday.

### 6.2 PROJECT TRIP DISTRIBUTION & ASSIGNMENT

The Project trip distribution was based on existing traffic patterns and the regional community access. City staff provided input into the assumed trip distribution during the scoping process. **Exhibit 8** shows the forecast trip percent distribution of the proposed Project within the study area. As shown, 40% of Project traffic is assumed to travel north and 60% south on Rosemead Boulevard.

**Exhibit 9** shows the Project only trip assignment at each of the study intersections. Project Only ADTs were determined by distributing the site generated trips assuming the above distribution patterns.



Paramount Blvd ↓ 2%	Washington Blvd ← 5%	Rosemead Blvd ↓ 5%	Washington Blvd ↖ 5%
5% →	↑ 2%	5% ↘	↖ 5% ↑ 5% ↗ 5%
Slauson Ave ↓ 6%	← 5%	2% ↘	↖ 2% ↑ 6% ↗ 2%
5% →	↑ 6%	6% →	↘ 2%
Rosemead Blvd ↓ 15%	↖ 15%	↖ 40%	Rosemead Blvd ↖ 40%
10% ↘	↖ 10% ↑ 15% ↗ 15%	Project Drwy ↖ 40% ↗ 60%	↖ 60%
Paramount Blvd ↓ 2%	← 5%	↖ 5% ↓ 45% ↗ 10%	Rosemead Blvd ↖ 10%
5% →	↑ 2%	5% ↘	Telegraph Rd ↑ 45%
Paramount Blvd ↓ 2%	I-5 On/Off Ramp ↑ 2%	Paramount Blvd ↓ 2%	I-5 On/Off Ramp ↑ 2%
↖ 15% ↓ 30%	↖ 15%	↖ 15% ↓ 15%	Lakewood Blvd ↖ 15%
I-5 On/Off-Ramp ↑ 30%	I-5 On/Off-Ramp ↑ 15%	I-5 On/Off-Ramp ↑ 15%	I-5 On/Off-Ramp ↑ 15%

**LEGEND**

- Project Site
- Study Segments
- Local Roads
- Highways
- Study Intersections
- % Project Distribution





3 / 1 Paramount Blvd <b>1</b>	1 / 6 Washington Blvd <b>1</b>	7 / 1 Rosemead Blvd <b>2</b>	6 / 1 Washington Blvd <b>2</b>
7 / 1 <b>3</b>	0 / 3 <b>3</b>	7 / 1 <b>4</b>	1 / 6 1 / 6 1 / 6 <b>4</b>
1 / 8 Slauson Ave <b>3</b>	1 / 6 Telegraph Rd <b>3</b>	3 / 1 <b>4</b>	0 / 3 1 / 7 0 / 3 Slauson Ave <b>4</b>
7 / 1 <b>5</b>	8 / 1 <b>5</b>	7 / 1 <b>6</b>	3 / 1 <b>6</b>
20 / 3 Rosemead Blvd <b>5</b>	20 / 3 Slauson Ave <b>5</b>	53 / 9 Rosemead Blvd <b>6</b>	13 / 3 <b>6</b>
2 / 13 3 / 18 2 / 19 <b>7</b>	7 / 50 10 / 76 <b>7</b>	80 / 13 <b>8</b>	0 / 3 Paramount Blvd <b>7</b>
1 / 6 Telegraph Rd <b>7</b>	1 / 6 7 / 57 2 / 13 <b>8</b>	13 / 2 Telegraph Rd <b>8</b>	7 / 1 <b>9</b>
3 / 1 <b>9</b>	7 / 1 <b>10</b>	60 / 10 <b>10</b>	0 / 3 Paramount Blvd <b>9</b>
0 / 3 I-5 On/Off Ramp <b>9</b>	0 / 3 I-5 On/Off Ramp <b>10</b>	3 / 0 <b>10</b>	0 / 3 Paramount Blvd <b>10</b>
3 / 0 <b>11</b>	3 / 0 <b>11</b>	20 / 19 <b>11</b>	2 / 19 <b>11</b>
2 / 19 5 / 38 <b>11</b>	20 / 3 I-5 On/Off-Ramp <b>11</b>	3 / 19 2 / 19 <b>12</b>	20 / 3 <b>12</b>
40 / 7 <b>12</b>	20 / 4 <b>12</b>	20 / 3 <b>12</b>	20 / 4 <b>12</b>

**LEGEND**

- Project Site
- Study Segments
- Local Roads
- Highways
- Study Intersections
- AM/PM Peak Hour Traffic Volumes

## 7 TRAFFIC VOLUME FORECASTS

### 7.1 EXISTING PLUS PROJECT

The Existing traffic volumes and the Project Only traffic volumes were combined to estimate the Existing Plus Project traffic volumes. **Exhibit 10** shows the Existing Plus Project daily and AM/PM peak hour traffic volumes. **Appendix C** contains the traffic volume development worksheets.

### 7.2 OPENING YEAR 2023 WITHOUT PROJECT

Existing traffic volumes were utilized to establish the Opening Year (2023) Without Project traffic volumes. Year 2021 existing count data was grown by a factor of 0.4% (linear, per year) for a period of two years to determine the Opening Year 2023 volumes. The growth rate was developed using Southern California Association of Governments (SCAG) 2016-2040 Regional Transportation Plan/Sustainable Communities Strategies (RTP/SCS) forecasts. The growth rate was coordinated with the City during the Scoping Agreement process. **Exhibit 11** shows the Opening Year (2023) Without Project daily and AM/PM peak hour traffic volumes. **Appendix C** contains the traffic volume development worksheets.

### 7.3 OPENING YEAR 2023 PLUS PROJECT

The Opening Year (2023) Without Project traffic volumes and the Project Only traffic volumes were combined to estimate the Opening Year (2023) Plus Project traffic volumes. **Exhibit 12** shows the Opening Year (2023) Plus Project daily and AM/PM peak hour traffic volumes. **Appendix C** contains the traffic volume development worksheets.





<p>212 / 111 611 / 681 116 / 168</p> <p>Paramount Blvd</p>	<p>63 / 119 1034 / 791 120 / 104</p> <p>Washington Blvd</p>	<p>99 / 132 799 / 852 187 / 211</p> <p>Rosemead Blvd</p>	<p>123 / 140 1137 / 792 249 / 191</p> <p>Washington Blvd</p>
<p>92 / 208 766 / 1347 232 / 264</p>	<p>243 / 359 382 / 816 79 / 136</p>	<p>89 / 241 641 / 1173 190 / 208</p>	<p>174 / 200 582 / 776 214 / 270</p>
<p>438 / 179 900 / 766 5 / 37</p> <p>Slauson Ave</p>	<p>21 / 18 497 / 370 366 / 265</p> <p>Telegraph Rd</p>	<p>257 / 288 588 / 759 92 / 135</p> <p>Paramount Blvd</p>	<p>119 / 120 1018 / 668 186 / 159</p> <p>Slauson Ave</p>
<p>107 / 163 324 / 931 522 / 743</p>	<p>175 / 88 933 / 1072 319 / 487</p>	<p>195 / 203 670 / 1098 17 / 65</p>	<p>26 / 30 411 / 696 162 / 156</p>
<p>96 / 109 778 / 960 96 / 123</p> <p>Rosemead Blvd</p>	<p>127 / 154 1157 / 720 272 / 233</p> <p>Slauson Ave</p>	<p>61 / 9 846 / 1203 62 / 134</p> <p>Rosemead Blvd</p>	<p>41 / 34 1 / 0 13 / 10</p>
<p>122 / 201 737 / 1025 141 / 139</p>	<p>93 / 91 603 / 932 151 / 186</p>	<p>9 / 50 0 / 0 18 / 77</p> <p>Project Drwy</p>	<p>91 / 13 884 / 1215 14 / 35</p>
<p>37 / 24 744 / 878 111 / 93</p> <p>Paramount Blvd</p>	<p>75 / 58 734 / 432 200 / 171</p> <p>Telegraph Rd</p>	<p>22 / 33 914 / 958 43 / 101</p> <p>Rosemead Blvd</p>	<p>74 / 97 681 / 531 522 / 463</p> <p>Telegraph Rd</p>
<p>39 / 50 499 / 902 148 / 263</p>	<p>142 / 156 413 / 738 105 / 153</p>	<p>67 / 89 520 / 677 259 / 399</p>	<p>225 / 170 684 / 1006 416 / 534</p>
<p>1159 / 1407 129 / 59</p> <p>Paramount Blvd</p>	<p>46 / 169 85 / 501</p> <p>I-5 On/Off Ramp</p>	<p>1092 / 1687 156 / 263</p> <p>Paramount Blvd</p>	<p>16 / 7 182 / 186</p> <p>I-5 On/Off Ramp</p>
<p>745 / 1016 693 / 287</p>	<p>745 / 1016 693 / 287</p>	<p>1458 / 1292 510 / 481</p>	<p>1458 / 1292 510 / 481</p>
<p>7 / 12 1661 / 1782</p> <p>Lakewood Blvd</p>	<p>106 / 325 17 / 31 175 / 214</p> <p>I-5 On/Off-Ramp</p>	<p>479 / 593 1080 / 1352</p> <p>Lakewood Blvd</p>	<p>I-5 On/Off-Ramp</p>
<p>8 / 12 145 / 175</p>	<p>60 / 66 1231 / 1481</p>	<p>254 / 292 78 / 72 217 / 198</p>	<p>1856 / 1608 223 / 229</p>

**LEGEND**

- Project Site
- Study Segments
- Local Roads
- Highways
- Study Intersections
- AM/PM Peak Hour Traffic Volumes
- Daily Traffic Volumes

**Existing Plus Project  
Daily & AM/PM Peak Hour Traffic Volumes  
Exhibit 10**





214 / 112 613 / 685 117 / 169 Paramount Blvd 1 Washington Blvd 64 / 120 1041 / 791 121 / 105	100 / 133 798 / 858 188 / 213 Rosemead Blvd 2 Washington Blvd 124 / 141 1146 / 798 245 / 192
93 / 210 765 / 1357 234 / 266 1 245 / 362 385 / 820 80 / 137	90 / 243 646 / 1182 184 / 209 2 174 / 196 586 / 776 215 / 266
442 / 180 906 / 764 5 / 37 Slauson Ave 3 Telegraph Rd 21 / 18 494 / 372 369 / 267	259 / 290 593 / 765 90 / 135 Paramount Blvd 4 Slauson Ave 119 / 120 1025 / 665 187 / 157
108 / 164 326 / 932 526 / 749 3 176 / 89 933 / 1080 322 / 491	197 / 205 668 / 1106 17 / 66 4 26 / 30 414 / 702 160 / 156
97 / 110 764 / 965 97 / 124 Rosemead Blvd 5 Slauson Ave 128 / 155 1166 / 726 254 / 232	8 / 0 853 / 1213 62 / 135 Rosemead Blvd 6 Project Drwy 41 / 34 1 / 0 13 / 10
123 / 203 743 / 1033 129 / 137 5 92 / 79 605 / 921 149 / 168	2 / 0 0 / 0 8 / 1 6 11 / 0 891 / 1225 14 / 35
37 / 24 750 / 882 112 / 94 Paramount Blvd 7 Telegraph Rd 76 / 58 739 / 429 202 / 172	21 / 27 914 / 908 41 / 89 Rosemead Blvd 8 Telegraph Rd 61 / 96 686 / 535 526 / 476
39 / 50 496 / 908 149 / 265 9 143 / 157 413 / 744 106 / 154	60 / 89 527 / 682 261 / 402 8 227 / 171 629 / 1004 419 / 538
1168 / 1418 130 / 59 Paramount Blvd 9 I-5 On/Off Ramp 46 / 170 86 / 505	1101 / 1700 157 / 265 Paramount Blvd 10 I-5 On/Off Ramp 16 / 7 183 / 187
7 / 12 1669 / 1782 Lakewood Blvd 11 I-5 On/Off-Ramp 176 / 216 17 / 31 87 / 325	480 / 579 1086 / 1344 Lakewood Blvd 12 I-5 On/Off-Ramp 1467 / 1302 514 / 485
8 / 12 146 / 176 11 60 / 67 1201 / 1486	236 / 291 79 / 73 219 / 200 12 1851 / 1618 225 / 231

**LEGEND**

- Project Site
- Study Segments
- Local Roads
- Highways
- Study Intersections
- # / # AM/PM Peak Hour Traffic Volumes
- ###,#### Daily Traffic Volumes

**Opening Year 2023 Without Project  
Daily & AM/PM Peak Hour Traffic Volumes**





<p>214 / 112 613 / 685 117 / 169</p> <p>Paramount Blvd</p>	<p>64 / 120 1042 / 797 121 / 105</p> <p>Washington Blvd</p>	<p>100 / 133 805 / 859 188 / 213</p> <p>Rosemead Blvd</p>	<p>124 / 141 1146 / 798 245 / 192</p> <p>Washington Blvd</p>
<p>93 / 210 772 / 1358 234 / 266</p>	<p>245 / 362 385 / 823 80 / 137</p>	<p>90 / 243 646 / 1182 191 / 210</p>	<p>175 / 202 587 / 782 216 / 272</p>
<p>442 / 180 907 / 772 5 / 37</p> <p>Slauson Ave</p>	<p>21 / 18 501 / 373 369 / 267</p> <p>Telegraph Rd</p>	<p>259 / 290 593 / 765 93 / 136</p> <p>Paramount Blvd</p>	<p>119 / 123 1026 / 673 187 / 160</p> <p>Slauson Ave</p>
<p>108 / 164 327 / 938 526 / 749</p>	<p>176 / 89 940 / 1081 322 / 491</p>	<p>197 / 205 675 / 1107 17 / 66</p>	<p>26 / 30 414 / 702 163 / 157</p>
<p>97 / 110 784 / 968 97 / 124</p> <p>Rosemead Blvd</p>	<p>274 / 235 1166 / 726 128 / 155</p> <p>Slauson Ave</p>	<p>61 / 9 853 / 1213 62 / 135</p> <p>Rosemead Blvd</p>	<p>41 / 34 1 / 0 13 / 10</p>
<p>123 / 203 743 / 1033 142 / 140</p>	<p>94 / 92 608 / 939 152 / 187</p>	<p>9 / 50 0 / 0 18 / 77</p> <p>Project Drwy</p>	<p>91 / 13 891 / 1225 14 / 35</p>
<p>37 / 24 750 / 885 112 / 94</p> <p>Paramount Blvd</p>	<p>76 / 58 740 / 435 202 / 172</p> <p>Telegraph Rd</p>	<p>22 / 33 921 / 965 43 / 102</p> <p>Rosemead Blvd</p>	<p>74 / 98 686 / 535 526 / 467</p> <p>Telegraph Rd</p>
<p>39 / 50 503 / 909 149 / 265</p>	<p>143 / 157 416 / 744 106 / 154</p>	<p>67 / 90 524 / 682 261 / 402</p>	<p>227 / 171 689 / 1014 419 / 538</p>
<p>1168 / 1421 130 / 59</p> <p>Paramount Blvd</p>	<p>46 / 170 86 / 505</p> <p>I-5 On/Off Ramp</p>	<p>1101 / 1700 157 / 265</p> <p>Paramount Blvd</p>	<p>16 / 7 183 / 187</p> <p>I-5 On/Off Ramp</p>
<p>754 / 1024 699 / 289</p>	<p>1470 / 1302 514 / 485</p>	<p>9 / 31 1674 / 1820</p> <p>Lakewood Blvd</p>	<p>107 / 328 17 / 31 176 / 216</p> <p>I-5 On/Off-Ramp</p>
<p>8 / 12 146 / 176</p>	<p>60 / 67 1241 / 1493</p>	<p>483 / 598 1089 / 1363</p> <p>Lakewood Blvd</p>	<p>256 / 294 79 / 73 219 / 200</p> <p>I-5 On/Off-Ramp</p>
			<p>1871 / 1621 225 / 231</p>

**LEGEND**

- Project Site
- Study Segments
- Local Roads
- Highways
- Study Intersections
- AM/PM Peak Hour Traffic Volumes
- Daily Traffic Volumes

## Opening Year 2023 Plus Project Daily & AM/PM Peak Hour Traffic Volumes

Exhibit 12

## 7.4 FORECAST CUMULATIVE CONDITIONS (2023) TRAFFIC VOLUMES

### 7.4.1 Cumulative Projects

The City of Pico Rivera provided a list of projects to consider in the development of the Forecast Cumulative Conditions (2023) traffic volumes. **Table 7** shows the projects considered in the development of the subsequent volumes. Individual trip generation and assignment was conducted for individual projects, resulting in the cumulative project traffic volumes. The following six projects were found to add traffic to the Project study area and were included in the Forecast Cumulative Conditions (2023) analysis. Information about the cumulative projects is included in **Appendix D**.

**TABLE 7: CUMULATIVE PROJECTS**

ID	Project Location/Name	Project Type	Size	ADT	AM Peak Hour	PM Peak Hour
1	8825 Washington Avenue (Mercury Project)	Apartments	255 Units	1,577	110	132
		Retail	2,750 SF			
		Restaurant	2,750 SF			
2	6605 Rosemead Boulevard	Public Storage	60,000 SF	87	5	9
3	Southeast Corner of Rosemead Boulevard / Beverly Boulevard (Beverly Crossing Project)	Gym	24,807 SF	3,691	203	266
		Retail	2,000 SF			
		Grocery Store	25,354 SF			
		Coffee Shop	1,800 SF			
4	9102 Slauson Avenue	Apartments	6 Units	44	3	3
5	7105 Paramount Boulevard	Industrial	28,458 SF	141	20	18
6	301 Jacmar Drive	Townhomes	31 Units	227	14	17

### 7.4.2 Forecast Cumulative (2023) Without Project

The cumulative project traffic volumes and the Opening Year (2023) traffic volumes were combined to estimate the Forecast Cumulative (2023) Without Project traffic volumes. **Exhibit 13** shows the daily and AM/PM peak hour traffic volumes for the Forecast Cumulative (2023) Without Project Conditions. **Appendix C** contains the traffic volume development worksheets.

### 7.4.3 Forecast Cumulative (2023) Plus Project

The Forecast Cumulative (2023) Without Project traffic volumes and Project Only traffic volumes were combined to estimate the Cumulative Conditions (2023) Plus Project traffic volumes. **Exhibit 14** shows the Forecast Cumulative (2023) Plus Project daily and AM/PM peak hour traffic volumes. **Appendix C** contains the traffic volume development worksheets.





<p>214 / 112 618 / 685 123 / 177</p> <p>Paramount Blvd</p>	<p>73 / 125 1062 / 807 128 / 110</p> <p>Washington Blvd</p>	<p>102 / 137 810 / 869 206 / 226</p> <p>Rosemead Blvd</p>	<p>124 / 141 1161 / 821 245 / 192</p> <p>Washington Blvd</p>
<p>95 / 210 776 / 1379 234 / 267</p>	<p>246 / 365 385 / 822 86 / 147</p>	<p>90 / 243 647 / 1186 184 / 209</p>	<p>180 / 208 588 / 778 215 / 266</p>
<p>442 / 180 919 / 784 5 / 37</p> <p>Slauson Ave</p>	<p>21 / 18 498 / 372 369 / 267</p> <p>Telegraph Rd</p>	<p>259 / 293 601 / 776 90 / 138</p> <p>Paramount Blvd</p>	<p>119 / 120 1026 / 666 191 / 157</p> <p>Slauson Ave</p>
<p>108 / 164 326 / 935 526 / 749</p>	<p>176 / 89 949 / 1101 322 / 491</p>	<p>197 / 205 669 / 1107 21 / 66</p>	<p>26 / 30 426 / 712 160 / 156</p>
<p>97 / 110 784 / 991 97 / 124</p> <p>Rosemead Blvd</p>	<p>128 / 155 1167 / 730 254 / 232</p> <p>Slauson Ave</p>	<p>8 / 0 873 / 1239 62 / 135</p> <p>Rosemead Blvd</p>	<p>41 / 34 1 / 0 13 / 10</p>
<p>123 / 203 748 / 1034 129 / 137</p>	<p>92 / 79 625 / 951 149 / 168</p>	<p>2 / 0 0 / 0 8 / 1</p> <p>Project Drwy</p>	<p>11 / 0 911 / 1255 14 / 35</p>
<p>37 / 24 758 / 892 112 / 94</p> <p>Paramount Blvd</p>	<p>76 / 58 739 / 429 202 / 172</p> <p>Telegraph Rd</p>	<p>21 / 27 932 / 931 41 / 89</p> <p>Rosemead Blvd</p>	<p>61 / 96 686 / 535 526 / 467</p> <p>Telegraph Rd</p>
<p>39 / 50 496 / 908 149 / 265</p>	<p>143 / 157 424 / 753 106 / 154</p>	<p>60 / 89 524 / 682 261 / 402</p>	<p>227 / 171 647 / 1032 419 / 538</p>
<p>1176 / 1428 130 / 59</p> <p>Paramount Blvd</p>	<p>46 / 170 86 / 505</p> <p>I-5 On/Off Ramp</p>	<p>1109 / 1707 157 / 265</p> <p>Paramount Blvd</p>	<p>16 / 7 183 / 187</p> <p>I-5 On/Off Ramp</p>
<p>762 / 1033 699 / 289</p>	<p>762 / 1033 699 / 289</p>	<p>1478 / 1311 514 / 485</p>	<p>1478 / 1311 514 / 485</p>
<p>7 / 12 1687 / 1805</p> <p>Lakewood Blvd</p>	<p>87 / 325 17 / 31 176 / 216</p> <p>I-5 On/Off-Ramp</p>	<p>480 / 579 1104 / 1367</p> <p>Lakewood Blvd</p>	<p>I-5 On/Off-Ramp</p>
<p>8 / 12 146 / 176</p>	<p>60 / 67 1219 / 1514</p>	<p>236 / 291 79 / 73 219 / 200</p>	<p>1869 / 1646 225 / 231</p>

**LEGEND**

- Project Site
- Study Segments
- Local Roads
- Highways
- Study Intersections
- AM/PM Peak Hour Traffic Volumes
- Daily Traffic Volumes

**Forecast Cumulative (2023) Without Project  
Daily & AM/PM Peak Hour Traffic Volumes**





<p>214 / 112 618 / 686 123 / 177</p> <p>Paramount Blvd</p>	<p>73 / 125 1063 / 813 128 / 110</p> <p>Washington Blvd</p>	<p>102 / 137 817 / 870 206 / 226</p> <p>Rosemead Blvd</p>	<p>124 / 141 1161 / 821 251 / 193</p> <p>Washington Blvd</p>
<p>95 / 210 783 / 1380 234 / 267</p>	<p>246 / 365 385 / 825 86 / 147</p>	<p>90 / 243 647 / 1186 191 / 210</p>	<p>181 / 214 589 / 784 216 / 272</p>
<p>442 / 180 920 / 792 5 / 37</p> <p>Slauson Ave</p>	<p>21 / 18 505 / 373 369 / 267</p> <p>Telegraph Rd</p>	<p>259 / 293 601 / 776 93 / 139</p> <p>Paramount Blvd</p>	<p>119 / 120 1027 / 674 191 / 160</p> <p>Slauson Ave</p>
<p>108 / 164 327 / 941 526 / 749</p>	<p>176 / 89 956 / 1102 322 / 491</p>	<p>197 / 205 676 / 1108 21 / 66</p>	<p>26 / 30 426 / 712 163 / 157</p>
<p>97 / 110 804 / 994 97 / 124</p> <p>Rosemead Blvd</p>	<p>128 / 155 1167 / 730 274 / 235</p> <p>Slauson Ave</p>	<p>61 / 9 873 / 1239 62 / 135</p> <p>Rosemead Blvd</p>	<p>41 / 34 1 / 0 13 / 10</p>
<p>123 / 203 748 / 1034 142 / 140</p>	<p>94 / 92 628 / 969 152 / 187</p>	<p>9 / 50 0 / 0 18 / 77</p> <p>Project Drwy</p>	<p>91 / 13 911 / 1255 14 / 35</p>
<p>37 / 24 758 / 895 112 / 94</p> <p>Paramount Blvd</p>	<p>76 / 58 740 / 435 202 / 172</p> <p>Telegraph Rd</p>	<p>22 / 33 939 / 988 43 / 102</p> <p>Rosemead Blvd</p>	<p>74 / 98 686 / 535 526 / 467</p> <p>Telegraph Rd</p>
<p>39 / 50 503 / 909 149 / 265</p>	<p>143 / 157 427 / 753 106 / 154</p>	<p>67 / 90 524 / 682 254 / 402</p>	<p>227 / 171 707 / 1042 419 / 538</p>
<p>1176 / 1431 130 / 59</p> <p>Paramount Blvd</p>	<p>46 / 170 85 / 505</p> <p>I-5 On/Off Ramp</p>	<p>1109 / 1710 157 / 265</p> <p>Paramount Blvd</p>	<p>16 / 70 183 / 187</p> <p>I-5 On/Off Ramp</p>
<p>765 / 1033 699 / 289</p>	<p>765 / 1033 699 / 289</p>	<p>1481 / 1311 514 / 485</p>	<p>1481 / 1311 514 / 485</p>
<p>9 / 31 1692 / 1843</p> <p>Lakewood Blvd</p>	<p>107 / 328 17 / 31 176 / 216</p> <p>I-5 On/Off-Ramp</p>	<p>483 / 598 1107 / 1386</p> <p>Lakewood Blvd</p>	<p>I-5 On/Off-Ramp</p>
<p>8 / 12 146 / 176</p>	<p>60 / 67 1259 / 1521</p>	<p>256 / 294 79 / 73 219 / 200</p>	<p>1889 / 1649</p>

**LEGEND**

	Project Site		Study Segments
	Local Roads	# / #	AM/PM Peak Hour Traffic Volumes
	Highways	###,####	Daily Traffic Volumes
	Study Intersections		

**Forecast Cumulative (2023) Plus Project  
Daily & AM/PM Peak Hour Traffic Volumes**

## 7.5 BUILD-OUT YEAR (2040) WITHOUT PROJECT

Opening Year (2023) intersection turning movement count data and Opening Year (2023) 24-hour segment data were utilized to establish the Build-out Year (2040) traffic volumes. Opening Year (2023) data was grown by a factor of 0.4% (linear, per year) for 17 years (2040 – 2023) and Cumulative project traffic volumes were added to determine the Build-out Year (2040) volumes. As discussed previously, the growth rate was calculated by evaluating projected growth in the region. **Exhibit 15** shows the Build-out Year (2040) Without Project daily and AM/PM peak hour traffic volumes. **Appendix C** contains the traffic volume development worksheets.

## 7.6 BUILD-OUT YEAR (2040) PLUS PROJECT

Build-out Year (2040) Without Project traffic volumes and the Project Only traffic volumes were combined to estimate the Build-out Year (2040) Plus Project traffic volumes. **Exhibit 16** shows the Build-out Year (2040) Plus Project daily and AM/PM peak hour traffic volumes. **Appendix C** contains the traffic volume development worksheets.





229 / 120 657 / 732 131 / 189 Paramount Blvd 1 Washington Blvd	78 / 134 1134 / 862 137 / 117 Washington Blvd 2 Washington Blvd	109 / 146 865 / 978 109 / 149 Rosemead Blvd 1 Washington Blvd	132 / 151 1240 / 877 262 / 205 Rosemead Blvd 2 Washington Blvd
101 / 224 829 / 1473 250 / 285 263 / 390 411 / 878 92 / 157 3 Slauson Ave Telegraph Rd	96 / 260 691 / 1267 197 / 223 192 / 222 628 / 831 230 / 284 4 Rosemead Blvd Slauson Ave	472 / 192 981 / 837 5 / 40 Slauson Ave 3 Telegraph Rd	22 / 19 532 / 397 394 / 285 277 / 313 642 / 829 96 / 147 Rosemead Blvd 4 Slauson Ave
115 / 175 348 / 999 562 / 800 188 / 95 1014 / 1176 344 / 524 5 Rosemead Blvd Slauson Ave	210 / 219 714 / 1182 22 / 70 28 / 32 455 / 760 171 / 167 6 Rosemead Blvd Project Drwy	104 / 117 837 / 1058 104 / 132 271 / 248 1246 / 780 137 / 166 9 / 0 932 / 1323 66 / 144 44 / 36 1 / 0 14 / 11 7 Rosemead Blvd Slauson Ave	131 / 217 799 / 1104 138 / 146 98 / 84 668 / 1016 159 / 179 12 / 0 973 / 1340 15 / 37 8 Rosemead Blvd Telegraph Rd
40 / 26 810 / 953 120 / 100 81 / 62 789 / 458 216 / 184 22 / 29 995 / 994 44 / 95 65 / 103 733 / 571 562 / 499 9 Paramount Blvd Telegraph Rd	42 / 53 530 / 970 159 / 283 153 / 168 453 / 804 113 / 164 64 / 95 560 / 728 279 / 429 242 / 183 691 / 1102 447 / 575 10 Paramount Blvd I-5 On/Off Ramp	1256 / 1525 139 / 63 49 / 182 92 / 539 1184 / 1823 168 / 283 17 / 7 195 / 200 814 / 1103 747 / 309 11 Lakewood Blvd I-5 On/Off-Ramp	1184 / 1823 168 / 283 17 / 7 195 / 200 1579 / 1400 549 / 518 12 Lakewood Blvd I-5 On/Off-Ramp
7 / 13 1802 / 1928 93 / 347 18 / 33 188 / 231 9 / 13 156 / 188 64 / 72 1302 / 1617 252 / 311 84 / 78 234 / 214 1996 / 1758 240 / 247	93 / 347 18 / 33 188 / 231 513 / 618 1179 / 1460 1996 / 1758 240 / 247	9 / 13 156 / 188 64 / 72 1302 / 1617 252 / 311 84 / 78 234 / 214 1996 / 1758 240 / 247	93 / 347 18 / 33 188 / 231 513 / 618 1179 / 1460 1996 / 1758 240 / 247

**LEGEND**

- Project Site
- Study Segments
- Local Roads
- Highways
- Study Intersections
- AM/PM Peak Hour Traffic Volumes

**Future Buildout Year 2040 Without Project  
Daily & AM/PM Peak Hour Traffic Volumes**





<p>229 / 120 660 / 733 131 / 189</p> <p>Paramount Blvd</p>	<p>78 / 134 1135 / 868 137 / 117</p> <p>Washington Blvd</p>	<p>109 / 146 872 / 979 220 / 241</p> <p>Rosemead Blvd</p>	<p>132 / 151 1240 / 877 268 / 206</p> <p>Washington Blvd</p>
<p>101 / 124 836 / 1474 250 / 285</p>	<p>263 / 390 411 / 881 92 / 157</p>	<p>96 / 260 691 / 1267 204 / 224</p>	<p>193 / 228 629 / 837 231 / 290</p>
<p>472 / 192 982 / 845 5 / 40</p> <p>Slauson Ave</p>	<p>22 / 19 539 / 398 394 / 285</p> <p>Telegraph Rd</p>	<p>277 / 313 642 / 829 99 / 148</p> <p>Paramount Blvd</p>	<p>127 / 131 1097 / 719 204 / 171</p> <p>Slauson Ave</p>
<p>115 / 175 349 / 1005 562 / 800</p>	<p>188 / 95 1021 / 1177 344 / 524</p>	<p>210 / 219 721 / 1183 22 / 70</p>	<p>28 / 32 455 / 760 174 / 168</p>
<p>104 / 117 857 / 1061 104 / 132</p> <p>Rosemead Blvd</p>	<p>137 / 166 1246 / 780 291 / 251</p> <p>Slauson Ave</p>	<p>62 / 9 932 / 1323 66 / 144</p> <p>Rosemead Blvd</p>	<p>44 / 36 1 / 0 14 / 11</p>
<p>131 / 217 799 / 1104 151 / 149</p>	<p>100 / 97 671 / 1034 162 / 198</p>	<p>9 / 50 0 / 0 19 / 77</p> <p>Project Drwy</p>	<p>92 / 13 973 / 1340 15 / 37</p>
<p>40 / 26 810 / 956 120 / 100</p> <p>Paramount Blvd</p>	<p>81 / 62 790 / 494 216 / 184</p> <p>Telegraph Rd</p>	<p>23 / 35 1002 / 1051 46 / 108</p> <p>Rosemead Blvd</p>	<p>78 / 105 733 / 571 562 / 499</p> <p>Telegraph Rd</p>
<p>42 / 53 537 / 971 159 / 283</p>	<p>153 / 168 456 / 804 113 / 164</p>	<p>71 / 96 560 / 728 279 / 429</p>	<p>242 / 183 751 / 1112 447 / 575</p>
<p>1256 / 1528 139 / 63</p> <p>Paramount Blvd</p>	<p>49 / 182 92 / 539</p> <p>I-5 On/Off Ramp</p>	<p>1184 / 1826 168 / 283</p> <p>Paramount Blvd</p>	<p>17 / 7 195 / 200</p> <p>I-5 On/Off Ramp</p>
<p>817 / 1103 747 / 309</p>	<p>1582 / 1400 549 / 518</p>	<p>9 / 32 1807 / 1966</p> <p>Lakewood Blvd</p>	<p>113 / 350 18 / 33 188 / 231</p> <p>I-5 On/Off-Ramp</p>
<p>9 / 13 156 / 188</p>	<p>64 / 72 1342 / 1624</p>	<p>516 / 637 1182 / 1479</p> <p>Lakewood Blvd</p>	<p>272 / 314 84 / 78 234 / 214</p> <p>I-5 On/Off-Ramp</p>
<p>2016 / 1761 240 / 247</p>			

**LEGEND**

	Project Site		Study Segments
	Local Roads	# / #	AM/PM Peak Hour Traffic Volumes
	Highways	###,####	Daily Traffic Volumes
	Study Intersections		

**Future Buildout Year 2040 Plus Project  
Daily & AM/PM Peak Hour Traffic Volumes  
Exhibit 16**



## 8 TRAFFIC OPERATIONS ANALYSIS

### 8.1 EXISTING YEAR (2021) CONDITIONS

#### Intersection Analysis

**Table 8** summarizes the Existing Year (2021) peak hour intersection analysis results. The analysis results show that all City of Pico Rivera intersections do not exceed threshold differences in v/c with the exception of Rosemead Boulevard & SoCalGas Driveway. During the AM peak hour, the LOS changes from an acceptable LOS D under Existing Year 2021 conditions to a deficient LOS E under Existing Year 2021 Plus Project conditions. During the PM peak hour at Rosemead Boulevard & SoCalGas Driveway, the change in delay is 696.4 seconds indicating an improvement is needed. The installation of a traffic signal at this location could improve operations to an acceptable LOS D or better during the AM and PM peak hours. Proposed improvements are discussed further in Section 8.6 of this report. At the Caltrans study intersections, no change in LOS is projected between the scenarios. Therefore, improvements are not required at any of the Caltrans study intersections. ICU analysis worksheets are contained in **Appendix E**. Synchro analysis sheets for the Existing Year (2021) Without and With Project conditions are contained in **Appendix F**.

**TABLE 8: EXISTING YEAR (2021) WITHOUT & WITH PROJECT PEAK HOUR INTERSECTION RESULTS COMPARISON**

LOS Comparison: Existing Year 2021 & Existing Year 2021 Plus Project																			
ID	Study Intersection	Control Type	Jurisdiction	Existing Year 2021						Existing Year 2021 Plus Project						Difference			
				AM			PM			AM			PM			AM		PM	
				ICU	Delay	LOS	ICU	Delay	LOS	ICU	Delay	LOS	ICU	Delay	LOS	ICU / Delay	Exceeds Threshold?	ICU / Delay	Exceeds Threshold?
1	Paramount Blvd / Washington Blvd	SIG	Pico Rivera	0.7437	--	C	0.8948	--	D	0.7459	--	C	0.8953	--	D	0.0022	No	0.0005	No
2	Rosemead Blvd / Washington Blvd	SIG	Pico Rivera	0.7618	--	C	0.8605	--	D	0.7640	--	C	0.8636	--	D	0.0022	No	0.0031	No
3	Slauson Ave / Telegraph Rd	SIG	Pico Rivera	0.7683	--	C	0.8889	--	D	0.7695	--	C	0.8910	--	D	0.0012	No	0.0021	No
4	Slauson Ave / Paramount Blvd	SIG	Pico Rivera	0.7085	--	C	0.7909	--	C	0.7087	--	C	0.7936	--	C	0.0002	No	0.0027	No
5	Slauson Ave / Rosemead Blvd	SIG	Pico Rivera	0.7096	--	C	0.7739	--	C	0.7140	--	C	0.7832	--	C	0.0044	No	0.0093	No
6	Rosemead Blvd / SoCalGas Drwy	TWSC	Pico Rivera	--	32.5	D	--	212.0	F	--	46.3	E	--	908.4	F	13.8	Yes	696.4	Yes
7	Telegraph Rd / Paramount Blvd	SIG	Pico Rivera	0.7412	--	C	0.8778	--	D	0.7427	--	C	0.8790	--	D	0.0015	No	0.0012	No
8	Telegraph Rd / Rosemead Blvd	SIG	Pico Rivera	0.8077	--	D	0.8008	--	D	0.8102	--	D	0.8205	--	D	0.0025	No	0.0197	No
9	Paramount Blvd / I-5 NB Ramps	SIG	Caltrans	--	10.1	B	--	22.5	C	--	10.1	B	--	22.5	C	0.0000	No	0.0000	No
10	Paramount Blvd / I-5 SB Ramps	OWSC	Caltrans	--	359.1	F	--	1222.3	F	--	359.1	F	--	1222.3	F	0.0000	No	0.0000	No
11	Lakewood Blvd / I-5 NB Ramps	SIG	Caltrans	--	23.0	C	--	34.9	C	--	23.6	C	--	37.0	D	0.6000	No	2.1000	No
12	Lakewood Blvd / I-5 SB Ramps	SIG	Caltrans	--	8.4	A	--	9.5	A	--	8.8	A	--	9.5	A	0.4	No	0.0000	No

Notes:

- 1) ICU = Intersection Capacity Utilization
- 2) LOS = Level of Service
- 3) OWSC = One-Way Stop-Control
- 4) TWSC = Two-Way Stop Control, Synchro was used to report worst approach delay and LOS
- 5) SIG = Signalized Control
- 6) Caltrans intersections report HCM 6th Edition delay and LOS
- 7) Delay in seconds per vehicle

## 8.2 OPENING YEAR (2023) CONDITIONS

### Intersection Analysis

**Table 9** summarizes the Opening Year (2023) Without and With Project peak hour intersection analysis results. The analysis results show that all City of Pico Rivera intersections do not exceed threshold differences in v/c with the exception of Rosemead Boulevard & SoCalGas Driveway during the AM and PM peak hour. At Rosemead Boulevard & SoCalGas Driveway, the Opening Year 2023 scenario during the AM peak hour is Los D and LOS F with the project. During the PM peak hour, the change in delay is 696.5 seconds which indicates an improvement is needed. Installation of a traffic signal would improve operations at this location. Proposed improvements are discussed further in Section 8.6 of this report.

At the Caltrans study intersections, no change in LOS is projected between the scenarios. Therefore, no improvements are required at any of the study intersections. ICU analysis worksheets are contained in **Appendix E**. Synchro analysis sheets for the Opening Year (2023) Without and With Project are contained in **Appendix G**.

**TABLE 9: OPENING YEAR (2023) WITHOUT & WITH PROJECT PEAK HOUR INTERSECTION RESULTS COMPARISON**

LOS Comparison: Opening Year 2023 & Opening Year 2023 Plus Project																			
ID	Study Intersection	Control Type	Jurisdiction	Opening Year 2023						Opening Year 2023 Plus Project						Difference			
				AM			PM			AM			PM			AM		PM	
				ICU	Delay	LOS	ICU	Delay	LOS	ICU	Delay	LOS	ICU	Delay	LOS	ICU	Delay	LOS	ICU / Delay
1	Paramount Blvd / Washington Blvd	SIG	Pico Rivera	0.7485	--	C	0.9008	--	E	0.7509	--	C	0.9013	--	E	0.0024	No	0.0005	No
2	Rosemead Blvd / Washington Blvd	SIG	Pico Rivera	0.7668	--	C	0.8665	--	D	0.7688	--	C	0.8696	--	D	0.0020	No	0.0031	No
3	Slauson Ave / Telegraph Rd	SIG	Pico Rivera	0.7731	--	C	0.8946	--	D	0.7740	--	C	0.8967	--	D	0.0009	No	0.0021	No
4	Slauson Ave / Paramount Blvd	SIG	Pico Rivera	0.7130	--	C	0.7961	--	C	0.7132	--	C	0.7988	--	C	0.0002	No	0.0027	No
5	Slauson Ave / Rosemead Blvd	SIG	Pico Rivera	0.7142	--	C	0.7788	--	C	0.7186	--	C	0.7881	--	C	0.0044	No	0.0093	No
6	Rosemead Blvd / SoCalGas Drwy	TWSC	Pico Rivera	--	33.1	D	--	212.0	F	--	52.1	F	--	908.5	F	19.0	<b>Yes</b>	696.5	<b>Yes</b>
7	Telegraph Rd / Paramount Blvd	SIG	Pico Rivera	0.7460	--	C	0.8831	--	D	0.7474	--	C	0.8843	--	D	0.0014	No	0.0012	No
8	Telegraph Rd / Rosemead Blvd	SIG	Pico Rivera	0.8128	--	D	0.8059	--	D	0.8153	--	D	0.8256	--	D	0.0025	No	0.0197	No
9	Paramount Blvd / I-5 NB Ramps	SIG	Caltrans	--	10.2	B	--	23.0	C	--	10.2	B	--	23.0	C	0.0000	No	0.0000	No
10	Paramount Blvd / I-5 SB Ramps	OWSC	Caltrans	--	384.6	F	--	1515.8	F	--	384.6	F	--	1515.8	F	0.0000	No	0.0000	No
11	Lakewood Blvd / I-5 NB Ramps	SIG	Caltrans	--	23.2	C	--	35.6	D	--	23.9	C	--	38.0	D	0.7000	No	2.4000	No
12	Lakewood Blvd / I-5 SB Ramps	SIG	Caltrans	--	8.5	A	--	9.5	A	--	8.9	A	--	9.6	A	0.4	No	0.1000	No

Notes:

- 1) ICU = Intersection Capacity Utilization
- 2) LOS = Level of Service
- 3) OWSC = One-Way Stop-Control
- 4) TWSC = Two-Way Stop Control, Synchro was used to report the worst approach delay and LOS
- 5) SIG = Signalized Control
- 6) Caltrans intersections report HCM 6th Edition delay and LOS
- 7) Delay in seconds per vehicle

### 8.3 FORECAST CUMULATIVE (2023) CONDITIONS

#### Intersection Analysis

**Table 10** summarizes the Forecast Cumulative (2023) Without and With Project peak hour intersection analysis results. The analysis results show that all City of Pico Rivera intersections do not exceed threshold differences in v/c with the exception of Rosemead Boulevard & SoCalGas Driveway. During the AM and PM peak hour, Rosemead Boulevard & SoCalGas Driveway is operating deficiently i.e. LOS E and F with a change in delay of 20.1 seconds in the AM peak hour and a change in delay of 874.2 seconds during the PM peak hour when project traffic is added. Installation of a traffic signal would improve operations at this location. Proposed improvements are discussed further in Section 8.6 of this report.

At the Caltrans study intersections, no change in LOS is projected between the scenarios. Therefore, no improvements are required at the study intersections. ICU analysis worksheets are contained in **Appendix E**. Synchro analysis sheets for the Forecast Cumulative (2023) Without and With Project conditions are contained in **Appendix H**.

**TABLE 10: FORECAST CUMULATIVE (2023) WITHOUT & WITH PROJECT PEAK HOUR INTERSECTION RESULTS COMPARISON**

LOS Comparison: Forecast Cumulative Year 2023 & Forecast Cumulative Year 2023 Plus Project																			
ID	Study Intersection	Control Type	Jurisdiction	Forecast Cumulative Year 2023						Forecast Cumulative Year 2023 Plus Project						Difference			
				AM			PM			AM			PM			AM		PM	
				ICU	Delay	LOS	ICU	Delay	LOS	ICU	Delay	LOS	ICU	Delay	LOS	ICU / Delay	Exceeds Threshold?	ICU / Delay	Exceeds Threshold?
1	Paramount Blvd / Washington Blvd	SIG	Pico Rivera	0.7561	--	C	0.9098	--	E	0.7581	--	C	0.9103	--	E	0.0020	No	0.0005	No
2	Rosemead Blvd / Washington Blvd	SIG	Pico Rivera	0.7765	--	C	0.8759	--	D	0.7786	--	C	0.8790	--	D	0.0021	No	0.0031	No
3	Slauson Ave / Telegraph Rd	SIG	Pico Rivera	0.7772	--	C	0.9021	--	E	0.7794	--	C	0.9043	--	E	0.0022	No	0.0022	No
4	Slauson Ave / Paramount Blvd	SIG	Pico Rivera	0.7157	--	C	0.8013	--	D	0.7160	--	C	0.8040	--	D	0.0003	No	0.0027	No
5	Slauson Ave / Rosemead Blvd	SIG	Pico Rivera	0.7186	--	C	0.7852	--	C	0.7230	--	C	0.7945	--	C	0.0044	No	0.0093	No
6	Rosemead Blvd / SoCalGas Drwy	TWSC	Pico Rivera	--	35.2	E	--	244.3	F	--	55.3	F	--	1118.5	F	20.1	Yes	874.2	Yes
7	Telegraph Rd / Paramount Blvd	SIG	Pico Rivera	0.7485	--	C	0.8863	--	D	0.7499	--	C	0.8874	--	D	0.0014	No	0.0011	No
8	Telegraph Rd / Rosemead Blvd	SIG	Pico Rivera	0.8184	--	D	0.8131	--	D	0.8209	--	D	0.8328	--	D	0.0025	No	0.0197	No
9	Paramount Blvd / I-5 NB Ramps	SIG	Caltrans	--	10.2	B	--	23.2	C	--	10.2	B	--	23.2	C	0.0000	No	0.0000	No
10	Paramount Blvd / I-5 SB Ramps	OWSC	Caltrans	--	384.6	F	--	1515.8	F	--	384.6	F	--	1515.8	F	0.0000	No	0.0000	No
11	Lakewood Blvd / I-5 NB Ramps	SIG	Caltrans	--	23.5	C	--	36.4	D	--	24.2	C	--	39.3	D	0.7000	No	2.9000	No
12	Lakewood Blvd / I-5 SB Ramps	SIG	Caltrans	--	8.5	A	--	9.5	A	--	8.9	A	--	9.6	A	0.4	No	0.1000	No

Notes:

- 1) ICU = Intersection Capacity Utilization
- 2) LOS = Level of Service
- 3) OWSC = One-Way Stop-Control
- 4) TWSC = Two-Way Stop Control, Synchro was used to report the worst approach delay and LOS
- 5) SIG = Signalized Control
- 6) Caltrans intersections report HCM 6th Edition delay and LOS
- 7) Delay in seconds per vehicle



## 8.4 BUILD-OUT YEAR (2040) CONDITIONS

### Intersection Analysis

**Table 11** summarizes the Build-out Year (2040) Without and With Project peak hour intersection analysis results. The analysis results show that all City of Pico Rivera intersections do not exceed threshold differences in v/c with the exception of Rosemead Boulevard & SoCalGas Driveway. During the AM and PM peak hour, Rosemead Boulevard & SoCalGas Driveway is operating deficiently i.e. LOS E and F with a change in delay of 37.7 seconds in the AM peak hour and a change in delay of 812.3 seconds during the PM peak hour when project traffic is added. Installation of a traffic signal would improve operations at this location. Proposed improvements are discussed further in Section 8.6 of this report.

At the Caltrans study intersections, no change in LOS is projected between the scenarios. ICU analysis worksheets are contained in **Appendix E**. Synchro analysis sheets for the Build-out Year (2040) Without and With Project conditions are contained in **Appendix I**.

**TABLE 11: BUILD-OUT YEAR (2040) WITHOUT & WITH PROJECT PEAK HOUR INTERSECTION RESULTS COMPARISON**

LOS Comparison: Buildout Year 2040 & Buildout Year 2040 Plus Project																			
ID	Study Intersection	Control Type	Jurisdiction	Buildout Year 2040						Buildout Year 2040 Plus Project						Difference			
				AM			PM			AM			PM			AM		PM	
				ICU	Delay	LOS	ICU	Delay	LOS	ICU	Delay	LOS	ICU	Delay	LOS	ICU / Delay	Exceeds Threshold?	ICU / Delay	Exceeds Threshold?
1	Paramount Blvd / Washington Blvd	SIG	Pico Rivera	0.7978	--	C	0.9615	--	E	0.8001	--	D	0.9619	--	E	0.0023	No	0.0004	No
2	Rosemead Blvd / Washington Blvd	SIG	Pico Rivera	0.8187	--	D	0.9250	--	E	0.8208	--	D	0.9282	--	E	0.0021	No	0.0032	No
3	Slauson Ave / Telegraph Rd	SIG	Pico Rivera	0.8128	--	D	0.9537	--	E	0.8147	--	D	0.9559	--	E	0.0019	No	0.0022	No
4	Slauson Ave / Paramount Blvd	SIG	Pico Rivera	0.7542	--	C	0.8452	--	D	0.7544	--	C	0.8479	--	D	0.0002	No	0.0027	No
5	Slauson Ave / Rosemead Blvd	SIG	Pico Rivera	0.7573	--	C	0.8280	--	D	0.7610	--	C	0.8374	--	D	0.0037	No	0.0094	No
6	Rosemead Blvd / SoCalGas Drwy	TWSC	Pico Rivera	--	47.7	E	--	410.5	F	--	85.4	F	--	1222.8	F	37.7	<b>Yes</b>	812.3	<b>Yes</b>
7	Telegraph Rd / Paramount Blvd	SIG	Pico Rivera	0.7897	--	C	0.9369	--	E	0.7912	--	C	0.9382	--	E	0.0015	No	0.0013	No
8	Telegraph Rd / Rosemead Blvd	SIG	Pico Rivera	0.8636	--	D	0.8582	--	D	0.8661	--	D	0.8779	--	D	0.0025	No	0.0197	No
9	Paramount Blvd / I-5 NB Ramps	SIG	Caltrans	--	10.5	B	--	27.5	C	--	10.5	B	--	27.6	C	0.0000	No	0.1000	No
10	Paramount Blvd / I-5 SB Ramps	OWSC	Caltrans	--	714.4	F	--	2704.0	F	--	714.4	F	--	2704.0	F	0.0000	No	0.0000	No
11	Lakewood Blvd / I-5 NB Ramps	SIG	Caltrans	--	27.4	C	--	53.7	D	--	28.2	C	--	54.4	D	0.8000	No	0.7000	No
12	Lakewood Blvd / I-5 SB Ramps	SIG	Caltrans	--	8.9	A	--	10.0	B	--	9.3	A	--	10.1	B	0.4	No	0.1000	No

Notes:

- 1) ICU = Intersection Capacity Utilization
- 2) LOS = Level of Service
- 3) OWSC = One-Way Stop-Control
- 4) TWSC = Two-Way Stop Control, Synchro was used to report the worst approach delay and LOS
- 5) SIG = Signalized Control
- 6) Caltrans intersections report HCM 6th Edition delay and LOS
- 7) Delay in seconds per vehicle

## 8.5 TRAFFIC SIGNAL WARRANT ANALYSIS

The *California Manual on Uniform Traffic Control Devices* (CA MUTCD), 2014 Edition was utilized to conduct a traffic signal warrant for the site driveway intersection along Rosemead Boulevard for the Existing Plus Project scenario. **Table 12** presents the summary warrant results for the Existing Plus Project scenario. Warrant 3 (Peak Hour) was determined to be the appropriate warrant for use in this analysis. The other warrants were determined to be not applicable for this Project. Under Existing Plus Project, Warrant 3 is satisfied due to high traffic volumes entering and exiting the site driveway. Since the Peak Hour signal warrant was satisfied under the Existing Plus Project condition, the remaining scenarios with higher traffic volumes would also meet warrants, and therefore, not included in this report. The traffic signal warrant analysis worksheets are contained in **Appendix J**.

**TABLE 12: SIGNAL WARRANT ANALYSIS SUMMARY**

Scenario (Rosemead Blvd & SoCalGas Driveway)	Warrant 3 (Peak Hour) Met?	
	AM	PM
Existing Year (2021) Plus Project	Yes	Yes

## 8.6 RECOMMENDED IMPROVEMENT

The analysis results indicate that the intersection of Rosemead Boulevard & SoCalGas Driveway (#6) is projected to exceed the delay threshold (change in 1 second) during the AM and PM Peak Hour under the Existing Year 2021 Plus Project, Opening Year 2023 Plus Project, Forecast Cumulative 2023 Plus Project, and Build-out Year 2040 Plus Project conditions. This is a worst-case scenario, assuming that SoCalGas is not utilizing telecommute and/or alternative work week options for their employees. The installation of a traffic signal would improve operations at the intersection to an acceptable level of service (D or better) under the Build-out Year (2040) Plus Project condition as shown in **Table 13**. However, given the unknown factors surrounding the actual number of employees anticipated to use this intersection at peak periods, the installation of a traffic signal is not recommended at this time. As discussed above, future travel behaviors of employees to this facility has yet to be determined in terms of flexible working hours (i.e. not all employees will work a standard 8 AM to 5 PM shift) and/or number of employees telecommuting. Flexible work week employees would likely avoid the typical AM and PM peak hour. These considerations would further reduce peak hour traffic volumes entering and exiting Rosemead Boulevard & SoCalGas Driveway. It may also be noted there is one right-turn lane and one left-turn lane exiting the site. Exiting the site, the majority of traffic volumes make right turns (77) and the number of left-turn movements (50) alone do not justify the installation of a signal at this location since a minimum of 100 vehicles are required on a minor street approach. For these reasons, it is recommended the intersection be evaluated after one year in operation to determine if traffic control is warranted at the intersection of Rosemead Boulevard & SoCalGas Driveway. Examples of traffic control could be a signal or roundabout. If the City determines traffic control is warranted, the applicant will be fully responsible for funding and constructing the improvement(s).

**TABLE 13: BUILD-OUT YEAR 2040 PLUS PROJECT MITIGATION LOS COMPARISON**

HCM LOS Comparison: Build-out Year 2040 Plus Project & Build-out Year 2040 Plus Project With Mitigation											
ID	Study Intersection	Existing Traffic Control	Jurisdiction	Build-out Year 2040 Plus Project Without Mitigation				Build-out Year 2040 Plus Project With Mitigation (Traffic Signal)			
				AM		PM		AM		PM	
				Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
6	Rosemead Blvd / SoCalGas Drwy	TWSC	Pico Rivera	85.4	F	1222.8	F	15.0	B	22.0	C

## 9 PARKING REVIEW

On-site parking analysis was conducted to determine the number of required parking spaces for the proposed uses. **Table 14** summarizes the required and provided parking spaces onsite. The proposed project would remove a total of 465 spaces, and construct 219 parking spaces at the new building. The existing facility accommodates parking for 648 vehicle parking spaces. Per the existing Municipal Code, implementation of the proposed Project would require 175 parking spaces, which would bring the required spaces for the whole facility to 632 spaces. As shown in Table 14, implementation of the proposed Project would result in a net deficiency of 230 parking spaces at the existing SoCalGas facility as a whole. In order to accommodate this net deficiency, the Project would re-stripe existing paved areas in the facility to accommodate 270 additional spaces. Thus, the Project would provide 40 additional parking spaces than the Municipal Code requirement of 632 spaces.

**TABLE 14: SITE PARKING SUMMARY**

Condition	Number of Parking Stalls	
	Parking Required	Parking Provided
Existing Facility	457	648
Project Site (Removed)	0	(465)
Project Site (Constructed)	175	219
<b>Proposed Facility (With Project)</b>	<b>632</b>	<b>402</b>
Added Spaces With Restriping	0	270 (170 spaces restriped in western lot) (72 spaces restriped in central lot) (28 spaces restriped in central lot)
<b>Total Vehicular Parking</b>	<b>632</b>	<b>672</b>



## 10 CONSTRUCTION

Project construction is anticipated to occur in one phase for a duration of 22 months, starting in Q2, 2022 and ending in Q2 2024. Construction staging would occur within project area boundaries. Construction activities would include grading, paving, building construction, and painting. Clearing and grading activities would involve approximately 1,500 cubic yards of cut material and approximately 8,500 cubic yards of fill material with import of approximately 7,000 cubic yards of fill material. Site construction activity is anticipated to occur weekdays between the hours of 7 AM to 7 PM in accordance with the City's Municipal Code 18.42. Travel to/from the site is projected to include both construction workers and truck trips. Employees will park on-site during construction. Based on modeling conducted for the Noise Study, it is anticipated that project construction would generate a maximum of 51 hauling trips per day, 171 worker trips per day, and 39 vendor trips per day. The project would result in a maximum of 261 total trips per day (i.e., hauling, worker, and vendor trips). Construction traffic is projected to be lower than anticipated Project traffic, thus no operational impacts are anticipated during construction.

**Exhibit 17** shows the route construction vehicles will use to access the site. As shown, vehicles will use Crossway Drive to access the site rather than the main entrance via Rosemead Boulevard in efforts to reduce traffic congestion throughout the day and specifically during the AM and PM peak hours.



EXHIBIT 17 – CONSTRUCTION TRUCK ROUTE

## 11 FINDINGS AND RECOMMENDATIONS

### **Traffic Operations Analysis Results – Intersections**

The results of the intersection operations analysis show that all City of Pico Rivera study intersections are projected to operate at levels which do not exceed threshold differences in v/c under all scenarios with the exception of the Rosemead Boulevard / SoCalGas Driveway Intersection (#6) which is projected to exceed the delay and LOS thresholds under Plus Project conditions for all study scenarios during the AM and PM peak hour. Although a traffic signal is warranted at Rosemead Boulevard & SoCalGas Driveway, traffic volumes exiting the project site do not justify the installation of a traffic signal and travel characteristics at the project site have yet to be determined.

### **Recommended Improvements**

The following findings are based on the operations analysis results:

**Threshold Exceeded** – Rosemead Boulevard & SoCalGas Driveway Intersection (#6) exceeds the delay and LOS thresholds under Plus Project Conditions for all study scenarios during the AM and PM peak hour.

**Proposed Improvement** – The intersection of Rosemead Boulevard & SoCalGas Driveway will be evaluated after one year in operation to determine if traffic control such as a signal or roundabout is warranted. If new traffic control is warranted, the applicant will be fully responsible for funding and constructing the improvement.

### **Signal Warrant Evaluation**

A Peak Hour Signal Warrant was evaluated for the Rosemead Boulevard & SoCalGas Driveway intersection under the Existing Plus Project conditions for both AM and PM peak hours. The signal warrant was met during both the AM and PM peak hour at this location.

### **CEQA VMT Assessment**

The VMT assessment for the proposed Project is contained in a separate document.

### **Truck Activity During Construction**

Additional construction truck activity is anticipated during construction, however construction is relatively short-term at only 22 months. Site construction activity is anticipated to occur weekdays between the hours of 7 AM to 7 PM. Travel to/from the site is projected to include both construction workers and truck trips. Based on modeling conducted for the Noise Study, it is anticipated that project construction would generate a maximum of 51 hauling trips per day, 171 worker trips per day, and 39 vendor trips per day. The project would result in a maximum of 261 total trips per day (i.e., hauling, worker, and vendor trips). Construction traffic is projected to be lower than anticipated Project traffic, thus no operational impacts are anticipated during construction.

### **On-Site Parking**

The parking provided will not exceed the parking required by City of Pico Rivera code. Bicycle parking will be provided in addition to motor vehicle parking.

# **Appendix A: TIA Scoping Agreement**



## SoCalGas Traffic Study Scoping Agreement

### Scope of Study Form

**To be completed by the preparer of a traffic study and approved by the City's Public Works Department prior to start of a traffic study**

Project Name:	SoCalGas – Office Building Project		
Project Address:	8101 Rosemead Boulevard in the City of Pico Rivera		
Project Description:	New 68,110 SF building will serve as a primary control center, providing both monitoring and control of gas infrastructure assets in southern CA.		
Developer's Name:	Trey Post, DG Architects, Inc.		
Address:	2550 Fifth Avenue, Suite 115, San Diego, CA 92103		
Telephone No.:	619-685-3990 x417	Fax Number:	N/A
Email Address:	tpost@dga-sd.com		

Trip Generation Rates From:	<b>ITE</b>	Ed.10	Other:	
-----------------------------	------------	-------	--------	--

**Trip Generation For:**

Land Use (1)	Office	Land Use (2)	
ITE Land Use Code	715 (Single Tenant Office)	ITE Land Use Code	
Daily Trips	1,146	Daily Trips	
<b>AM Peak Hour Trips</b>		<b>AM Peak Hour Trips</b>	
Inbound	133	Inbound	
Outbound	17	Outbound	
Total	150	Total	
<b>PM Peak Hour Trips</b>		<b>PM Peak Hour Trips</b>	
Inbound	22	Inbound	
Outbound	126	Outbound	
Total	148	Total	

*(Use Additional Sheet(s), if necessary) (See Trip Generation Tables 1 and 2 in Section 2 of the Attachment)*

Pass-by Trips (%), if applicable:	0 %
-----------------------------------	-----

Trip Credits, if applicable for any existing use:	None
---	------


Land Use (1)	N/A	Land Use (2)	
ITE Land Use Code	N/A	ITE Land Use Code	
Daily Trips	0	Daily Trips	
<b>AM Peak Hour Trips</b>		<b>AM Peak Hour Trips</b>	
Inbound	0	Inbound	
Outbound	0	Outbound	
Total	0	Total	
<b>PM Peak Hour Trips:</b>		<b>PM Peak Hour Trips:</b>	
Inbound	0	Inbound	
Outbound	0	Outbound	
Total	0	Total	

**Project Opening Year:** 2022 **Build-out Year:** 2040

<b>Study Intersections:</b> 1	See attached list (Table 3 in Section 3).
2	
3	
4	
5	

*(Use Additional Sheet(s), if necessary)*

## SoCalGas Traffic Study Scoping Agreement

<b>Scope of Study form (continued)</b>												
<b>Study Segments:</b>	1						6					
	2						7					
	3						8					
	4	See attached list (Table 4 in Section 4).					9					
	5						10					
<i>(Use Additional Sheet(s), if necessary)</i>												
<b>Ambient Growth Rate:</b>	0.4	%	(linear growth per year) (See Attachments Section 7)									
<b>Trip Distribution:</b>	East	%	West	%	North	40	%	South	60	%		
<b>Include exhibit showing trip distribution/ assignment and a map showing the project's trips at the study intersections and project driveways</b>												
<b>Comments</b>	See attachments for trip distribution and assignment percentages: <b>Exhibit 3 &amp; 4: Area Trip Distribution Percentages</b>  See attachments for trip assignments: <b>Exhibit 5: Project Only AM/PM Peak Hour Volumes</b>											
<i>(Use Additional Sheet(s), if necessary)</i>												
<b>Preparer's Name:</b>	Jacob Swim, TE - Michael Baker International											
Address:	5050 Avenida Encinas, Suite 260   Carlsbad, CA 92008											
Telephone No.	619-456-1410				Fax Number:							
Email Address:	Jacob.swim@mbakerintl.com											
Signature:						Date:	4/26/2021					

**Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline)** (To be filled out by City Staff)

\_\_\_\_\_

Scoping Agreement Submitted on 4/26/2021

Revised on \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

**Approved Scoping Agreement:**

**Approved By (Department of Public Works):**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

SoCalGas Traffic Study Scoping Agreement - Attachments

Section 1 - Site Plan  
Exhibit 1: Site Plan





## SoCalGas Traffic Study Scoping Agreement - Attachments

### Section 2 - Trip Generation Tables

**Table 1: Trip Generation Rates**

Land Use	Daily Trip Rate	AM Peak Hour				PM Peak Hour			
		Total	In	:	Out	Total	In	:	Out
Office	4.42 / employee	0.58 / employee	89%	:	11%	0.57 / employee	15%	:	85%

Source: Institute of Transportation Engineers *Trip Generation Manual*, 10<sup>th</sup> Edition using the Fitted Curve Equation.  
KSF = 1,000 Square Feet

**Table 2: Trip Generation (Vehicles)**

Land Use	Intensity	Daily Trips	AM Peak Hour Trips				PM Peak Hour Trips			
			Total	In	:	Out	Total	In	:	Out
Office	259 employees	1,146	150	133	:	17	148	22	:	126
<b>Total Project Trip Generation</b>		<b>1,146</b>	<b>150</b>	<b>133</b>	<b>:</b>	<b>17</b>	<b>148</b>	<b>22</b>	<b>:</b>	<b>126</b>

SF = Square Feet

## SoCalGas Traffic Study Scoping Agreement - Attachments

### Section 3 – Study Intersections

ID	Table 3 - Study Intersections		
1	Paramount Boulevard / Washington Boulevard	7	Telegraph Road / Paramount Boulevard
2	Rosemead Boulevard / Washington Boulevard	8	Telegraph Road / Rosemead Boulevard
3	Slauson Avenue / Telegraph Road	9	Paramount Boulevard / I-5 Westbound
4	Slauson Avenue / Paramount Boulevard	10	Paramount Boulevard / I-5 Eastbound
5	Slauson Avenue / Rosemead Boulevard	11	Rosemead Boulevard / I-5 Westbound
6	Rosemead Boulevard / SoCalGas Driveway	12	Rosemead Boulevard / I-5 Eastbound

### Section 4 - Study Roadway Segments

Table 4 - Local Roadway Segments
<ol style="list-style-type: none"> <li>1) Washington Boulevard between Paramount Boulevard and Rosemead Boulevard</li> <li>2) Washington Boulevard east of Rosemead Boulevard</li> <li>3) Slauson Avenue between Telegraph Road and Paramount Boulevard</li> <li>4) Slauson Avenue between Paramount Boulevard and Rosemead Boulevard</li> <li>5) Slauson Avenue east of Rosemead Boulevard</li> <li>6) Telegraph Road between Slauson Avenue and Paramount Boulevard</li> <li>7) Telegraph Road between Paramount Boulevard and Rosemead Boulevard</li> <li>8) Telegraph Road east of Rosemead Boulevard</li> <li>9) Paramount Boulevard between Washington Boulevard and Slauson Avenue</li> <li>10) Paramount Boulevard between Slauson Avenue and Telegraph Road</li> <li>11) Paramount Boulevard between Telegraph Road and I-5 Westbound Ramps</li> <li>12) Rosemead Boulevard between Washington Avenue and Slauson Avenue</li> <li>13) Rosemead Boulevard between SoCalGas Driveway and Telegraph Road</li> </ol>
I-5 or I-605 Merge and Diverge Segments
Analysis of merge and diverge segments along I-5 or I-605 are not anticipated since project trips on the freeway ramps are anticipated to be less than 20 during the peak periods.
I-5 or I-605 Mainline Segments
Analysis of freeway segments is not assumed since the 150 or more peak hour trips in either direction is not anticipated to be satisfied.

Exhibit 2: Study Area Boundary





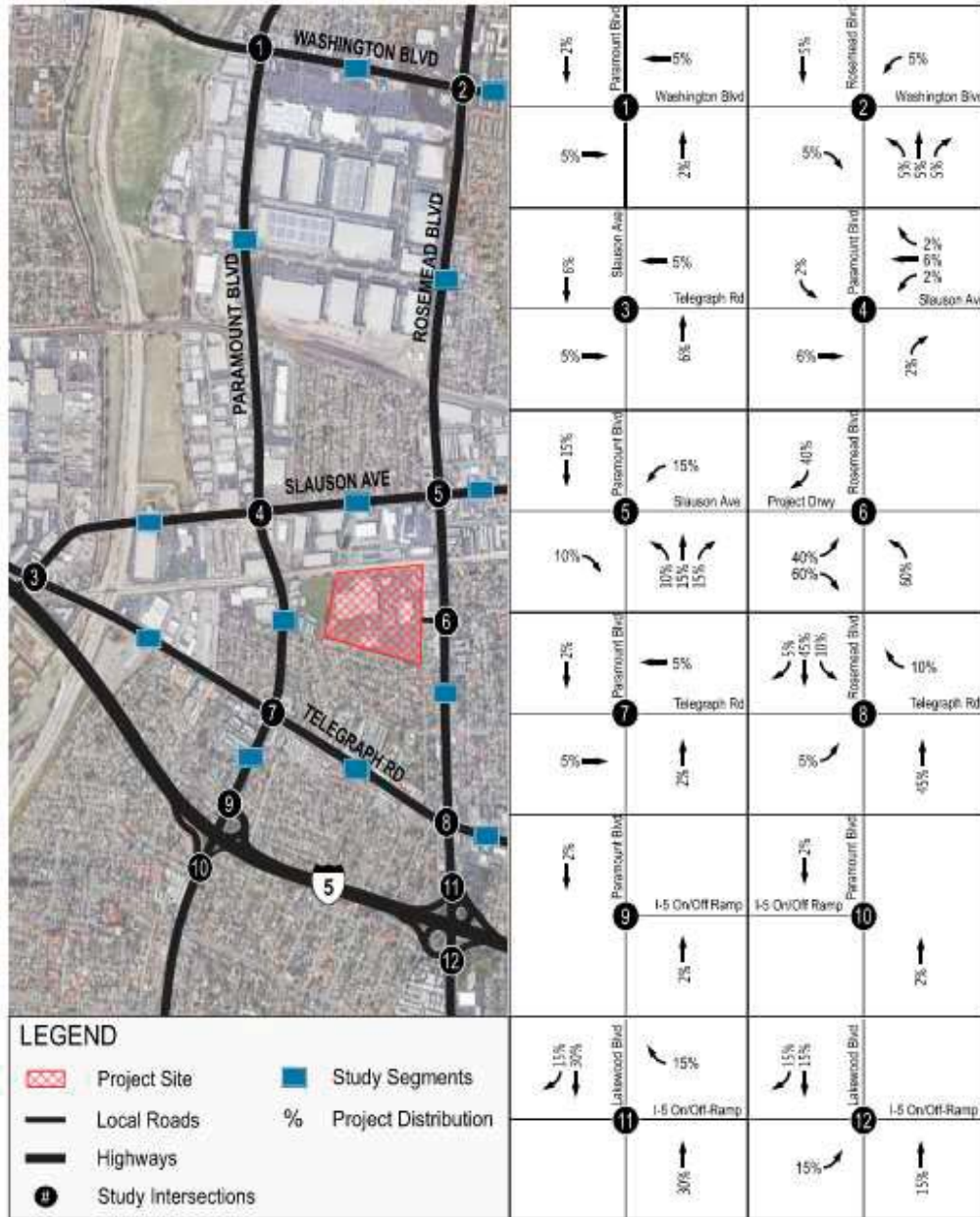
Section 5 - Trip Distribution

Exhibit 3: Study Area Trip Distribution Percentages



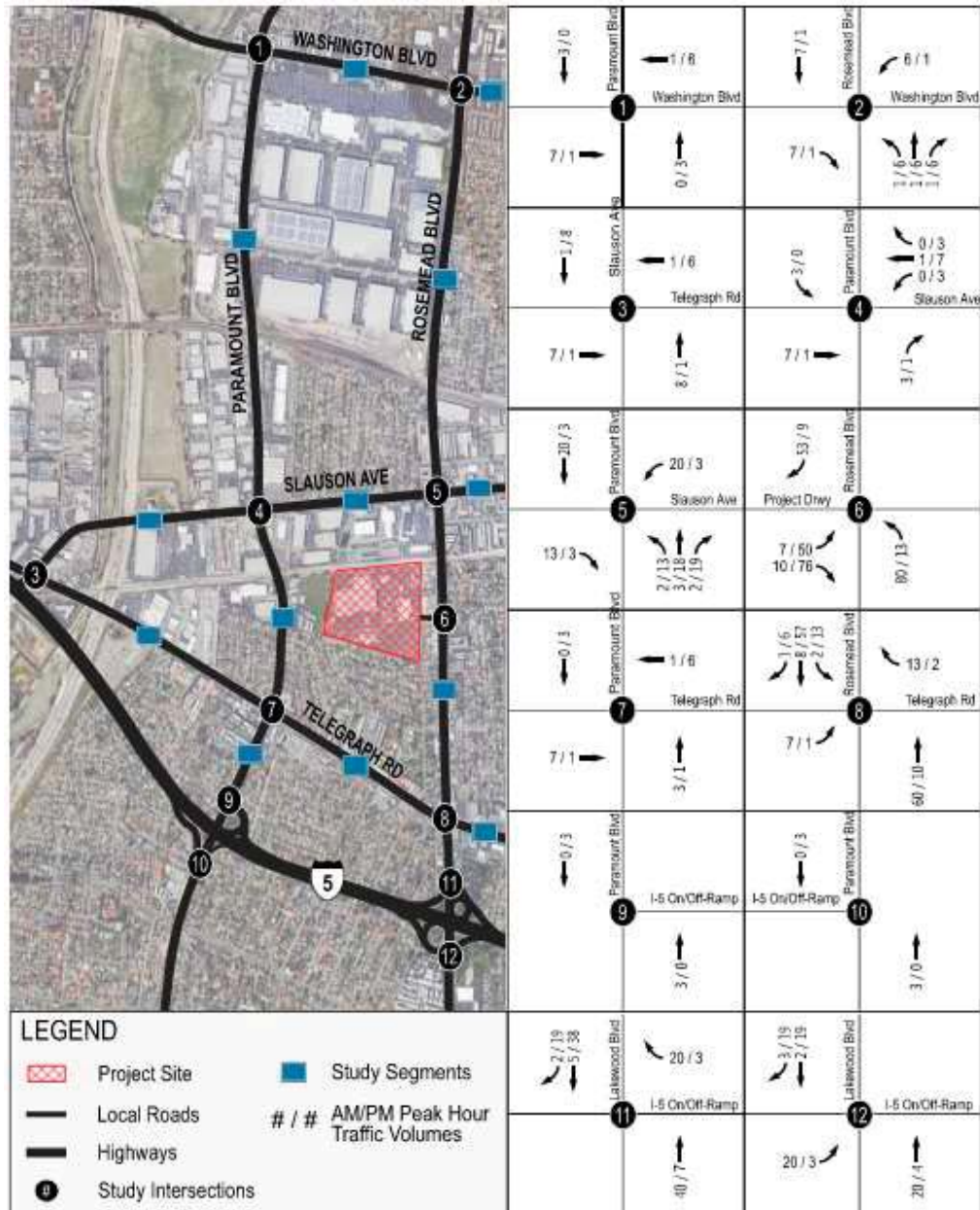
# SoCalGas Traffic Study Scoping Agreement - Attachments

Exhibit 4: Trip Distribution Percentages at Study Intersections



Section 6 - Trip Assignment

Exhibit 5: Project Only AM/PM Peak Hour Volumes





## SoCalGas Traffic Study Scoping Agreement - Attachments

### Section 7 - Ambient Growth

Annual Ambient Growth Rate: 0.4% per year (linear)

The data listed below was reviewed in order to estimate a background ambient growth rate. The highest value was assumed in an effort to be conservative.

- 1) SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) population, households, and employment data for the region (Downey RSA 22).
- 2) SCAG 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) population, households, and employment data for the city of Pico Rivera.
- 3) 2010 Congestion Management Program for Los Angeles County, Appendix D – Guidelines for CMP Transportation Impact Analysis – Exhibit D-1, General Traffic Volume Growth Factors.

**Table 5: Growth Data**

SCAG DATA - REGION														
County Name	City Name	Population				Households				Employment				Average
		2012	2020	2035	2040	2012	2020	2035	2040	2012	2020	2035	2040	
LOS ANGELES COUNTY	Pico Rivera	63,400	64,700	68,000	69,100	16,600	17,200	18,100	18,400	18,900	20,600	21,700	22,400	--
	Paramount	54,500	54,900	56,900	58,000	13,900	14,100	14,600	14,800	19,600	21,000	21,800	22,300	--
	Hawaiian Gardens	14,300	14,700	15,500	15,900	3,600	3,700	3,900	4,000	4,800	5,100	5,400	5,600	--
	La Habra Heights	5,400	5,600	6,000	6,200	1,800	1,800	1,900	1,900	200	300	400	400	--
	Whittier	85,900	88,600	93,700	96,900	28,300	29,800	31,500	32,600	26,900	29,100	30,700	31,700	--
TOTAL		223,500	228,500	240,100	246,100	64,200	66,600	70,000	71,700	70,400	76,100	80,000	82,400	--
Growth Rate 2020 to 2040 - Linear		0.385%				0.383%				0.414%				<b>0.394%</b>
SCAG DATA - CITY														
County Name	City Name	Population				Households				Employment				Average
		2012	2020	2035	2040	2012	2020	2035	2040	2012	2020	2035	2040	
LOS ANGELES COUNTY	Pico Rivera	63,400	64,700	68,000	69,100	16,600	17,200	18,100	18,400	18,900	20,600	21,700	22,400	--
Growth Rate 2020 to 2040 - Linear		0.340%				0.349%				0.437%				<b>0.375%</b>
CMP Exhibit D-1 - General Traffic Volume Growth Factors														
Area	Factor						Growth Between 2020 and 2035							
	2010	2015	2020	2025	2030	2035								
Downey (RSA 22)	1.000	1.052	1.104	1.116	1.127	1.139	0.035				<b>0.23%</b>			

## SoCalGas Traffic Study Scoping Agreement - Attachments

### Section 8 - Existing Conditions

Existing traffic count data will likely be impacted by COVID-19 conditions. Propose to conduct traffic counts and apply an adjustment factor based on a comparison to available historic traffic counts. Data collection will occur on Tuesdays, Wednesdays, or Thursdays during non-holiday weeks.

### Section 9 - Analysis Scenarios

The proposed analysis scenarios are listed below.

1. Existing Conditions (E)
2. Existing With Project (E+P)
3. Forecast Opening Year (E + Ambient Growth, A)
4. Forecast Opening Year With Project (E + A + P)
5. Forecast Cumulative (E + A + Cumulative Projects, C)
6. Forecast Cumulative With Project (E + A + C + P)
7. Future Build-out Year Cumulative Base Plus Project Traffic Condition
8. Future Build-out Year Cumulative Base Plus Project Traffic Condition with Mitigation, if necessary

### Section 10 – TIA and VMT Guidance

The City of Pico Rivera's Traffic Impact Study Guidelines dated July 27, 2020 will be used to prepare the Traffic Impact Analysis report. The Los Angeles County Public Works Transportation Impact Analysis Guidelines dated July 23, 2020 will be used for evaluating the CEQA Vehicle Miles Traveled (VMT) analysis. Michael Baker plans to provide both the LOS and VMT analysis in one document. If two separate documents are required, please let us know.

### Section 11 - Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guidelines)

- 1) Provide a Traffic Signal Warrant analysis at the intersection of Rosemead Boulevard and the existing SoCalGas Driveway.
- 2) Analyze the Rosemead Boulevard left turn pocket LOS and storage needs into the SoCalGas Driveway.
- 3) Provide a queuing analysis of the northbound left turn lane at the Rosemead Boulevard / SoCalGas Driveway intersection to determine if adequate storage is provided with the additional project trips.

### Section 12 – Items which may be requested from City staff

- 1) Traffic signal timings.
- 2) Cumulative project information.
- 3) Historic traffic count data.

### Section 13 – Vehicle Miles Traveled (VMT) Analysis

The City of Pico Rivera requires the detailed VMT analysis follow the County's TIA Guidelines. Screening criteria to determine if a project is anticipated to result in a less than significant impact along with VMT metrics and thresholds of significance are included in the County TIA Guidelines. Projects that meet the screening criteria identified in **Table 6** are assumed to result in a less than significant transportation impact under CEQA and do not require a detailed quantitative VMT assessment. Michael Baker has conducted a preliminary assessment of the screening criteria and has determined that **the Project does not meet any of the Screening Criteria. Thus, a project specific VMT assessment would be required.**

## SoCalGas Traffic Study Scoping Agreement - Attachments

In order to evaluate the Project's VMT, the Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) / Sustainable Communities Strategy (SCS) Travel Demand Forecast Model will be used to determine the Project effects on VMT. Has the City of Pico Rivera prepared any VMT models? If not, Michael Baker will coordinate with City staff and our subconsultant, Translutions, to run a VMT model in order to determine the project VMT. The modeling results will be reviewed and then used to determine if the project results in a significant VMT impact. The VMT metric for determining significance is office which is an employment-based land use. For this project, the most appropriate VMT metric is VMT per employee. If a significant VMT impact is identified, Michael Baker will determine appropriate mitigation measures to reduce the impact to below a level of significance. Potential mitigation measures may include Transportation Demand Managements (TDM) strategies effective in reducing VMT. Please let us know if the City concurs with this approach to the VMT analysis.

**Table 6: Screening Criteria for Development Projects Exempt from VMT Calculation**

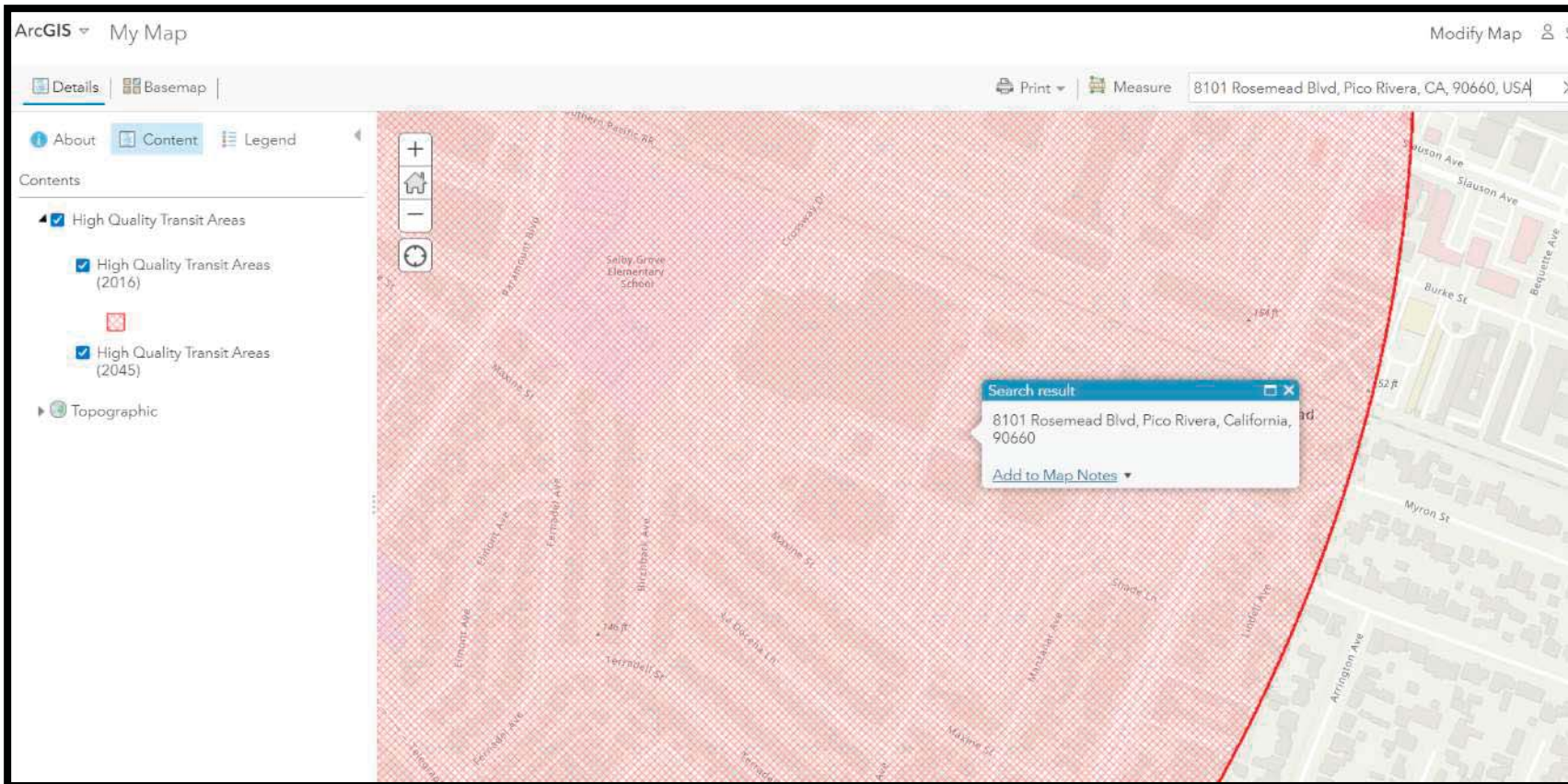
Screening Criteria	Description of Screening Criteria	Project Evaluation	Result
Non-Retail Project Trip Generation Screening Criteria	Does the development project generate a net increase of 110 or more daily vehicle trips using the most recent edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual?	Project is anticipated to generate approximately 1,146 daily trips.	Does Not Meet Criteria
Retail Project Site Plan Screening Criteria	Does the project contain retail uses that exceed 50,000 square feet of gross floor area?	Project does not contain any retail uses so this section of the screening criteria does not apply.	Does Not Apply
Proximity to Transit Based Screening Criteria	Is the project located within a one-half mile radius of a major transit stop or an existing stop along a high-quality transit corridor?	The project is located within SCAG's High-Quality Transit Area, refer to <b>Exhibit 6</b> . However, there are additional criteria that need to apply such as: Does the project have a FAR less than 0.75? Yes. Does the project provide more parking than required by City Code? Yes. Is the project inconsistent with the SCAG RTP/SCS? Unknown.	Does Not Meet Criteria



## SoCalGas Traffic Study Scoping Agreement - Attachments

Residential Land Use Based Screening Criteria	Are 100% of the residential units, excluding manager's units, set aside for lower income households?	The Project is not residential and therefore this screening criteria does not apply.	Does Not Apply
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**Exhibit 6: SCAG 2016 High Quality Transit Map**



# Appendix B: Traffic Counts & Signal Timing Sheets

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Washington Boulevard  
 Weather: Clear

File Name : 01\_PRV\_Para\_Wash AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

Groups Printed- Total Volume

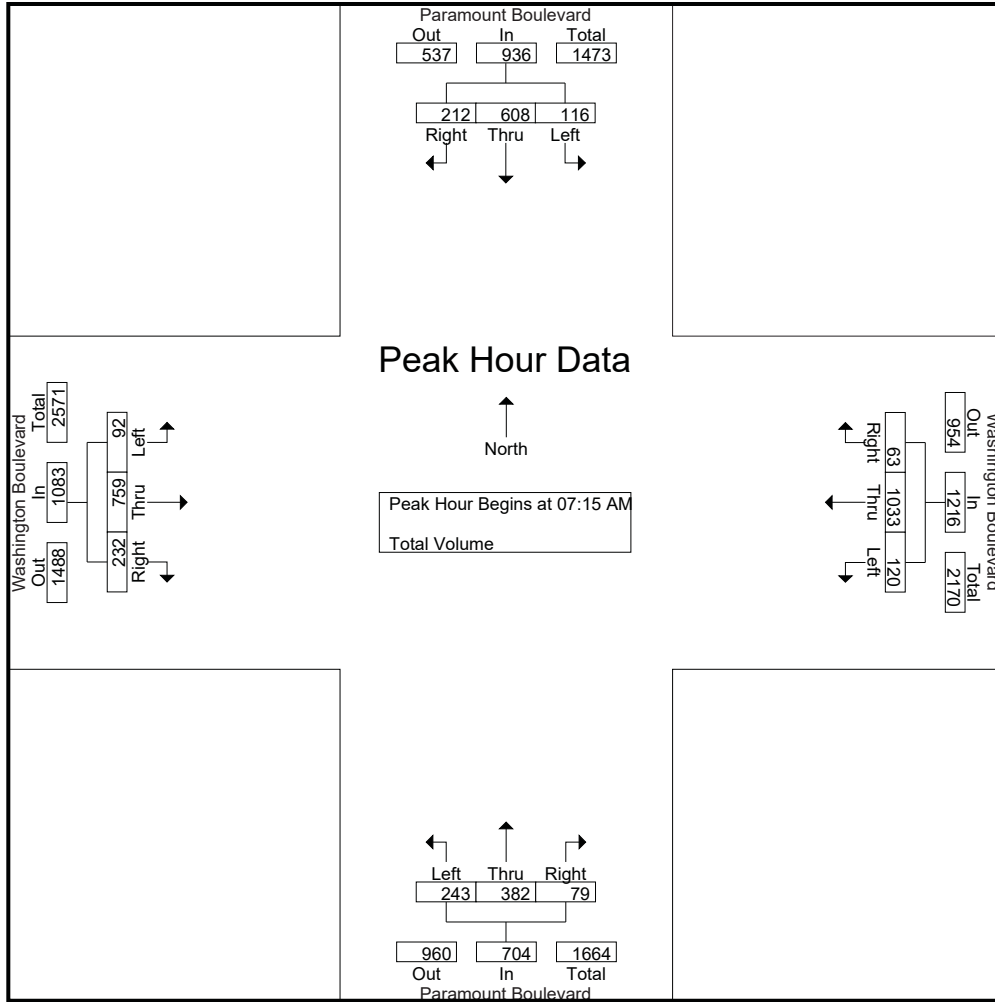
Start Time	Paramount Boulevard Southbound				Washington Boulevard Westbound				Paramount Boulevard Northbound				Washington Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	24	111	44	179	28	230	8	266	47	86	11	144	17	121	40	178	767
07:15 AM	32	119	56	207	21	245	6	272	52	72	14	138	26	178	42	246	863
07:30 AM	29	170	47	246	29	268	10	307	59	108	26	193	20	185	52	257	1003
07:45 AM	25	167	60	252	41	259	28	328	67	97	18	182	18	190	70	278	1040
Total	110	567	207	884	119	1002	52	1173	225	363	69	657	81	674	204	959	3673
08:00 AM	30	152	49	231	29	261	19	309	65	105	21	191	28	206	68	302	1033
08:15 AM	33	147	50	230	30	198	17	245	61	83	25	169	28	136	48	212	856
08:30 AM	24	114	27	165	37	203	17	257	51	71	18	140	21	166	72	259	821
08:45 AM	26	114	42	182	34	177	12	223	52	87	24	163	29	153	51	233	801
Total	113	527	168	808	130	839	65	1034	229	346	88	663	106	661	239	1006	3511
Grand Total	223	1094	375	1692	249	1841	117	2207	454	709	157	1320	187	1335	443	1965	7184
Apprch %	13.2	64.7	22.2		11.3	83.4	5.3		34.4	53.7	11.9		9.5	67.9	22.5		
Total %	3.1	15.2	5.2	23.6	3.5	25.6	1.6	30.7	6.3	9.9	2.2	18.4	2.6	18.6	6.2	27.4	

Start Time	Paramount Boulevard Southbound				Washington Boulevard Westbound				Paramount Boulevard Northbound				Washington Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	<b>32</b>	119	56	207	21	245	6	272	52	72	14	138	26	178	42	246	863
07:30 AM	29	<b>170</b>	47	246	29	<b>268</b>	10	307	59	<b>108</b>	<b>26</b>	<b>193</b>	20	185	52	257	1003
07:45 AM	25	167	<b>60</b>	<b>252</b>	<b>41</b>	259	<b>28</b>	<b>328</b>	<b>67</b>	97	18	182	18	190	<b>70</b>	278	<b>1040</b>
08:00 AM	30	152	49	231	29	261	19	309	65	105	21	191	<b>28</b>	<b>206</b>	68	<b>302</b>	1033
Total Volume	116	608	212	936	120	1033	63	1216	243	382	79	704	92	759	232	1083	3939
% App. Total	12.4	65	22.6		9.9	85	5.2		34.5	54.3	11.2		8.5	70.1	21.4		
PHF	.906	.894	.883	.929	.732	.964	.563	.927	.907	.884	.760	.912	.821	.921	.829	.897	.947



City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Washington Boulevard  
 Weather: Clear

File Name : 01\_PRV\_Para\_Wash AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:30 AM				07:15 AM			
+0 mins.	29	<b>170</b>	47	246	21	245	6	272	59	<b>108</b>	<b>26</b>	<b>193</b>	26	178	42	246
+15 mins.	25	167	<b>60</b>	<b>252</b>	29	<b>268</b>	10	307	<b>67</b>	97	18	182	20	185	52	257
+30 mins.	30	152	49	231	<b>41</b>	259	<b>28</b>	<b>328</b>	65	105	21	191	18	190	<b>70</b>	278
+45 mins.	<b>33</b>	147	50	230	29	261	19	309	61	83	25	169	<b>28</b>	<b>206</b>	68	<b>302</b>
Total Volume	117	636	206	959	120	1033	63	1216	252	393	90	735	92	759	232	1083
% App. Total	12.2	66.3	21.5		9.9	85	5.2		34.3	53.5	12.2		8.5	70.1	21.4	
PHF	.886	.935	.858	.951	.732	.964	.563	.927	.940	.910	.865	.952	.821	.921	.829	.897

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Washington Boulevard  
 Weather: Clear

File Name : 01\_PRV\_Para\_Wash PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

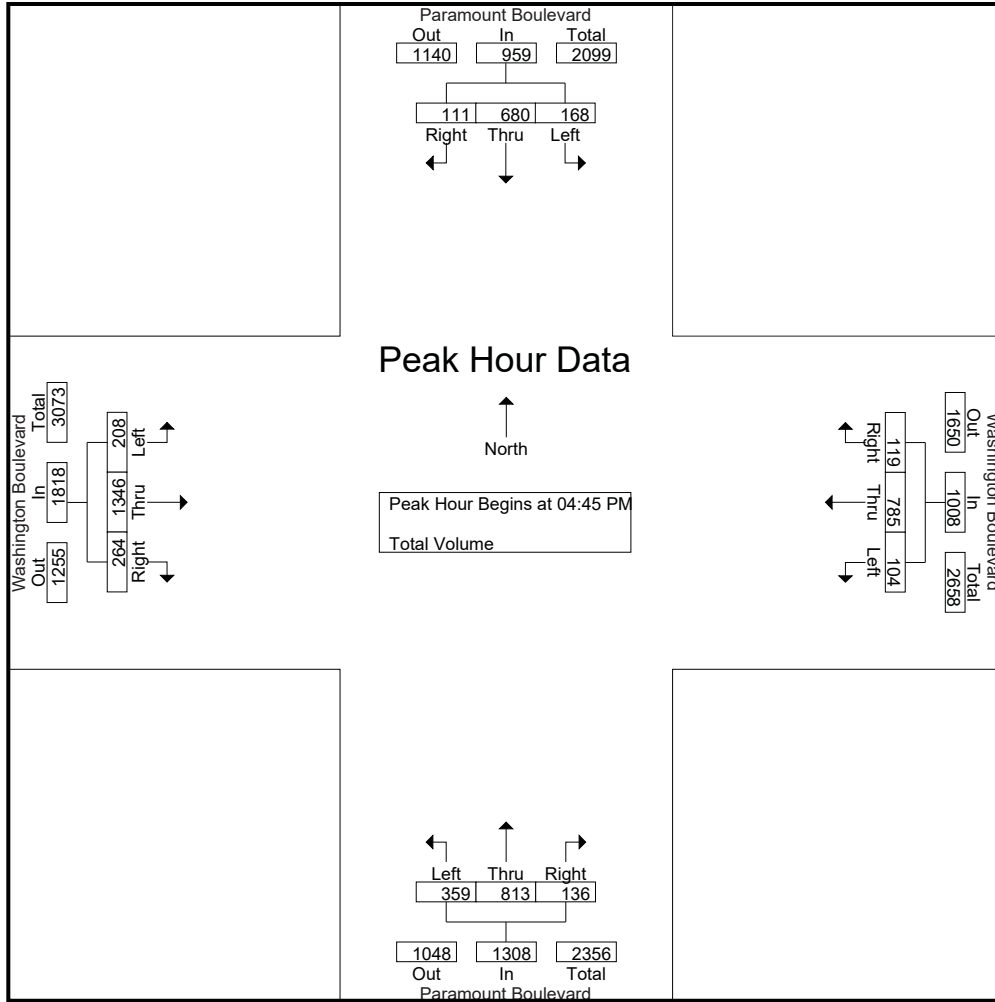
Groups Printed- Total Volume

Start Time	Paramount Boulevard Southbound				Washington Boulevard Westbound				Paramount Boulevard Northbound				Washington Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	48	132	38	218	29	181	31	241	84	175	34	293	49	320	67	436	1188
04:15 PM	32	142	33	207	28	194	24	246	67	176	28	271	34	310	71	415	1139
04:30 PM	35	157	29	221	29	167	29	225	96	196	38	330	48	304	76	428	1204
04:45 PM	53	154	32	239	19	204	29	252	81	191	27	299	54	349	66	469	1259
Total	168	585	132	885	105	746	113	964	328	738	127	1193	185	1283	280	1748	4790
05:00 PM	49	178	20	247	22	192	24	238	114	220	49	383	53	326	64	443	1311
05:15 PM	26	175	35	236	34	224	27	285	77	211	29	317	52	323	72	447	1285
05:30 PM	40	173	24	237	29	165	39	233	87	191	31	309	49	348	62	459	1238
05:45 PM	55	179	23	257	31	151	32	214	78	178	30	286	52	316	60	428	1185
Total	170	705	102	977	116	732	122	970	356	800	139	1295	206	1313	258	1777	5019
Grand Total	338	1290	234	1862	221	1478	235	1934	684	1538	266	2488	391	2596	538	3525	9809
Apprch %	18.2	69.3	12.6		11.4	76.4	12.2		27.5	61.8	10.7		11.1	73.6	15.3		
Total %	3.4	13.2	2.4	19	2.3	15.1	2.4	19.7	7	15.7	2.7	25.4	4	26.5	5.5	35.9	

Start Time	Paramount Boulevard Southbound				Washington Boulevard Westbound				Paramount Boulevard Northbound				Washington Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	<b>53</b>	154	32	239	19	204	29	252	81	191	27	299	<b>54</b>	<b>349</b>	66	<b>469</b>	1259
05:00 PM	49	<b>178</b>	20	<b>247</b>	22	192	24	238	<b>114</b>	<b>220</b>	<b>49</b>	<b>383</b>	53	326	64	443	<b>1311</b>
05:15 PM	26	175	<b>35</b>	236	<b>34</b>	<b>224</b>	27	<b>285</b>	77	211	29	317	52	323	<b>72</b>	447	1285
05:30 PM	40	173	24	237	29	165	<b>39</b>	233	87	191	31	309	49	348	62	459	1238
Total Volume	168	680	111	959	104	785	119	1008	359	813	136	1308	208	1346	264	1818	5093
% App. Total	17.5	70.9	11.6		10.3	77.9	11.8		27.4	62.2	10.4		11.4	74	14.5		
PHF	.792	.955	.793	.971	.765	.876	.763	.884	.787	.924	.694	.854	.963	.964	.917	.969	.971

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Washington Boulevard  
 Weather: Clear

File Name : 01\_PRV\_Para\_Wash PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				04:30 PM				04:45 PM			
+0 mins.	49	178	20	247	19	204	29	252	96	196	38	330	<b>54</b>	<b>349</b>	66	<b>469</b>
+15 mins.	26	175	<b>35</b>	236	22	192	24	238	81	191	27	299	53	326	64	443
+30 mins.	40	173	24	237	<b>34</b>	<b>224</b>	27	<b>285</b>	<b>114</b>	<b>220</b>	<b>49</b>	<b>383</b>	52	323	<b>72</b>	447
+45 mins.	<b>55</b>	<b>179</b>	23	<b>257</b>	29	165	<b>39</b>	233	77	211	29	317	49	348	62	459
Total Volume	170	705	102	977	104	785	119	1008	368	818	143	1329	208	1346	264	1818
% App. Total	17.4	72.2	10.4		10.3	77.9	11.8		27.7	61.6	10.8		11.4	74	14.5	
PHF	.773	.985	.729	.950	.765	.876	.763	.884	.807	.930	.730	.867	.963	.964	.917	.969



Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: Washington Blvd



Date: 10/6/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Paramount Blvd Pedestrians	East Leg Washington Blvd Pedestrians	South Leg Paramount Blvd Pedestrians	West Leg Washington Blvd Pedestrians	
7:00 AM	2	3	1	1	7
7:15 AM	0	5	6	1	12
7:30 AM	3	0	3	2	8
7:45 AM	1	2	0	1	4
8:00 AM	2	4	0	0	6
8:15 AM	1	4	1	1	7
8:30 AM	5	5	0	0	10
8:45 AM	1	0	1	1	3
TOTAL VOLUMES:	15	23	12	7	57

	North Leg Paramount Blvd Pedestrians	East Leg Washington Blvd Pedestrians	South Leg Paramount Blvd Pedestrians	West Leg Washington Blvd Pedestrians	
4:00 PM	4	3	0	0	7
4:15 PM	0	1	3	3	7
4:30 PM	1	1	2	0	4
4:45 PM	0	4	0	0	4
5:00 PM	3	4	5	2	14
5:15 PM	2	4	2	0	8
5:30 PM	1	7	3	0	11
5:45 PM	4	3	2	3	12
TOTAL VOLUMES:	15	27	17	8	67

Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: Washington Blvd



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Paramount Blvd			Westbound Washington Blvd			Northbound Paramount Blvd			Eastbound Washington Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	2	0	1	0	0	0	0	0	3

	Southbound Paramount Blvd			Westbound Washington Blvd			Northbound Paramount Blvd			Eastbound Washington Blvd			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	1	0	0	0	2	0	0	0	0	0	0	0	3
4:15 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	1	1	0	0	0	0	0	0	0	2
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	0	1	4	0	0	0	0	0	0	0	6

City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Washington Boulevard  
 Weather: Clear

File Name : 02\_PRV\_Rose\_Wash AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

Groups Printed- Total Volume

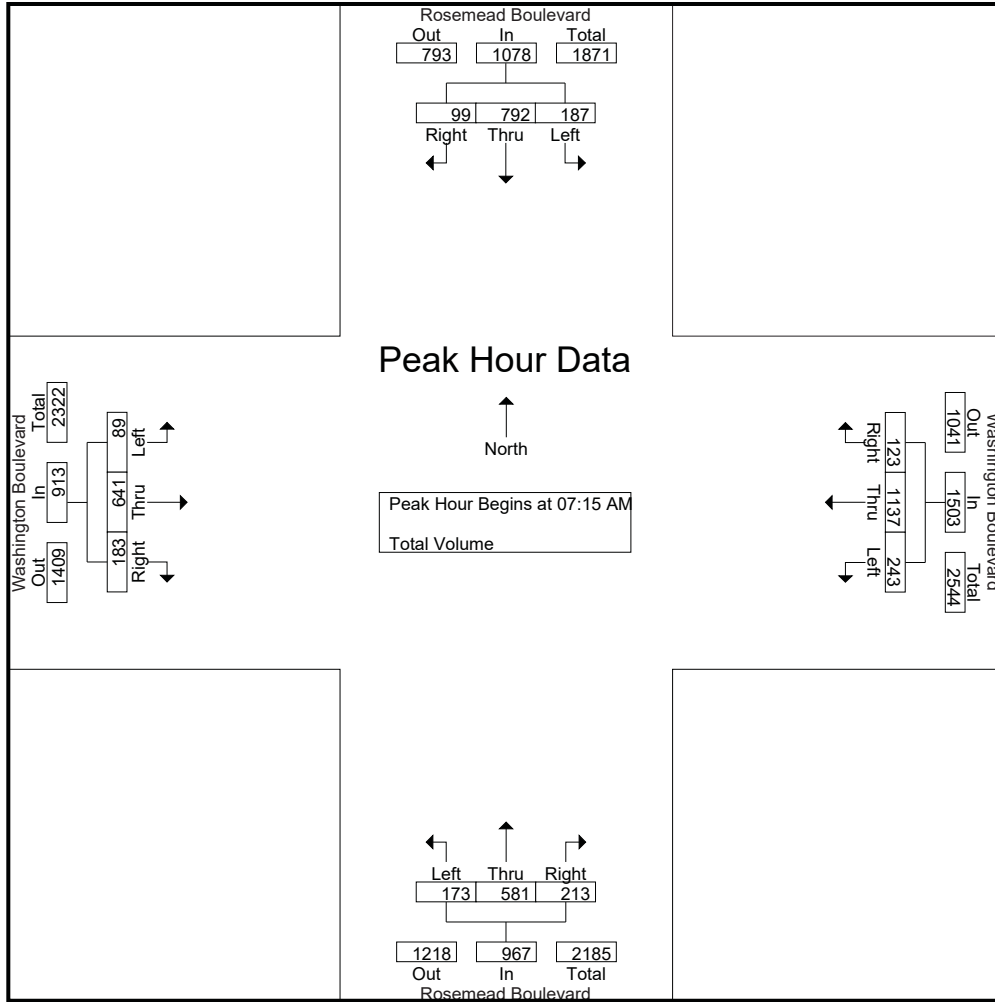
Start Time	Rosemead Boulevard Southbound				Washington Boulevard Westbound				Rosemead Boulevard Northbound				Washington Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	27	148	26	201	46	270	22	338	31	81	24	136	9	117	24	150	825
07:15 AM	44	180	16	240	56	278	25	359	27	111	36	174	14	155	36	205	978
07:30 AM	39	182	30	251	51	323	25	399	33	142	82	257	27	190	44	261	1168
07:45 AM	55	230	28	313	69	241	32	342	48	165	66	279	28	153	51	232	1166
Total	165	740	100	1005	222	1112	104	1438	139	499	208	846	78	615	155	848	4137
08:00 AM	49	200	25	274	67	295	41	403	65	163	29	257	20	143	52	215	1149
08:15 AM	36	168	24	228	54	237	31	322	42	105	25	172	33	124	41	198	920
08:30 AM	50	171	27	248	41	224	14	279	34	117	25	176	26	130	31	187	890
08:45 AM	25	157	31	213	44	205	26	275	23	87	28	138	30	131	39	200	826
Total	160	696	107	963	206	961	112	1279	164	472	107	743	109	528	163	800	3785
Grand Total	325	1436	207	1968	428	2073	216	2717	303	971	315	1589	187	1143	318	1648	7922
Apprch %	16.5	73	10.5		15.8	76.3	7.9		19.1	61.1	19.8		11.3	69.4	19.3		
Total %	4.1	18.1	2.6	24.8	5.4	26.2	2.7	34.3	3.8	12.3	4	20.1	2.4	14.4	4	20.8	

Start Time	Rosemead Boulevard Southbound				Washington Boulevard Westbound				Rosemead Boulevard Northbound				Washington Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	44	180	16	240	56	278	25	359	27	111	36	174	14	155	36	205	978
07:30 AM	39	182	<b>30</b>	251	51	<b>323</b>	25	399	33	142	<b>82</b>	257	27	<b>190</b>	44	<b>261</b>	<b>1168</b>
07:45 AM	<b>55</b>	<b>230</b>	28	<b>313</b>	<b>69</b>	241	32	342	48	<b>165</b>	66	<b>279</b>	<b>28</b>	153	51	232	1166
08:00 AM	49	200	25	274	67	295	<b>41</b>	<b>403</b>	<b>65</b>	163	29	257	20	143	<b>52</b>	215	1149
Total Volume	187	792	99	1078	243	1137	123	1503	173	581	213	967	89	641	183	913	4461
% App. Total	17.3	73.5	9.2		16.2	75.6	8.2		17.9	60.1	22		9.7	70.2	20		
PHF	.850	.861	.825	.861	.880	.880	.750	.932	.665	.880	.649	.866	.795	.843	.880	.875	.955



City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Washington Boulevard  
 Weather: Clear

File Name : 02\_PRV\_Rose\_Wash AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	44	180	16	240	56	278	25	359	27	111	36	174	14	155	36	205
+15 mins.	39	182	<b>30</b>	251	51	<b>323</b>	25	399	33	142	<b>82</b>	257	27	<b>190</b>	44	<b>261</b>
+30 mins.	<b>55</b>	<b>230</b>	28	<b>313</b>	<b>69</b>	241	32	342	48	<b>165</b>	66	<b>279</b>	<b>28</b>	153	51	232
+45 mins.	49	200	25	274	67	295	<b>41</b>	<b>403</b>	<b>65</b>	163	29	257	20	143	<b>52</b>	215
Total Volume	187	792	99	1078	243	1137	123	1503	173	581	213	967	89	641	183	913
% App. Total	17.3	73.5	9.2		16.2	75.6	8.2		17.9	60.1	22		9.7	70.2	20	
PHF	.850	.861	.825	.861	.880	.880	.750	.932	.665	.880	.649	.866	.795	.843	.880	.875

City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Washington Boulevard  
 Weather: Clear

File Name : 02\_PRV\_Rose\_Wash PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

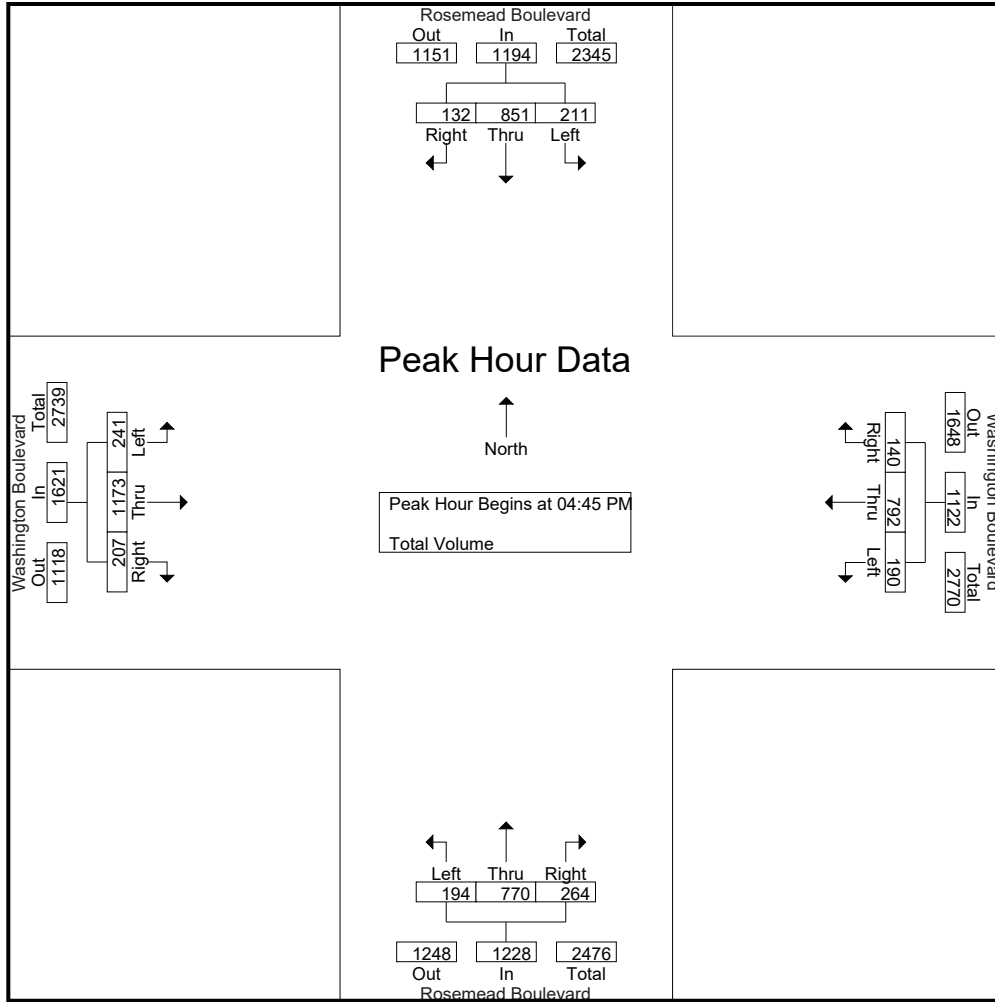
Groups Printed- Total Volume

Start Time	Rosemead Boulevard Southbound				Washington Boulevard Westbound				Rosemead Boulevard Northbound				Washington Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	44	191	43	278	53	182	45	280	51	161	48	260	56	289	56	401	1219
04:15 PM	43	172	34	249	56	183	40	279	43	182	36	261	62	279	70	411	1200
04:30 PM	55	188	51	294	40	182	19	241	40	207	58	305	58	282	56	396	1236
04:45 PM	36	208	34	278	52	207	36	295	44	195	67	306	61	285	46	392	1271
Total	178	759	162	1099	201	754	140	1095	178	745	209	1132	237	1135	228	1600	4926
05:00 PM	64	201	35	300	30	189	37	256	44	198	65	307	61	310	63	434	1297
05:15 PM	48	223	33	304	69	209	23	301	41	177	66	284	66	279	47	392	1281
05:30 PM	63	219	30	312	39	187	44	270	65	200	66	331	53	299	51	403	1316
05:45 PM	60	210	37	307	51	158	40	249	39	210	54	303	67	271	69	407	1266
Total	235	853	135	1223	189	743	144	1076	189	785	251	1225	247	1159	230	1636	5160
Grand Total	413	1612	297	2322	390	1497	284	2171	367	1530	460	2357	484	2294	458	3236	10086
Apprch %	17.8	69.4	12.8		18	69	13.1		15.6	64.9	19.5		15	70.9	14.2		
Total %	4.1	16	2.9	23	3.9	14.8	2.8	21.5	3.6	15.2	4.6	23.4	4.8	22.7	4.5	32.1	

Start Time	Rosemead Boulevard Southbound				Washington Boulevard Westbound				Rosemead Boulevard Northbound				Washington Boulevard Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	36	208	34	278	52	207	36	295	44	195	<b>67</b>	306	61	285	46	392	1271
05:00 PM	<b>64</b>	201	<b>35</b>	300	30	189	37	256	44	198	65	307	61	<b>310</b>	<b>63</b>	<b>434</b>	1297
05:15 PM	48	<b>223</b>	33	304	<b>69</b>	<b>209</b>	23	<b>301</b>	41	177	66	284	<b>66</b>	279	47	392	1281
05:30 PM	63	219	30	<b>312</b>	39	187	<b>44</b>	270	<b>65</b>	<b>200</b>	66	<b>331</b>	53	299	51	403	<b>1316</b>
Total Volume	211	851	132	1194	190	792	140	1122	194	770	264	1228	241	1173	207	1621	5165
% App. Total	17.7	71.3	11.1		16.9	70.6	12.5		15.8	62.7	21.5		14.9	72.4	12.8		
PHF	.824	.954	.943	.957	.688	.947	.795	.932	.746	.963	.985	.927	.913	.946	.821	.934	.981

City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Washington Boulevard  
 Weather: Clear

File Name : 02\_PRV\_Rose\_Wash PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM				04:45 PM				04:45 PM				05:00 PM			
+0 mins.	64	201	35	300	52	207	36	295	44	195	67	306	61	310	63	434
+15 mins.	48	223	33	304	30	189	37	256	44	198	65	307	66	279	47	392
+30 mins.	63	219	30	312	69	209	23	301	41	177	66	284	53	299	51	403
+45 mins.	60	210	37	307	39	187	44	270	65	200	66	331	67	271	69	407
Total Volume	235	853	135	1223	190	792	140	1122	194	770	264	1228	247	1159	230	1636
% App. Total	19.2	69.7	11		16.9	70.6	12.5		15.8	62.7	21.5		15.1	70.8	14.1	
PHF	.918	.956	.912	.980	.688	.947	.795	.932	.746	.963	.985	.927	.922	.935	.833	.942



Location: Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Washington Boulevard



Date: 10/6/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Rosemead Boulevard Pedestrians	East Leg Washington Boulevard Pedestrians	South Leg Rosemead Boulevard Pedestrians	West Leg Washington Boulevard Pedestrians	
7:00 AM	5	1	3	3	12
7:15 AM	3	4	2	4	13
7:30 AM	2	3	2	2	9
7:45 AM	3	3	2	2	10
8:00 AM	0	1	0	1	2
8:15 AM	1	0	1	5	7
8:30 AM	0	1	2	1	4
8:45 AM	1	2	1	4	8
TOTAL VOLUMES:	15	15	13	22	65

	North Leg Rosemead Boulevard Pedestrians	East Leg Washington Boulevard Pedestrians	South Leg Rosemead Boulevard Pedestrians	West Leg Washington Boulevard Pedestrians	
4:00 PM	7	1	4	7	19
4:15 PM	1	3	9	6	19
4:30 PM	1	4	2	4	11
4:45 PM	2	5	6	3	16
5:00 PM	6	2	3	8	19
5:15 PM	9	1	7	6	23
5:30 PM	3	3	5	10	21
5:45 PM	4	3	2	5	14
TOTAL VOLUMES:	33	22	38	49	142

Location: Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Washington Boulevard



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Rosemead Boulevard			Westbound Washington Boulevard			Northbound Rosemead Boulevard			Eastbound Washington Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
TOTAL VOLUMES:	0	1	0	0	0	0	0	1	0	0	2	0	4

	Southbound Rosemead Boulevard			Westbound Washington Boulevard			Northbound Rosemead Boulevard			Eastbound Washington Boulevard			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	1	1	0	0	0	0	2	0	4
4:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	1	1	0	1	1	1	0	0	0	2	0	7

City of Pico Rivera  
 N/S: Slauson Avenue  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 03\_PRV\_Slau\_Tele AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

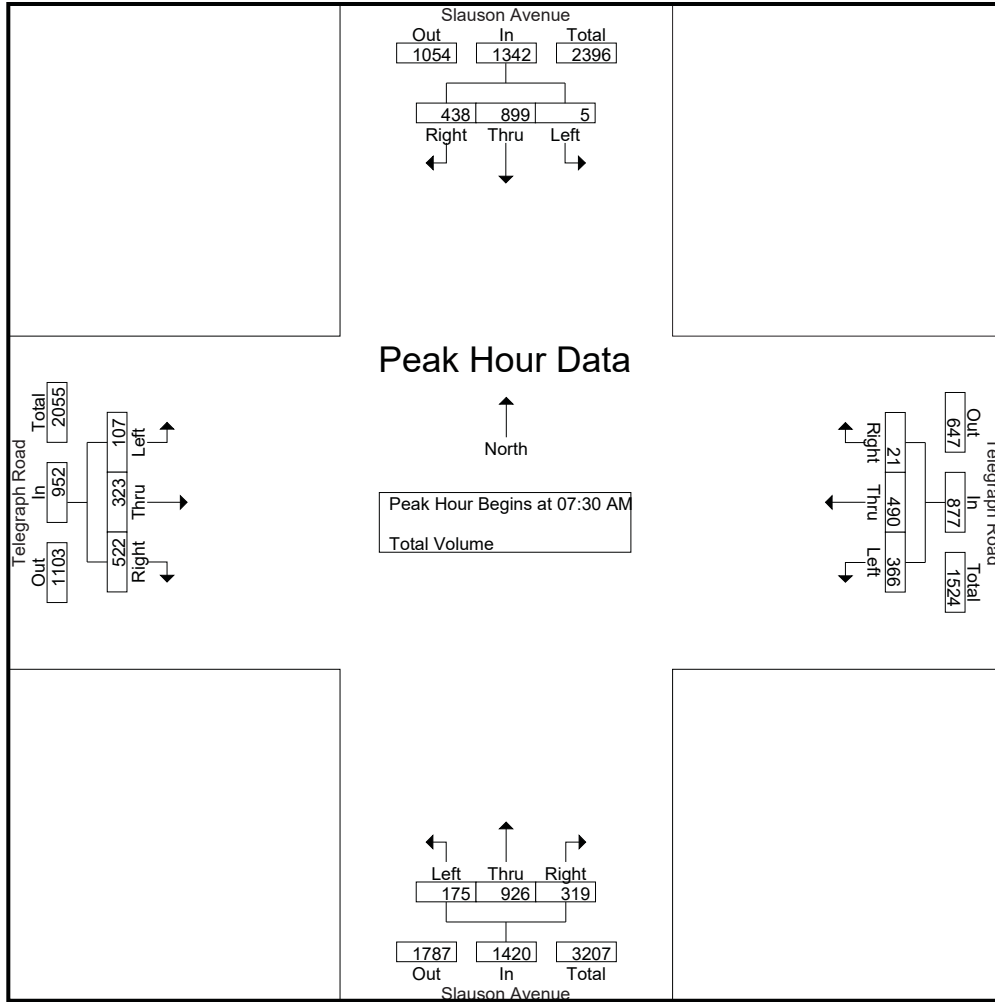
Groups Printed- Total Volume

Start Time	Slauson Avenue Southbound				Telegraph Road Westbound				Slauson Avenue Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	2	205	77	284	103	112	1	216	44	179	58	281	15	47	118	180	961
07:15 AM	0	220	87	307	127	125	4	256	41	209	91	341	21	58	128	207	1111
07:30 AM	4	233	96	333	103	132	3	238	61	242	104	407	22	77	125	224	1202
07:45 AM	0	197	110	307	110	129	5	244	42	232	79	353	30	83	132	245	1149
Total	6	855	370	1231	443	498	13	954	188	862	332	1382	88	265	503	856	4423
08:00 AM	1	212	118	331	73	122	6	201	42	220	65	327	23	86	140	249	1108
08:15 AM	0	257	114	371	80	107	7	194	30	232	71	333	32	77	125	234	1132
08:30 AM	4	172	90	266	66	120	6	192	34	166	71	271	29	81	141	251	980
08:45 AM	0	205	88	293	67	127	4	198	44	189	72	305	16	60	125	201	997
Total	5	846	410	1261	286	476	23	785	150	807	279	1236	100	304	531	935	4217
Grand Total	11	1701	780	2492	729	974	36	1739	338	1669	611	2618	188	569	1034	1791	8640
Apprch %	0.4	68.3	31.3		41.9	56	2.1		12.9	63.8	23.3		10.5	31.8	57.7		
Total %	0.1	19.7	9	28.8	8.4	11.3	0.4	20.1	3.9	19.3	7.1	30.3	2.2	6.6	12	20.7	

Start Time	Slauson Avenue Southbound				Telegraph Road Westbound				Slauson Avenue Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	<b>4</b>	233	96	333	103	<b>132</b>	3	238	<b>61</b>	<b>242</b>	<b>104</b>	<b>407</b>	22	77	125	224	<b>1202</b>
07:45 AM	0	197	110	307	<b>110</b>	129	5	<b>244</b>	42	232	79	353	30	83	132	245	1149
08:00 AM	1	212	<b>118</b>	331	73	122	6	201	42	220	65	327	23	<b>86</b>	<b>140</b>	<b>249</b>	1108
08:15 AM	0	<b>257</b>	114	<b>371</b>	80	107	<b>7</b>	194	30	232	71	333	<b>32</b>	77	125	234	1132
Total Volume	5	899	438	1342	366	490	21	877	175	926	319	1420	107	323	522	952	4591
% App. Total	0.4	67	32.6		41.7	55.9	2.4		12.3	65.2	22.5		11.2	33.9	54.8		
PHF	.313	.875	.928	.904	.832	.928	.750	.899	.717	.957	.767	.872	.836	.939	.932	.956	.955

City of Pico Rivera  
 N/S: Slauson Avenue  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 03\_PRV\_Slau\_Tele AM  
 Site Code : 12221549  
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:15 AM				07:45 AM			
+0 mins.	4	233	96	333	103	112	1	216	41	209	91	341	30	83	132	245
+15 mins.	0	197	110	307	<b>127</b>	125	4	<b>256</b>	<b>61</b>	<b>242</b>	<b>104</b>	<b>407</b>	23	<b>86</b>	140	249
+30 mins.	1	212	<b>118</b>	331	103	<b>132</b>	3	238	42	232	79	353	<b>32</b>	77	125	234
+45 mins.	0	<b>257</b>	114	<b>371</b>	110	129	<b>5</b>	244	42	220	65	327	29	81	<b>141</b>	<b>251</b>
Total Volume	5	899	438	1342	443	498	13	954	186	903	339	1428	114	327	538	979
% App. Total	0.4	67	32.6		46.4	52.2	1.4		13	63.2	23.7		11.6	33.4	55	
PHF	.313	.875	.928	.904	.872	.943	.650	.932	.762	.933	.815	.877	.891	.951	.954	.975



City of Pico Rivera  
 N/S: Slauson Avenue  
 E/W: Telegraph Road  
 Weather: Clear

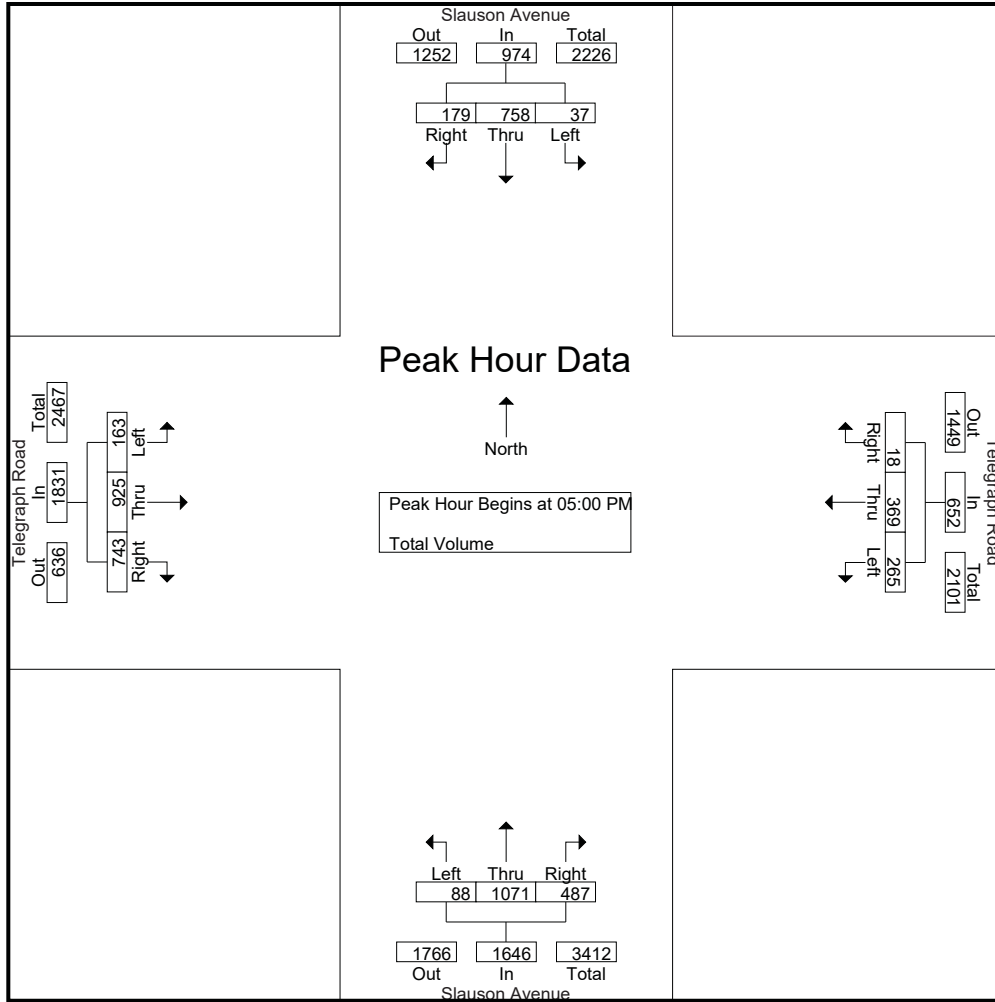
File Name : 03\_PRV\_Slau\_Tele PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

Groups Printed- Total Volume

Start Time	Slauson Avenue Southbound				Telegraph Road Westbound				Slauson Avenue Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	5	188	62	255	85	89	8	182	31	268	128	427	43	177	157	377	1241
04:15 PM	4	224	78	306	52	82	3	137	21	270	120	411	28	192	164	384	1238
04:30 PM	5	203	62	270	48	86	7	141	30	290	128	448	35	182	171	388	1247
04:45 PM	14	178	50	242	83	83	7	173	20	235	112	367	33	232	167	432	1214
Total	28	793	252	1073	268	340	25	633	102	1063	488	1653	139	783	659	1581	4940
05:00 PM	9	192	54	255	51	106	4	161	22	275	111	408	35	238	181	454	1278
05:15 PM	8	211	43	262	74	84	5	163	31	283	120	434	48	206	178	432	1291
05:30 PM	10	171	40	221	73	103	5	181	15	247	126	388	43	240	200	483	1273
05:45 PM	10	184	42	236	67	76	4	147	20	266	130	416	37	241	184	462	1261
Total	37	758	179	974	265	369	18	652	88	1071	487	1646	163	925	743	1831	5103
Grand Total	65	1551	431	2047	533	709	43	1285	190	2134	975	3299	302	1708	1402	3412	10043
Apprch %	3.2	75.8	21.1		41.5	55.2	3.3		5.8	64.7	29.6		8.9	50.1	41.1		
Total %	0.6	15.4	4.3	20.4	5.3	7.1	0.4	12.8	1.9	21.2	9.7	32.8	3	17	14	34	

Start Time	Slauson Avenue Southbound				Telegraph Road Westbound				Slauson Avenue Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
05:00 PM	9	192	<b>54</b>	255	51	<b>106</b>	4	161	22	275	111	408	35	238	181	454	1278
05:15 PM	8	<b>211</b>	43	<b>262</b>	<b>74</b>	84	<b>5</b>	163	<b>31</b>	<b>283</b>	120	<b>434</b>	<b>48</b>	206	178	432	<b>1291</b>
05:30 PM	<b>10</b>	171	40	221	73	103	5	<b>181</b>	15	247	126	388	43	240	<b>200</b>	<b>483</b>	1273
05:45 PM	10	184	42	236	67	76	4	147	20	266	<b>130</b>	416	37	<b>241</b>	184	462	1261
Total Volume	37	758	179	974	265	369	18	652	88	1071	487	1646	163	925	743	1831	5103
% App. Total	3.8	77.8	18.4		40.6	56.6	2.8		5.3	65.1	29.6		8.9	50.5	40.6		
PHF	.925	.898	.829	.929	.895	.870	.900	.901	.710	.946	.937	.948	.849	.960	.929	.948	.988

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Entire Intersection Begins at 05:00 PM



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:45 PM				04:30 PM				05:00 PM			
+0 mins.	5	188	62	255	<b>83</b>	83	<b>7</b>	173	30	<b>290</b>	<b>128</b>	<b>448</b>	35	238	181	454
+15 mins.	4	<b>224</b>	<b>78</b>	<b>306</b>	51	<b>106</b>	4	161	20	235	112	367	<b>48</b>	206	178	432
+30 mins.	5	203	62	270	74	84	5	163	22	275	111	408	43	240	<b>200</b>	<b>483</b>
+45 mins.	<b>14</b>	178	50	242	73	103	5	<b>181</b>	<b>31</b>	283	120	434	37	<b>241</b>	184	462
Total Volume	28	793	252	1073	281	376	21	678	103	1083	471	1657	163	925	743	1831
% App. Total	2.6	73.9	23.5		41.4	55.5	3.1		6.2	65.4	28.4		8.9	50.5	40.6	
PHF	.500	.885	.808	.877	.846	.887	.750	.936	.831	.934	.920	.925	.849	.960	.929	.948

Location: Pico Rivera  
 N/S: Slauson Avenue  
 E/W: Telegraph Road



Date: 10/6/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Slauson Avenue	East Leg Telegraph Road	South Leg Slauson Avenue	West Leg Telegraph Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	2	6	0	2	10
7:15 AM	2	0	0	3	5
7:30 AM	4	1	0	1	6
7:45 AM	6	4	0	2	12
8:00 AM	2	4	0	4	10
8:15 AM	3	6	0	1	10
8:30 AM	3	2	0	2	7
8:45 AM	1	4	0	2	7
TOTAL VOLUMES:	23	27	0	17	67

	North Leg Slauson Avenue	East Leg Telegraph Road	South Leg Slauson Avenue	West Leg Telegraph Road	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	1	1	0	3	5
4:15 PM	3	1	4	7	15
4:30 PM	1	0	1	3	5
4:45 PM	2	0	2	3	7
5:00 PM	2	1	0	1	4
5:15 PM	6	1	2	6	15
5:30 PM	1	1	1	1	4
5:45 PM	0	1	0	4	5
TOTAL VOLUMES:	16	6	10	28	60

Location: Pico Rivera  
 N/S: Slauson Avenue  
 E/W: Telegraph Road



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Slauson Avenue			Westbound Telegraph Road			Northbound Slauson Avenue			Eastbound Telegraph Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	1	0	1	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	2	0	1	0	0	0	0	3

	Southbound Slauson Avenue			Westbound Telegraph Road			Northbound Slauson Avenue			Eastbound Telegraph Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	2	0	0	0	0	0	0	0	0	0	0	3
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	2	0	0	1	0	0	1	1	0	1	0	6
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	1	6	0	0	1	0	0	2	1	0	1	0	12



City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Slauson Avenue  
 Weather: Clear

File Name : 04\_PRV\_Para\_Slau AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

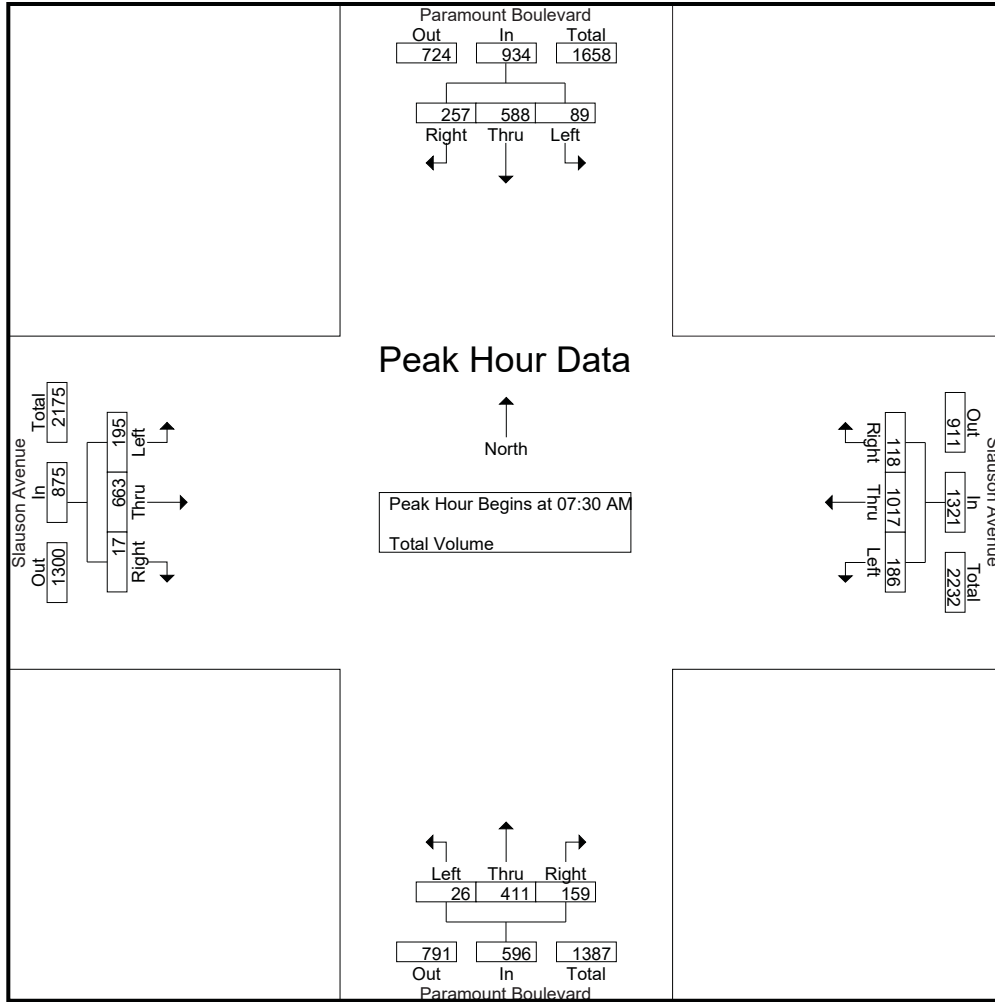
Groups Printed- Total Volume

Start Time	Paramount Boulevard Southbound				Slauson Avenue Westbound				Paramount Boulevard Northbound				Slauson Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	19	137	65	221	45	306	17	368	10	79	27	116	39	124	5	168	873
07:15 AM	14	139	49	202	60	240	21	321	8	88	29	125	47	152	8	207	855
07:30 AM	13	187	60	260	53	244	20	317	5	107	40	152	59	162	4	225	954
07:45 AM	25	147	60	232	50	251	41	342	6	102	40	148	41	203	3	247	969
Total	71	610	234	915	208	1041	99	1348	29	376	136	541	186	641	20	847	3651
08:00 AM	22	118	71	211	42	264	39	345	8	121	52	181	49	151	6	206	943
08:15 AM	29	136	66	231	41	258	18	317	7	81	27	115	46	147	4	197	860
08:30 AM	20	114	61	195	32	224	16	272	9	80	19	108	44	141	2	187	762
08:45 AM	25	126	58	209	37	202	14	253	4	105	27	136	52	120	2	174	772
Total	96	494	256	846	152	948	87	1187	28	387	125	540	191	559	14	764	3337
Grand Total	167	1104	490	1761	360	1989	186	2535	57	763	261	1081	377	1200	34	1611	6988
Apprch %	9.5	62.7	27.8		14.2	78.5	7.3		5.3	70.6	24.1		23.4	74.5	2.1		
Total %	2.4	15.8	7	25.2	5.2	28.5	2.7	36.3	0.8	10.9	3.7	15.5	5.4	17.2	0.5	23.1	

Start Time	Paramount Boulevard Southbound				Slauson Avenue Westbound				Paramount Boulevard Northbound				Slauson Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	13	<b>187</b>	60	<b>260</b>	<b>53</b>	244	20	317	5	107	40	152	<b>59</b>	162	4	225	954
07:45 AM	25	147	60	232	50	251	<b>41</b>	342	6	102	40	148	41	<b>203</b>	3	<b>247</b>	<b>969</b>
08:00 AM	22	118	<b>71</b>	211	42	<b>264</b>	39	<b>345</b>	<b>8</b>	<b>121</b>	<b>52</b>	<b>181</b>	49	151	<b>6</b>	206	943
08:15 AM	<b>29</b>	136	66	231	41	258	18	317	7	81	27	115	46	147	4	197	860
Total Volume	89	588	257	934	186	1017	118	1321	26	411	159	596	195	663	17	875	3726
% App. Total	9.5	63	27.5		14.1	77	8.9		4.4	69	26.7		22.3	75.8	1.9		
PHF	.767	.786	.905	.898	.877	.963	.720	.957	.813	.849	.764	.823	.826	.817	.708	.886	.961

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Slauson Avenue  
 Weather: Clear

File Name : 04\_PRV\_Para\_Slau AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:15 AM				07:15 AM			
+0 mins.	13	<b>187</b>	60	<b>260</b>	45	<b>306</b>	17	<b>368</b>	<b>8</b>	88	29	125	47	152	<b>8</b>	207
+15 mins.	25	147	60	232	<b>60</b>	240	21	321	5	107	40	152	<b>59</b>	162	4	225
+30 mins.	22	118	<b>71</b>	211	53	244	20	317	6	102	40	148	41	<b>203</b>	3	<b>247</b>
+45 mins.	<b>29</b>	136	66	231	50	251	<b>41</b>	342	8	<b>121</b>	<b>52</b>	<b>181</b>	49	151	6	206
Total Volume	89	588	257	934	208	1041	99	1348	27	418	161	606	196	668	21	885
% App. Total	9.5	63	27.5		15.4	77.2	7.3		4.5	69	26.6		22.1	75.5	2.4	
PHF	.767	.786	.905	.898	.867	.850	.604	.916	.844	.864	.774	.837	.831	.823	.656	.896

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Slauson Avenue  
 Weather: Clear

File Name : 04\_PRV\_Para\_Slau PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

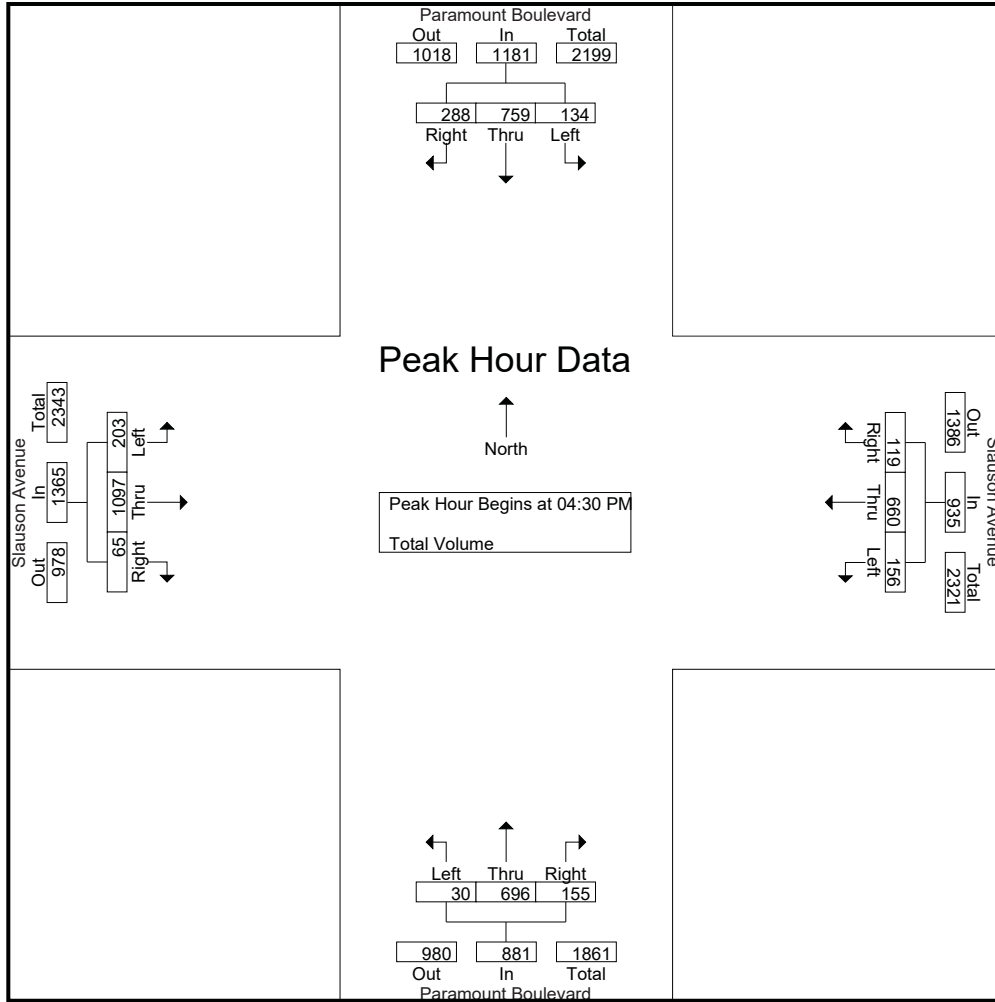
Groups Printed- Total Volume

Start Time	Paramount Boulevard Southbound				Slauson Avenue Westbound				Paramount Boulevard Northbound				Slauson Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	30	155	88	273	35	182	17	234	5	135	41	181	53	268	15	336	1024
04:15 PM	28	165	59	252	46	175	26	247	5	147	34	186	52	240	7	299	984
04:30 PM	32	213	100	345	46	165	22	233	5	157	44	206	51	243	17	311	1095
04:45 PM	37	151	48	236	35	164	34	233	9	178	38	225	61	252	15	328	1022
Total	127	684	295	1106	162	686	99	947	24	617	157	798	217	1003	54	1274	4125
05:00 PM	32	206	72	310	25	175	34	234	5	196	39	240	41	291	18	350	1134
05:15 PM	33	189	68	290	50	156	29	235	11	165	34	210	50	311	15	376	1111
05:30 PM	37	185	69	291	32	200	25	257	0	123	50	173	55	243	21	319	1040
05:45 PM	49	165	55	269	37	137	22	196	4	174	35	213	63	271	8	342	1020
Total	151	745	264	1160	144	668	110	922	20	658	158	836	209	1116	62	1387	4305
Grand Total	278	1429	559	2266	306	1354	209	1869	44	1275	315	1634	426	2119	116	2661	8430
Apprch %	12.3	63.1	24.7		16.4	72.4	11.2		2.7	78	19.3		16	79.6	4.4		
Total %	3.3	17	6.6	26.9	3.6	16.1	2.5	22.2	0.5	15.1	3.7	19.4	5.1	25.1	1.4	31.6	

Start Time	Paramount Boulevard Southbound				Slauson Avenue Westbound				Paramount Boulevard Northbound				Slauson Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	32	<b>213</b>	<b>100</b>	<b>345</b>	46	165	22	233	5	157	<b>44</b>	206	51	243	17	311	1095
04:45 PM	<b>37</b>	151	48	236	35	164	<b>34</b>	233	9	178	38	225	<b>61</b>	252	15	328	1022
05:00 PM	32	206	72	310	25	<b>175</b>	34	234	5	<b>196</b>	39	<b>240</b>	41	291	<b>18</b>	350	<b>1134</b>
05:15 PM	33	189	68	290	<b>50</b>	156	29	<b>235</b>	<b>11</b>	165	34	210	50	<b>311</b>	15	<b>376</b>	1111
Total Volume	134	759	288	1181	156	660	119	935	30	696	155	881	203	1097	65	1365	4362
% App. Total	11.3	64.3	24.4		16.7	70.6	12.7		3.4	79	17.6		14.9	80.4	4.8		
PHF	.905	.891	.720	.856	.780	.943	.875	.995	.682	.888	.881	.918	.832	.882	.903	.908	.962

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Slauson Avenue  
 Weather: Clear

File Name : 04\_PRV\_Para\_Slau PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				04:30 PM				05:00 PM			
+0 mins.	32	<b>213</b>	<b>100</b>	<b>345</b>	35	164	<b>34</b>	233	5	157	<b>44</b>	206	41	291	18	350
+15 mins.	<b>37</b>	151	48	236	25	175	34	234	9	178	38	225	50	<b>311</b>	15	<b>376</b>
+30 mins.	32	206	72	310	<b>50</b>	156	29	235	5	<b>196</b>	39	<b>240</b>	55	243	<b>21</b>	319
+45 mins.	33	189	68	290	32	<b>200</b>	25	<b>257</b>	<b>11</b>	165	34	210	<b>63</b>	271	8	342
Total Volume	134	759	288	1181	142	695	122	959	30	696	155	881	209	1116	62	1387
% App. Total	11.3	64.3	24.4		14.8	72.5	12.7		3.4	79	17.6		15.1	80.5	4.5	
PHF	.905	.891	.720	.856	.710	.869	.897	.933	.682	.888	.881	.918	.829	.897	.738	.922



Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: Slauson Avenue



Date: 10/6/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Paramount Blvd Pedestrians	East Leg Slauson Avenue Pedestrians	South Leg Paramount Blvd Pedestrians	West Leg Slauson Avenue Pedestrians	
7:00 AM	0	1	2	3	6
7:15 AM	2	0	1	0	3
7:30 AM	0	1	1	2	4
7:45 AM	0	0	0	0	0
8:00 AM	2	0	1	4	7
8:15 AM	0	2	2	2	6
8:30 AM	0	0	1	2	3
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	4	4	8	13	29

	North Leg Paramount Blvd Pedestrians	East Leg Slauson Avenue Pedestrians	South Leg Paramount Blvd Pedestrians	West Leg Slauson Avenue Pedestrians	
4:00 PM	0	1	5	1	7
4:15 PM	0	1	0	2	3
4:30 PM	0	0	1	1	2
4:45 PM	1	2	1	3	7
5:00 PM	4	1	2	3	10
5:15 PM	0	0	0	0	0
5:30 PM	0	1	0	1	2
5:45 PM	0	0	1	1	2
TOTAL VOLUMES:	5	6	10	12	33

Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: Slauson Avenue



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Paramount Blvd			Westbound Slauson Avenue			Northbound Paramount Blvd			Eastbound Slauson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	0	0	0	0	0	1	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	1	0	0	0	0	1	0	4

	Southbound Paramount Blvd			Westbound Slauson Avenue			Northbound Paramount Blvd			Eastbound Slauson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	1	0	0	0	0	0	0	0	1	0	0	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:30 PM	0	0	1	0	1	1	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	0	1	0	1	1	0	0	1	0	4	0	9

City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Slauson Avenue  
 Weather: Clear

File Name : 05\_PRV\_Rose\_Slau AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

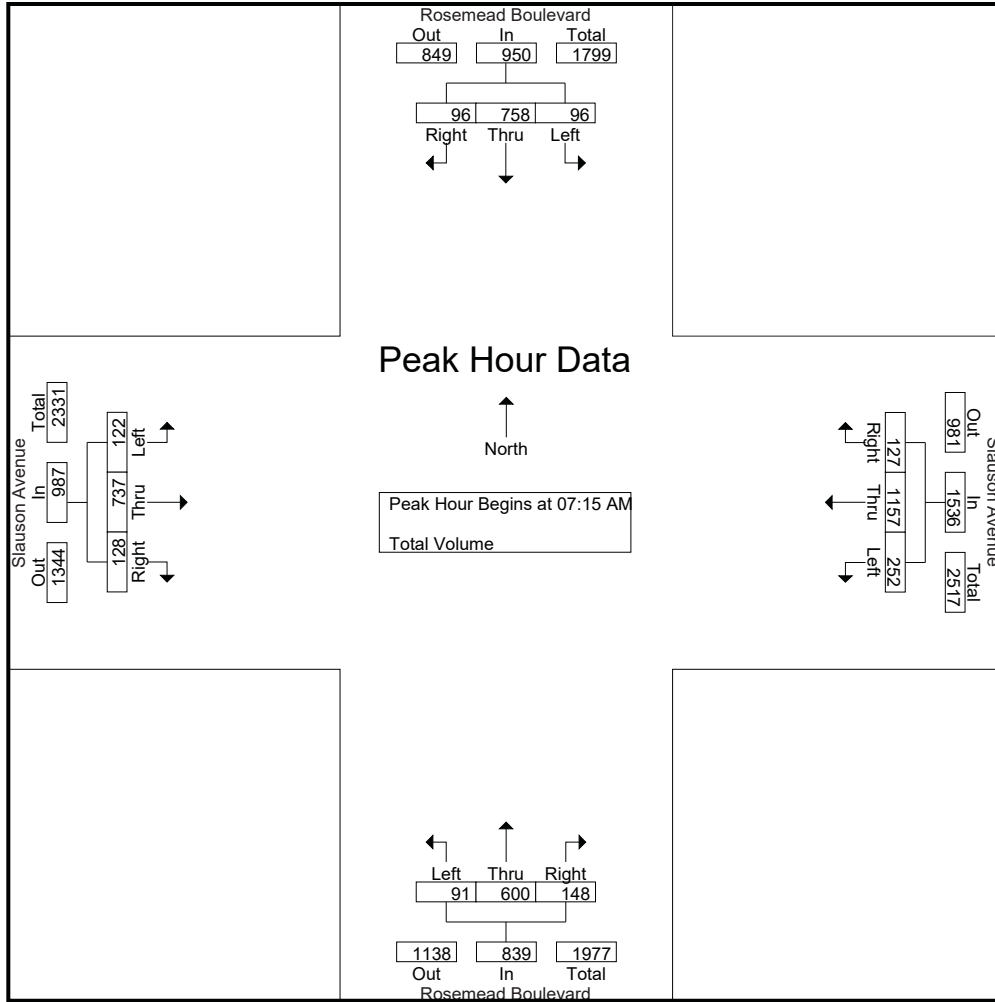
Groups Printed- Total Volume

Start Time	Rosemead Boulevard Southbound				Slauson Avenue Westbound				Rosemead Boulevard Northbound				Slauson Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	14	165	31	210	70	294	16	380	12	85	23	120	13	153	17	183	893
07:15 AM	15	186	19	220	68	287	24	379	16	144	34	194	19	166	22	207	1000
07:30 AM	26	176	27	229	67	299	32	398	18	170	35	223	40	192	33	265	1115
07:45 AM	28	197	28	253	53	280	42	375	25	155	42	222	34	204	38	276	1126
Total	83	724	105	912	258	1160	114	1532	71	554	134	759	106	715	110	931	4134
08:00 AM	27	199	22	248	64	291	29	384	32	131	37	200	29	175	35	239	1071
08:15 AM	17	180	31	228	59	284	30	373	25	125	35	185	30	145	25	200	986
08:30 AM	23	144	28	195	66	213	28	307	23	122	31	176	19	168	20	207	885
08:45 AM	26	181	19	226	54	217	22	293	19	123	35	177	26	124	11	161	857
Total	93	704	100	897	243	1005	109	1357	99	501	138	738	104	612	91	807	3799
Grand Total	176	1428	205	1809	501	2165	223	2889	170	1055	272	1497	210	1327	201	1738	7933
Apprch %	9.7	78.9	11.3		17.3	74.9	7.7		11.4	70.5	18.2		12.1	76.4	11.6		
Total %	2.2	18	2.6	22.8	6.3	27.3	2.8	36.4	2.1	13.3	3.4	18.9	2.6	16.7	2.5	21.9	

Start Time	Rosemead Boulevard Southbound				Slauson Avenue Westbound				Rosemead Boulevard Northbound				Slauson Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	15	186	19	220	<b>68</b>	287	24	379	16	144	34	194	19	166	22	207	1000
07:30 AM	26	176	27	229	67	<b>299</b>	32	<b>398</b>	18	<b>170</b>	35	<b>223</b>	<b>40</b>	192	33	265	1115
07:45 AM	<b>28</b>	197	<b>28</b>	<b>253</b>	53	280	<b>42</b>	375	25	155	<b>42</b>	222	34	<b>204</b>	<b>38</b>	<b>276</b>	<b>1126</b>
08:00 AM	27	<b>199</b>	22	248	64	291	29	384	<b>32</b>	131	37	200	29	175	35	239	1071
Total Volume	96	758	96	950	252	1157	127	1536	91	600	148	839	122	737	128	987	4312
% App. Total	10.1	79.8	10.1		16.4	75.3	8.3		10.8	71.5	17.6		12.4	74.7	13		
PHF	.857	.952	.857	.939	.926	.967	.756	.965	.711	.882	.881	.941	.763	.903	.842	.894	.957

City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Slauson Avenue  
 Weather: Clear

File Name : 05\_PRV\_Rose\_Slau AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	26	176	27	229	<b>68</b>	287	24	379	16	144	34	194	19	166	22	207
+15 mins.	<b>28</b>	197	28	<b>253</b>	67	<b>299</b>	32	<b>398</b>	18	<b>170</b>	35	<b>223</b>	<b>40</b>	192	33	265
+30 mins.	27	<b>199</b>	22	248	53	280	<b>42</b>	375	25	155	<b>42</b>	222	34	<b>204</b>	<b>38</b>	<b>276</b>
+45 mins.	17	180	<b>31</b>	228	64	291	29	384	<b>32</b>	131	37	200	29	175	35	239
Total Volume	98	752	108	958	252	1157	127	1536	91	600	148	839	122	737	128	987
% App. Total	10.2	78.5	11.3		16.4	75.3	8.3		10.8	71.5	17.6		12.4	74.7	13	
PHF	.875	.945	.871	.947	.926	.967	.756	.965	.711	.882	.881	.941	.763	.903	.842	.894



City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Slauson Avenue  
 Weather: Clear

File Name : 05\_PRV\_Rose\_Slau PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

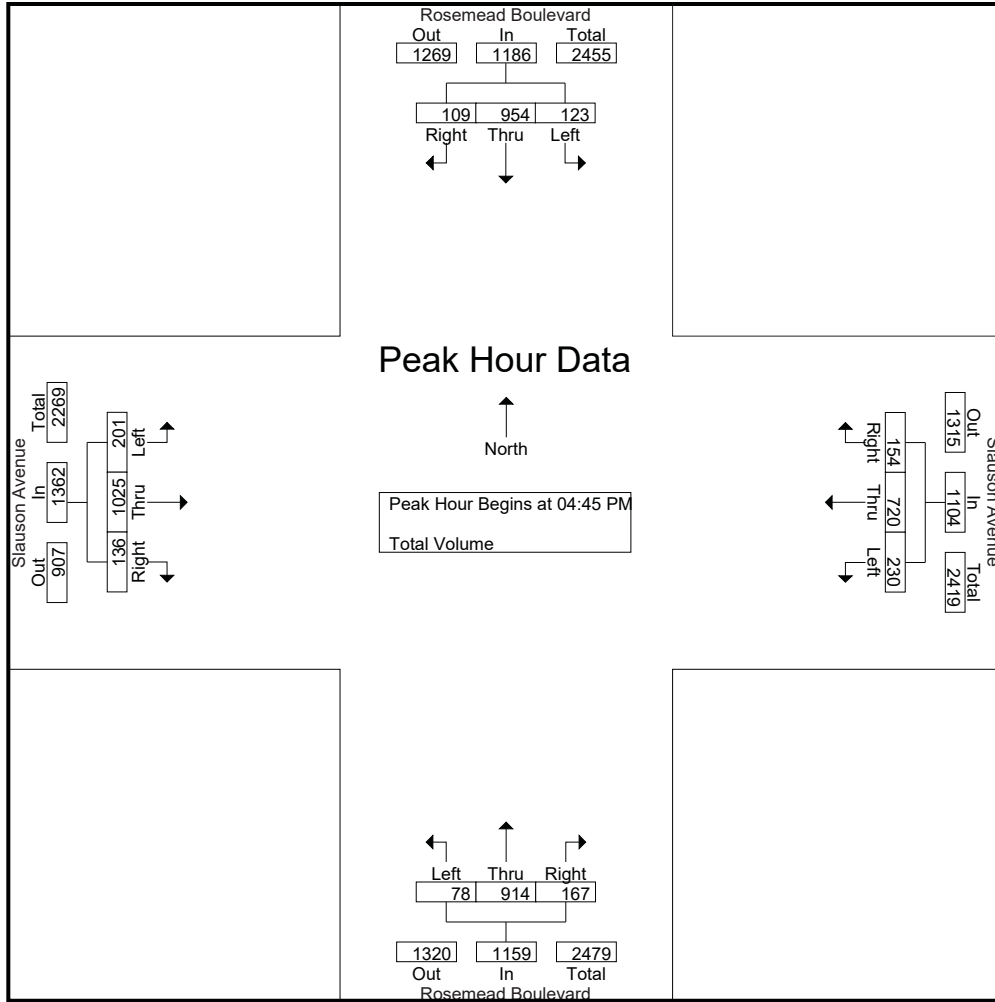
Groups Printed- Total Volume

Start Time	Rosemead Boulevard Southbound				Slauson Avenue Westbound				Rosemead Boulevard Northbound				Slauson Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	35	195	23	253	44	185	35	264	6	194	42	242	44	265	47	356	1115
04:15 PM	29	239	22	290	67	201	37	305	17	187	42	246	39	251	26	316	1157
04:30 PM	30	220	28	278	64	221	26	311	28	213	38	279	41	277	25	343	1211
04:45 PM	28	267	21	316	46	165	48	259	22	219	37	278	56	240	38	334	1187
Total	122	921	94	1137	221	772	146	1139	73	813	159	1045	180	1033	136	1349	4670
05:00 PM	32	234	30	296	56	180	41	277	20	235	43	298	53	254	27	334	1205
05:15 PM	31	251	31	313	64	183	33	280	18	202	35	255	46	262	42	350	1198
05:30 PM	32	202	27	261	64	192	32	288	18	258	52	328	46	269	29	344	1221
05:45 PM	32	230	22	284	51	166	27	244	14	235	44	293	30	268	41	339	1160
Total	127	917	110	1154	235	721	133	1089	70	930	174	1174	175	1053	139	1367	4784
Grand Total	249	1838	204	2291	456	1493	279	2228	143	1743	333	2219	355	2086	275	2716	9454
Apprch %	10.9	80.2	8.9		20.5	67	12.5		6.4	78.5	15		13.1	76.8	10.1		
Total %	2.6	19.4	2.2	24.2	4.8	15.8	3	23.6	1.5	18.4	3.5	23.5	3.8	22.1	2.9	28.7	

Start Time	Rosemead Boulevard Southbound				Slauson Avenue Westbound				Rosemead Boulevard Northbound				Slauson Avenue Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	28	<b>267</b>	21	<b>316</b>	46	165	<b>48</b>	259	<b>22</b>	219	37	278	<b>56</b>	240	38	334	1187
05:00 PM	<b>32</b>	234	30	296	56	180	41	277	20	235	43	298	53	254	27	334	1205
05:15 PM	31	251	<b>31</b>	313	<b>64</b>	183	33	280	18	202	35	255	46	262	<b>42</b>	<b>350</b>	1198
05:30 PM	32	202	27	261	64	<b>192</b>	32	<b>288</b>	18	<b>258</b>	<b>52</b>	<b>328</b>	46	<b>269</b>	29	344	<b>1221</b>
Total Volume	123	954	109	1186	230	720	154	1104	78	914	167	1159	201	1025	136	1362	4811
% App. Total	10.4	80.4	9.2		20.8	65.2	13.9		6.7	78.9	14.4		14.8	75.3	10		
PHF	.961	.893	.879	.938	.898	.938	.802	.958	.886	.886	.803	.883	.897	.953	.810	.973	.985

City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Slauson Avenue  
 Weather: Clear

File Name : 05\_PRV\_Rose\_Slau PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:15 PM				05:00 PM				05:00 PM			
+0 mins.	30	220	28	278	<b>67</b>	201	37	305	<b>20</b>	235	43	298	<b>53</b>	254	27	334
+15 mins.	28	<b>267</b>	21	<b>316</b>	64	<b>221</b>	26	<b>311</b>	18	202	35	255	46	262	<b>42</b>	<b>350</b>
+30 mins.	<b>32</b>	234	30	296	46	165	<b>48</b>	259	18	<b>258</b>	<b>52</b>	<b>328</b>	46	<b>269</b>	29	344
+45 mins.	31	251	<b>31</b>	313	56	180	41	277	14	235	44	293	30	268	41	339
Total Volume	121	972	110	1203	233	767	152	1152	70	930	174	1174	175	1053	139	1367
% App. Total	10.1	80.8	9.1		20.2	66.6	13.2		6	79.2	14.8		12.8	77	10.2	
PHF	.945	.910	.887	.952	.869	.868	.792	.926	.875	.901	.837	.895	.825	.979	.827	.976

Location: Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Slauson Avenue



Date: 10/6/2021  
 Day: Wednesday

**PEDESTRIANS**

	North Leg Rosemead Boulevard Pedestrians	East Leg Slauson Avenue Pedestrians	South Leg Rosemead Boulevard Pedestrians	West Leg Slauson Avenue Pedestrians	
7:00 AM	0	1	1	0	2
7:15 AM	2	7	2	0	11
7:30 AM	3	2	3	1	9
7:45 AM	0	3	3	5	11
8:00 AM	1	1	4	5	11
8:15 AM	2	2	2	3	9
8:30 AM	1	1	1	1	4
8:45 AM	0	0	3	2	5
<b>TOTAL VOLUMES:</b>	9	17	19	17	62

	North Leg Rosemead Boulevard Pedestrians	East Leg Slauson Avenue Pedestrians	South Leg Rosemead Boulevard Pedestrians	West Leg Slauson Avenue Pedestrians	
4:00 PM	0	1	2	2	5
4:15 PM	3	0	2	1	6
4:30 PM	2	0	3	1	6
4:45 PM	1	0	0	5	6
5:00 PM	1	1	0	1	3
5:15 PM	3	2	6	3	14
5:30 PM	1	1	4	3	9
5:45 PM	1	3	2	0	6
<b>TOTAL VOLUMES:</b>	12	8	19	16	55

Location: Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: Slauson Avenue



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Rosemead Boulevard			Westbound Slauson Avenue			Northbound Rosemead Boulevard			Eastbound Slauson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	1	1	0	0	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL VOLUMES:	0	0	0	0	1	1	1	1	0	0	0	0	4

	Southbound Rosemead Boulevard			Westbound Slauson Avenue			Northbound Rosemead Boulevard			Eastbound Slauson Avenue			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	2
4:15 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	1	0	0	0	0	0	0	0	0	1	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	1	0	0	0	0	0	0	1	0	2
5:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	1	2	0	1	0	0	0	0	0	0	4	1	9



City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: SoCal Gas Driveway / Aero Drive  
 Weather: Clear

File Name : 06\_PRV\_Rosemead\_Aero\_AM  
 Site Code : 12221549  
 Start Date : 11/30/2021  
 Page No : 1

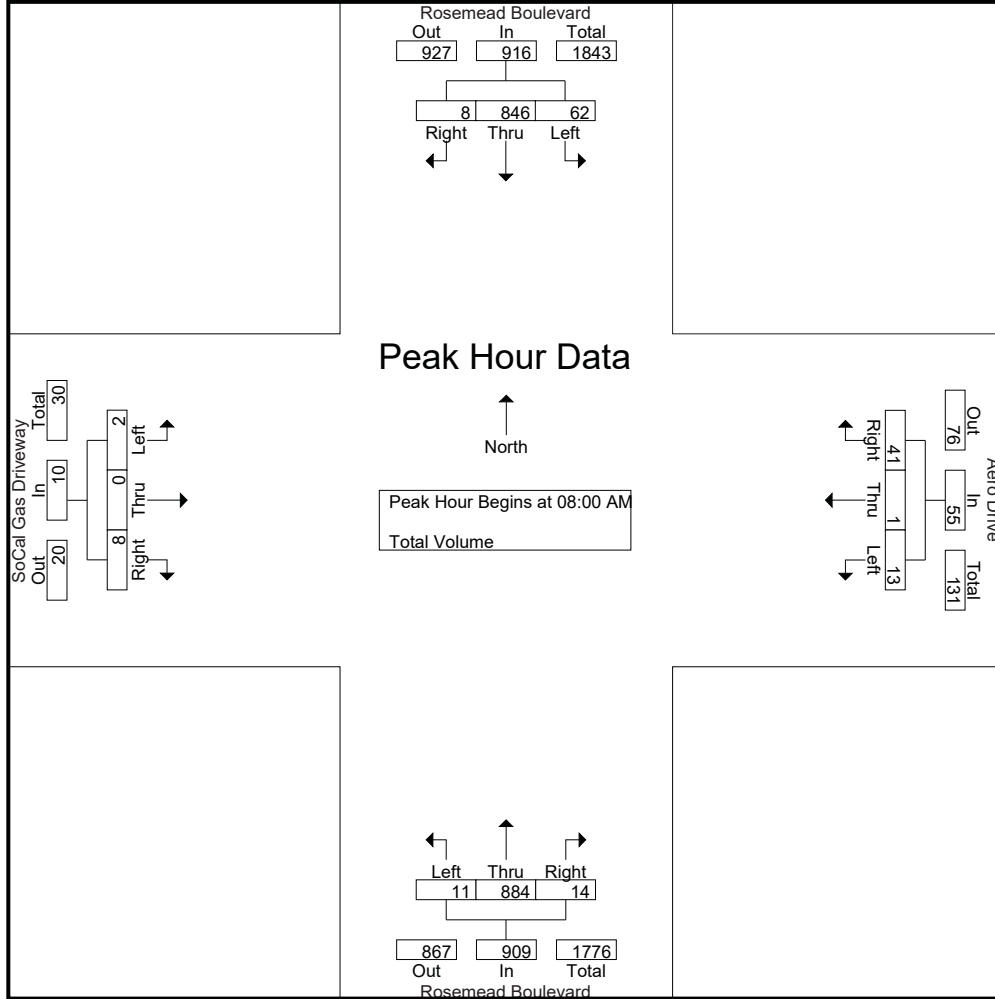
Groups Printed- Total Volume

Start Time	Rosemead Boulevard Southbound				Aero Drive Westbound				Rosemead Boulevard Northbound				SoCal Gas Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	4	216	10	230	6	0	3	9	4	109	1	114	1	1	3	5	358
07:15 AM	8	260	4	272	6	0	10	16	4	152	6	162	0	0	1	1	451
07:30 AM	15	215	3	233	1	0	14	15	1	195	10	206	0	0	0	0	454
07:45 AM	23	211	3	237	4	0	14	18	0	187	5	192	1	0	2	3	450
Total	50	902	20	972	17	0	41	58	9	643	22	674	2	1	6	9	1713
08:00 AM	29	201	5	235	3	0	10	13	1	218	3	222	1	0	4	5	475
08:15 AM	18	219	3	240	6	0	13	19	5	238	3	246	0	0	3	3	508
08:30 AM	11	217	0	228	1	0	9	10	3	208	5	216	1	0	0	1	455
08:45 AM	4	209	0	213	3	1	9	13	2	220	3	225	0	0	1	1	452
Total	62	846	8	916	13	1	41	55	11	884	14	909	2	0	8	10	1890
Grand Total	112	1748	28	1888	30	1	82	113	20	1527	36	1583	4	1	14	19	3603
Apprch %	5.9	92.6	1.5		26.5	0.9	72.6		1.3	96.5	2.3		21.1	5.3	73.7		
Total %	3.1	48.5	0.8	52.4	0.8	0	2.3	3.1	0.6	42.4	1	43.9	0.1	0	0.4	0.5	

Start Time	Rosemead Boulevard Southbound				Aero Drive Westbound				Rosemead Boulevard Northbound				SoCal Gas Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	<b>29</b>	201	<b>5</b>	235	3	0	10	13	1	218	3	222	<b>1</b>	0	<b>4</b>	<b>5</b>	475
08:15 AM	18	<b>219</b>	3	<b>240</b>	<b>6</b>	0	<b>13</b>	<b>19</b>	<b>5</b>	<b>238</b>	3	<b>246</b>	0	0	3	3	<b>508</b>
08:30 AM	11	217	0	228	1	0	9	10	3	208	<b>5</b>	216	1	0	0	1	455
08:45 AM	4	209	0	213	3	<b>1</b>	9	13	2	220	3	225	0	0	1	1	452
Total Volume	62	846	8	916	13	1	41	55	11	884	14	909	2	0	8	10	1890
% App. Total	6.8	92.4	0.9		23.6	1.8	74.5		1.2	97.2	1.5		20	0	80		
PHF	.534	.966	.400	.954	.542	.250	.788	.724	.550	.929	.700	.924	.500	.000	.500	.500	.930

City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: SoCal Gas Driveway / Aero Drive  
 Weather: Clear

File Name : 06\_PRV\_Rosemead\_Aero\_AM  
 Site Code : 12221549  
 Start Date : 11/30/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				08:00 AM				07:45 AM			
+0 mins.	8	260	4	272	1	0	14	15	1	218	3	222	1	0	2	3
+15 mins.	15	215	3	233	4	0	14	18	5	238	3	246	1	0	4	5
+30 mins.	23	211	3	237	3	0	10	13	3	208	5	216	0	0	3	3
+45 mins.	29	201	5	235	6	0	13	19	2	220	3	225	1	0	0	1
Total Volume	75	887	15	977	14	0	51	65	11	884	14	909	3	0	9	12
% App. Total	7.7	90.8	1.5		21.5	0	78.5		1.2	97.2	1.5		25	0	75	
PHF	.647	.853	.750	.898	.583	.000	.911	.855	.550	.929	.700	.924	.750	.000	.563	.600

City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: SoCal Gas Driveway / Aero Drive  
 Weather: Clear

File Name : 06\_PRV\_Rosemead\_Aero\_PM  
 Site Code : 12221549  
 Start Date : 11/30/2021  
 Page No : 1

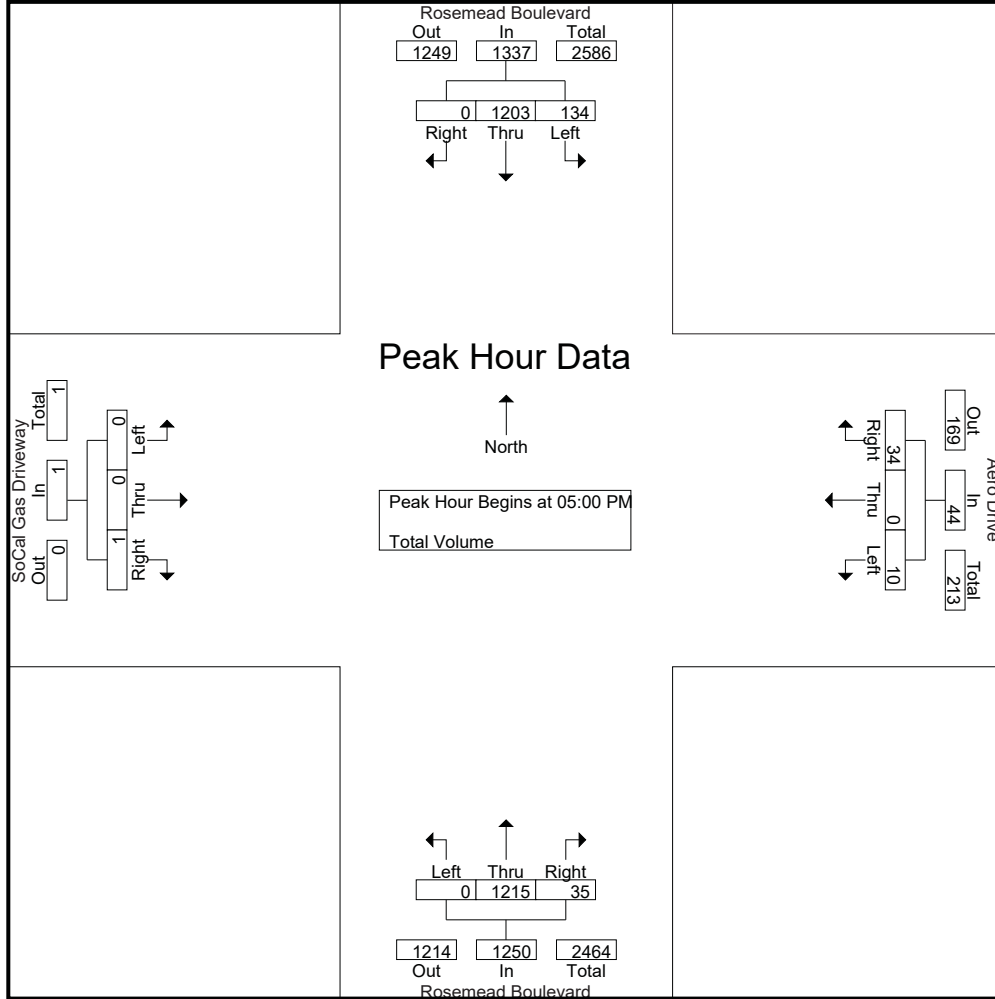
Groups Printed- Total Volume

Start Time	Rosemead Boulevard Southbound				Aero Drive Westbound				Rosemead Boulevard Northbound				SoCal Gas Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	19	299	0	318	2	0	10	12	0	290	5	295	2	0	6	8	633
04:15 PM	13	261	0	274	4	0	4	8	0	249	6	255	2	0	4	6	543
04:30 PM	21	306	0	327	2	0	4	6	0	280	5	285	0	0	9	9	627
04:45 PM	39	303	0	342	2	0	2	4	0	252	12	264	1	0	0	1	611
Total	92	1169	0	1261	10	0	20	30	0	1071	28	1099	5	0	19	24	2414
05:00 PM	41	285	0	326	2	0	8	10	0	290	9	299	0	0	1	1	636
05:15 PM	29	285	0	314	2	0	8	10	0	282	6	288	0	0	0	0	612
05:30 PM	35	347	0	382	4	0	6	10	0	332	10	342	0	0	0	0	734
05:45 PM	29	286	0	315	2	0	12	14	0	311	10	321	0	0	0	0	650
Total	134	1203	0	1337	10	0	34	44	0	1215	35	1250	0	0	1	1	2632
Grand Total	226	2372	0	2598	20	0	54	74	0	2286	63	2349	5	0	20	25	5046
Apprch %	8.7	91.3	0		27	0	73		0	97.3	2.7		20	0	80		
Total %	4.5	47	0	51.5	0.4	0	1.1	1.5	0	45.3	1.2	46.6	0.1	0	0.4	0.5	

Start Time	Rosemead Boulevard Southbound				Aero Drive Westbound				Rosemead Boulevard Northbound				SoCal Gas Driveway Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	<b>41</b>	285	0	326	2	0	8	10	0	290	9	299	0	0	<b>1</b>	<b>1</b>	636
05:15 PM	29	285	0	314	2	0	8	10	0	282	6	288	0	0	0	0	612
05:30 PM	35	<b>347</b>	0	<b>382</b>	<b>4</b>	0	6	10	0	<b>332</b>	<b>10</b>	<b>342</b>	0	0	0	0	<b>734</b>
05:45 PM	29	286	0	315	2	0	<b>12</b>	<b>14</b>	0	311	10	321	0	0	0	0	650
Total Volume	134	1203	0	1337	10	0	34	44	0	1215	35	1250	0	0	1	1	2632
% App. Total	10	90	0		22.7	0	77.3		0	97.2	2.8		0	0	100		
PHF	.817	.867	.000	.875	.625	.000	.708	.786	.000	.915	.875	.914	.000	.000	.250	.250	.896

City of Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: SoCal Gas Driveway / Aero Drive  
 Weather: Clear

File Name : 06\_PRV\_Rosemead\_Aero\_PM  
 Site Code : 12221549  
 Start Date : 11/30/2021  
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM				05:00 PM				05:00 PM				04:00 PM			
+0 mins.	39	303	0	342	2	0	8	10	0	290	9	299	2	0	6	8
+15 mins.	41	285	0	326	2	0	8	10	0	282	6	288	2	0	4	6
+30 mins.	29	285	0	314	4	0	6	10	0	<b>332</b>	<b>10</b>	<b>342</b>	0	0	<b>9</b>	<b>9</b>
+45 mins.	35	<b>347</b>	0	<b>382</b>	2	0	<b>12</b>	<b>14</b>	0	311	10	321	1	0	0	1
Total Volume	144	1220	0	1364	10	0	34	44	0	1215	35	1250	5	0	19	24
% App. Total	10.6	89.4	0		22.7	0	77.3		0	97.2	2.8		20.8	0	79.2	
PHF	.878	.879	.000	.893	.625	.000	.708	.786	.000	.915	.875	.914	.625	.000	.528	.667



Location: Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: SoCal Gas Dwy / Aero Dr



Date: 11/30/2021  
 Day: Tuesday

PEDESTRIANS

	North Leg Rosemead Boulevard Pedestrians	East Leg SoCal Gas Dwy / Aero Dr Pedestrians	South Leg Rosemead Boulevard Pedestrians	West Leg SoCal Gas Dwy / Aero Dr Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	1	0	0	1
7:30 AM	0	1	0	0	1
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	2	2
8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	0	3	0	2	5

	North Leg Rosemead Boulevard Pedestrians	East Leg SoCal Gas Dwy / Aero Dr Pedestrians	South Leg Rosemead Boulevard Pedestrians	West Leg SoCal Gas Dwy / Aero Dr Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	2	0	0	2
4:30 PM	0	1	0	1	2
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	3	0	1	4

Location: Pico Rivera  
 N/S: Rosemead Boulevard  
 E/W: SoCal Gas Dwy / Aero Dr



Date: 11/30/2021  
 Day: Tuesday

BICYCLES

	Southbound Rosemead Boulevard			Westbound SoCal Gas Dwy / Aero Dr			Northbound Rosemead Boulevard			Eastbound SoCal Gas Dwy / Aero Dr			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	3
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	4	0	0	0	0	4

	Southbound Rosemead Boulevard			Westbound SoCal Gas Dwy / Aero Dr			Northbound Rosemead Boulevard			Eastbound SoCal Gas Dwy / Aero Dr			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	0	0	0	0	2	0	0	0	0	4

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 07\_PRV\_Para\_Tele AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

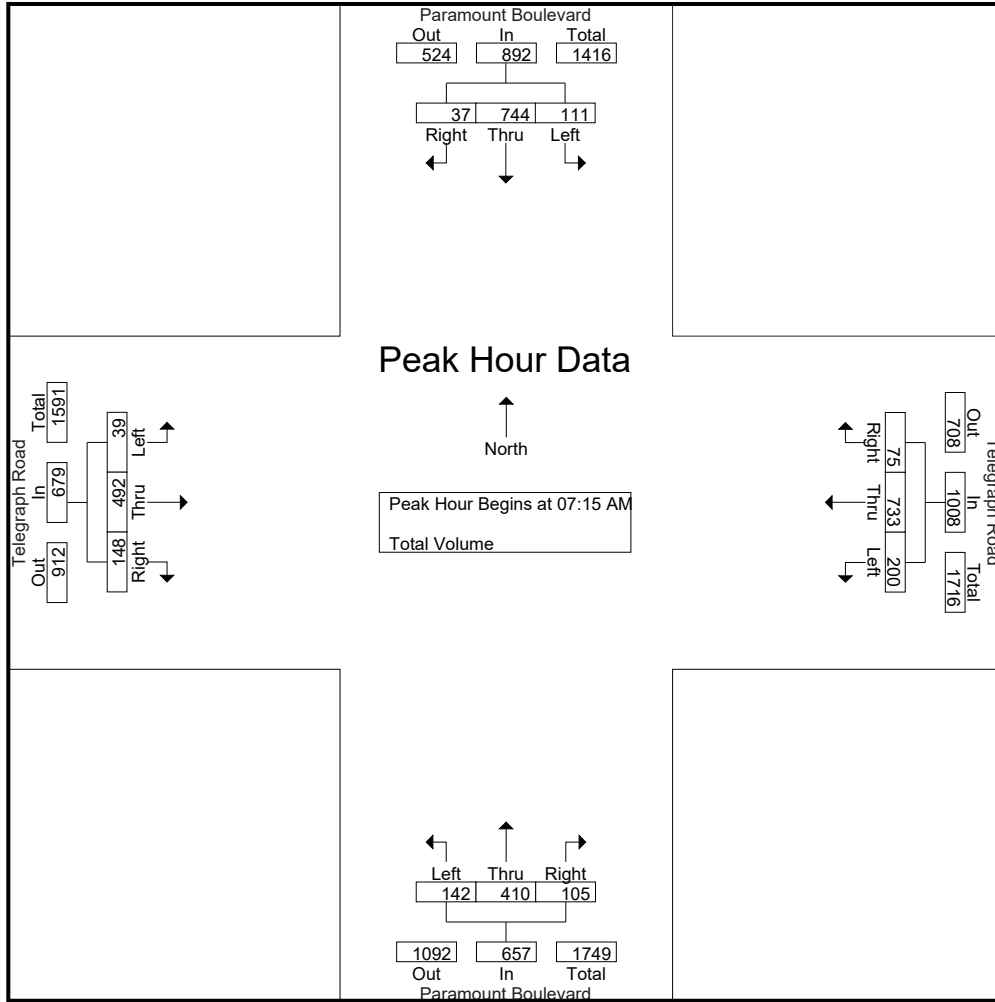
Groups Printed- Total Volume

Start Time	Paramount Boulevard Southbound				Telegraph Road Westbound				Paramount Boulevard Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	14	122	12	148	41	202	13	256	26	90	18	134	9	74	20	103	641
07:15 AM	27	196	10	233	52	185	18	255	28	96	15	139	13	102	41	156	783
07:30 AM	29	206	9	244	51	226	21	298	36	90	25	151	11	130	44	185	878
07:45 AM	32	208	7	247	61	148	20	229	41	122	27	190	8	130	24	162	828
Total	102	732	38	872	205	761	72	1038	131	398	85	614	41	436	129	606	3130
08:00 AM	23	134	11	168	36	174	16	226	37	102	38	177	7	130	39	176	747
08:15 AM	18	154	9	181	49	136	17	202	39	94	39	172	6	113	46	165	720
08:30 AM	15	157	9	181	49	165	19	233	37	89	35	161	5	106	36	147	722
08:45 AM	14	109	10	133	35	138	18	191	32	87	44	163	10	64	20	94	581
Total	70	554	39	663	169	613	70	852	145	372	156	673	28	413	141	582	2770
Grand Total	172	1286	77	1535	374	1374	142	1890	276	770	241	1287	69	849	270	1188	5900
Apprch %	11.2	83.8	5		19.8	72.7	7.5		21.4	59.8	18.7		5.8	71.5	22.7		
Total %	2.9	21.8	1.3	26	6.3	23.3	2.4	32	4.7	13.1	4.1	21.8	1.2	14.4	4.6	20.1	

Start Time	Paramount Boulevard Southbound				Telegraph Road Westbound				Paramount Boulevard Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	27	196	10	233	52	185	18	255	28	96	15	139	<b>13</b>	102	41	156	783
07:30 AM	29	206	9	244	51	<b>226</b>	<b>21</b>	<b>298</b>	36	90	25	151	11	<b>130</b>	<b>44</b>	<b>185</b>	<b>878</b>
07:45 AM	<b>32</b>	<b>208</b>	7	<b>247</b>	<b>61</b>	148	20	229	<b>41</b>	<b>122</b>	27	<b>190</b>	8	130	24	162	828
08:00 AM	23	134	<b>11</b>	168	36	174	16	226	37	102	<b>38</b>	177	7	130	39	176	747
Total Volume	111	744	37	892	200	733	75	1008	142	410	105	657	39	492	148	679	3236
% App. Total	12.4	83.4	4.1		19.8	72.7	7.4		21.6	62.4	16		5.7	72.5	21.8		
PHF	.867	.894	.841	.903	.820	.811	.893	.846	.866	.840	.691	.864	.750	.946	.841	.918	.921

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 07\_PRV\_Para\_Tele AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:45 AM				07:30 AM			
+0 mins.	27	196	10	233	41	202	13	256	<b>41</b>	<b>122</b>	27	<b>190</b>	<b>11</b>	<b>130</b>	44	<b>185</b>
+15 mins.	29	206	9	244	52	185	18	255	37	102	38	177	8	130	24	162
+30 mins.	<b>32</b>	<b>208</b>	7	<b>247</b>	51	<b>226</b>	<b>21</b>	<b>298</b>	39	94	<b>39</b>	172	7	130	39	176
+45 mins.	23	134	<b>11</b>	168	<b>61</b>	148	20	229	37	89	35	161	6	113	<b>46</b>	165
Total Volume	111	744	37	892	205	761	72	1038	154	407	139	700	32	503	153	688
% App. Total	12.4	83.4	4.1		19.7	73.3	6.9		22	58.1	19.9		4.7	73.1	22.2	
PHF	.867	.894	.841	.903	.840	.842	.857	.871	.939	.834	.891	.921	.727	.967	.832	.930

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 07\_PRV\_Para\_Tele PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

Groups Printed- Total Volume

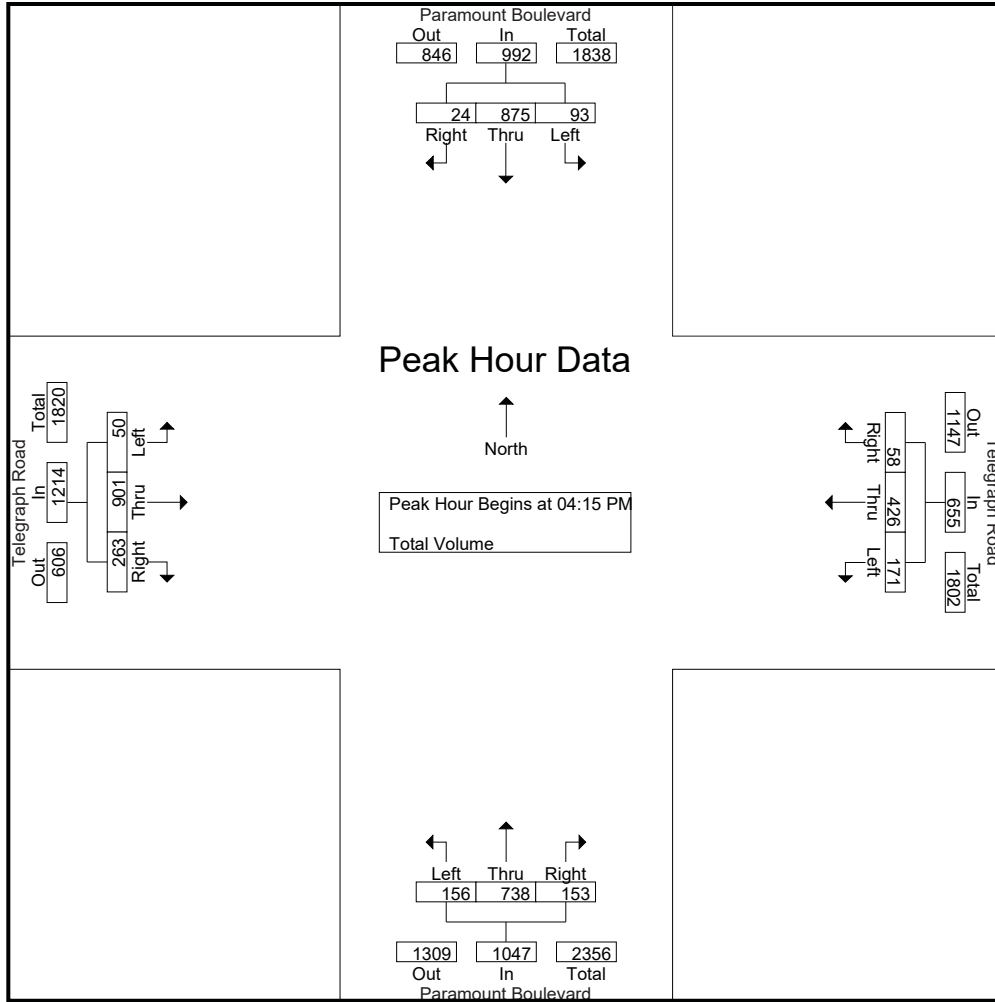
Start Time	Paramount Boulevard Southbound				Telegraph Road Westbound				Paramount Boulevard Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	25	212	7	244	35	96	17	148	36	172	39	247	16	197	64	277	916
04:15 PM	25	223	8	256	43	121	17	181	40	175	40	255	14	227	63	304	996
04:30 PM	28	241	6	275	38	101	12	151	35	194	42	271	10	226	58	294	991
04:45 PM	23	178	4	205	45	118	15	178	43	158	32	233	9	236	72	317	933
Total	101	854	25	980	161	436	61	658	154	699	153	1006	49	886	257	1192	3836
05:00 PM	17	233	6	256	45	86	14	145	38	211	39	288	17	212	70	299	988
05:15 PM	20	214	6	240	37	120	12	169	37	160	34	231	20	247	76	343	983
05:30 PM	24	213	11	248	46	128	6	180	42	201	48	291	15	205	65	285	1004
05:45 PM	18	178	8	204	30	90	11	131	33	171	37	241	18	237	67	322	898
Total	79	838	31	948	158	424	43	625	150	743	158	1051	70	901	278	1249	3873
Grand Total	180	1692	56	1928	319	860	104	1283	304	1442	311	2057	119	1787	535	2441	7709
Apprch %	9.3	87.8	2.9		24.9	67	8.1		14.8	70.1	15.1		4.9	73.2	21.9		
Total %	2.3	21.9	0.7	25	4.1	11.2	1.3	16.6	3.9	18.7	4	26.7	1.5	23.2	6.9	31.7	

Start Time	Paramount Boulevard Southbound				Telegraph Road Westbound				Paramount Boulevard Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	25	223	<b>8</b>	256	43	<b>121</b>	<b>17</b>	<b>181</b>	40	175	40	255	14	227	63	304	<b>996</b>
04:30 PM	<b>28</b>	<b>241</b>	6	<b>275</b>	38	101	12	151	35	194	<b>42</b>	271	10	226	58	294	991
04:45 PM	23	178	4	205	<b>45</b>	118	15	178	<b>43</b>	158	32	233	9	<b>236</b>	<b>72</b>	<b>317</b>	933
05:00 PM	17	233	6	256	45	86	14	145	38	<b>211</b>	39	<b>288</b>	<b>17</b>	212	70	299	988
Total Volume	93	875	24	992	171	426	58	655	156	738	153	1047	50	901	263	1214	3908
% App. Total	9.4	88.2	2.4		26.1	65	8.9		14.9	70.5	14.6		4.1	74.2	21.7		
PHF	.830	.908	.750	.902	.950	.880	.853	.905	.907	.874	.911	.909	.735	.954	.913	.957	.981



City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 07\_PRV\_Para\_Tele PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:45 PM				05:00 PM				04:30 PM			
+0 mins.	25	223	8	256	45	118	15	178	38	211	39	288	10	226	58	294
+15 mins.	28	241	6	275	45	86	14	145	37	160	34	231	9	236	72	317
+30 mins.	23	178	4	205	37	120	12	169	42	201	48	291	17	212	70	299
+45 mins.	17	233	6	256	46	128	6	180	33	171	37	241	20	247	76	343
Total Volume	93	875	24	992	173	452	47	672	150	743	158	1051	56	921	276	1253
% App. Total	9.4	88.2	2.4		25.7	67.3	7		14.3	70.7	15		4.5	73.5	22	
PHF	.830	.908	.750	.902	.940	.883	.783	.933	.893	.880	.823	.903	.700	.932	.908	.913

Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: Telegraph Road



Date: 10/6/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Paramount Blvd Pedestrians	East Leg Telegraph Road Pedestrians	South Leg Paramount Blvd Pedestrians	West Leg Telegraph Road Pedestrians	
7:00 AM	4	1	1	0	6
7:15 AM	0	1	2	1	4
7:30 AM	1	1	0	1	3
7:45 AM	0	1	1	1	3
8:00 AM	1	2	1	1	5
8:15 AM	1	5	3	1	10
8:30 AM	3	1	0	0	4
8:45 AM	0	0	2	1	3
TOTAL VOLUMES:	10	12	10	6	38

	North Leg Paramount Blvd Pedestrians	East Leg Telegraph Road Pedestrians	South Leg Paramount Blvd Pedestrians	West Leg Telegraph Road Pedestrians	
4:00 PM	0	0	0	2	2
4:15 PM	0	0	2	1	3
4:30 PM	1	1	2	2	6
4:45 PM	4	0	6	1	11
5:00 PM	0	2	3	0	5
5:15 PM	3	0	2	1	6
5:30 PM	2	2	2	4	10
5:45 PM	1	0	6	4	11
TOTAL VOLUMES:	11	5	23	15	54

Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: Telegraph Road



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Paramount Blvd			Westbound Telegraph Road			Northbound Paramount Blvd			Eastbound Telegraph Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	1	0	0	2	0	0	0	0	0	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	0	0	2	0	0	1	0	0	0	0	6

	Southbound Paramount Blvd			Westbound Telegraph Road			Northbound Paramount Blvd			Eastbound Telegraph Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	1	0	1	0	2
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	1	0	1	0	2

City of Pico Rivera  
 N/S: Rosemead Blvd/Lakewood Blvd  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 08\_PRV\_Rose\_Tele AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

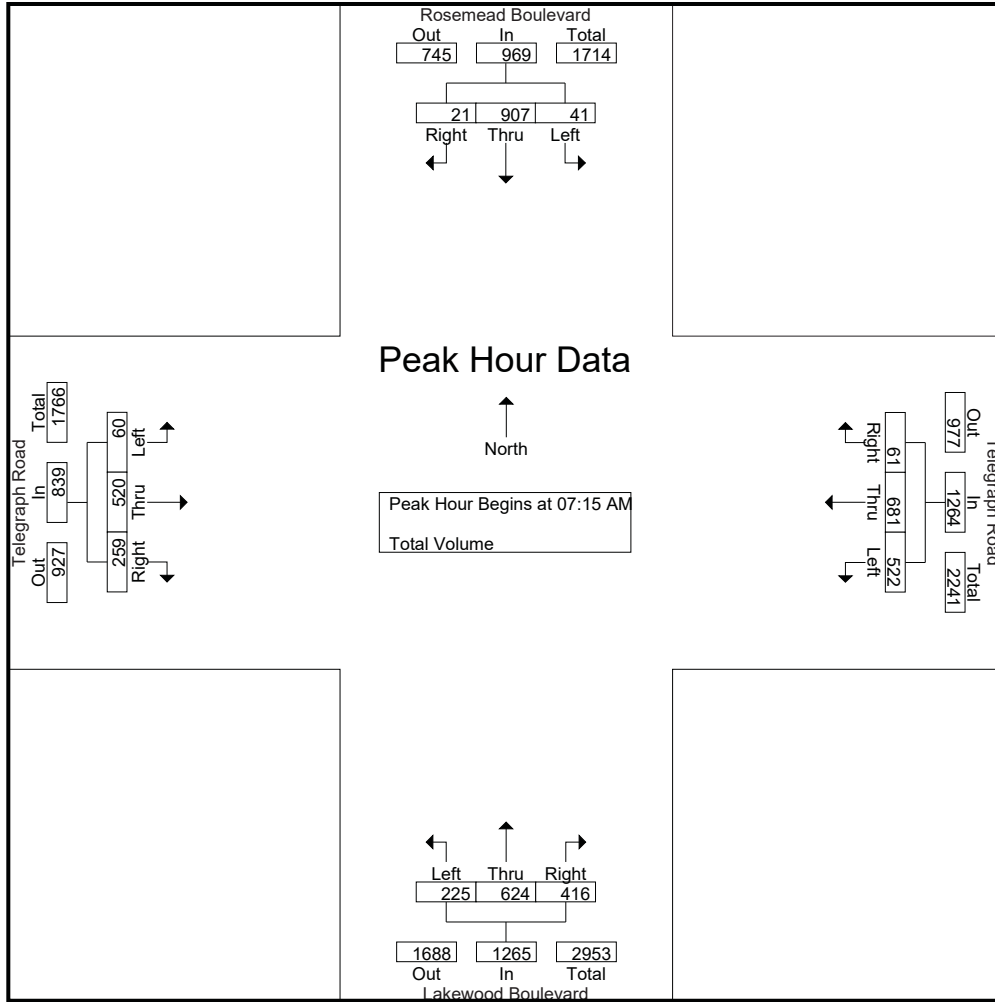
Groups Printed- Total Volume

Start Time	Rosemead Boulevard Southbound				Telegraph Road Westbound				Lakewood Boulevard Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	10	203	4	217	110	148	9	267	53	96	55	204	10	62	48	120	808
07:15 AM	8	248	4	260	147	228	15	390	53	136	65	254	9	139	71	219	1123
07:30 AM	8	232	6	246	147	161	14	322	58	163	88	309	17	119	73	209	1086
07:45 AM	12	225	5	242	113	167	15	295	44	169	142	355	14	128	64	206	1098
Total	38	908	19	965	517	704	53	1274	208	564	350	1122	50	448	256	754	4115
08:00 AM	13	202	6	221	115	125	17	257	70	156	121	347	20	134	51	205	1030
08:15 AM	16	243	10	269	111	132	18	261	56	136	97	289	23	128	40	191	1010
08:30 AM	20	201	11	232	113	175	17	305	65	128	86	279	10	99	49	158	974
08:45 AM	23	208	12	243	95	116	15	226	53	153	95	301	16	77	40	133	903
Total	72	854	39	965	434	548	67	1049	244	573	399	1216	69	438	180	687	3917
Grand Total	110	1762	58	1930	951	1252	120	2323	452	1137	749	2338	119	886	436	1441	8032
Apprch %	5.7	91.3	3		40.9	53.9	5.2		19.3	48.6	32		8.3	61.5	30.3		
Total %	1.4	21.9	0.7	24	11.8	15.6	1.5	28.9	5.6	14.2	9.3	29.1	1.5	11	5.4	17.9	

Start Time	Rosemead Boulevard Southbound				Telegraph Road Westbound				Lakewood Boulevard Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	8	<b>248</b>	4	<b>260</b>	<b>147</b>	<b>228</b>	15	<b>390</b>	53	136	65	254	9	<b>139</b>	71	<b>219</b>	<b>1123</b>
07:30 AM	8	232	<b>6</b>	246	147	161	14	322	58	163	88	309	17	119	<b>73</b>	209	1086
07:45 AM	12	225	5	242	113	167	15	295	44	<b>169</b>	<b>142</b>	<b>355</b>	14	128	64	206	1098
08:00 AM	<b>13</b>	202	6	221	115	125	<b>17</b>	257	<b>70</b>	156	121	347	<b>20</b>	134	51	205	1030
Total Volume	41	907	21	969	522	681	61	1264	225	624	416	1265	60	520	259	839	4337
% App. Total	4.2	93.6	2.2		41.3	53.9	4.8		17.8	49.3	32.9		7.2	62	30.9		
PHF	.788	.914	.875	.932	.888	.747	.897	.810	.804	.923	.732	.891	.750	.935	.887	.958	.965

City of Pico Rivera  
 N/S: Rosemead Blvd/Lakewood Blvd  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 08\_PRV\_Rose\_Tele AM  
 Site Code : 12221549  
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:30 AM				07:00 AM				07:30 AM				07:15 AM			
+0 mins.	8	232	6	246	110	148	9	267	58	163	88	309	9	<b>139</b>	71	<b>219</b>
+15 mins.	12	225	5	242	<b>147</b>	<b>228</b>	<b>15</b>	<b>390</b>	44	<b>169</b>	<b>142</b>	<b>355</b>	17	119	<b>73</b>	209
+30 mins.	13	202	6	221	147	161	14	322	<b>70</b>	156	121	347	14	128	64	206
+45 mins.	<b>16</b>	<b>243</b>	<b>10</b>	<b>269</b>	113	167	15	295	56	136	97	289	<b>20</b>	134	51	205
Total Volume	49	902	27	978	517	704	53	1274	228	624	448	1300	60	520	259	839
% App. Total	5	92.2	2.8		40.6	55.3	4.2		17.5	48	34.5		7.2	62	30.9	
PHF	.766	.928	.675	.909	.879	.772	.883	.817	.814	.923	.789	.915	.750	.935	.887	.958



City of Pico Rivera  
 N/S: Rosemead Blvd/Lakewood Blvd  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 08\_PRV\_Rose\_Tele PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

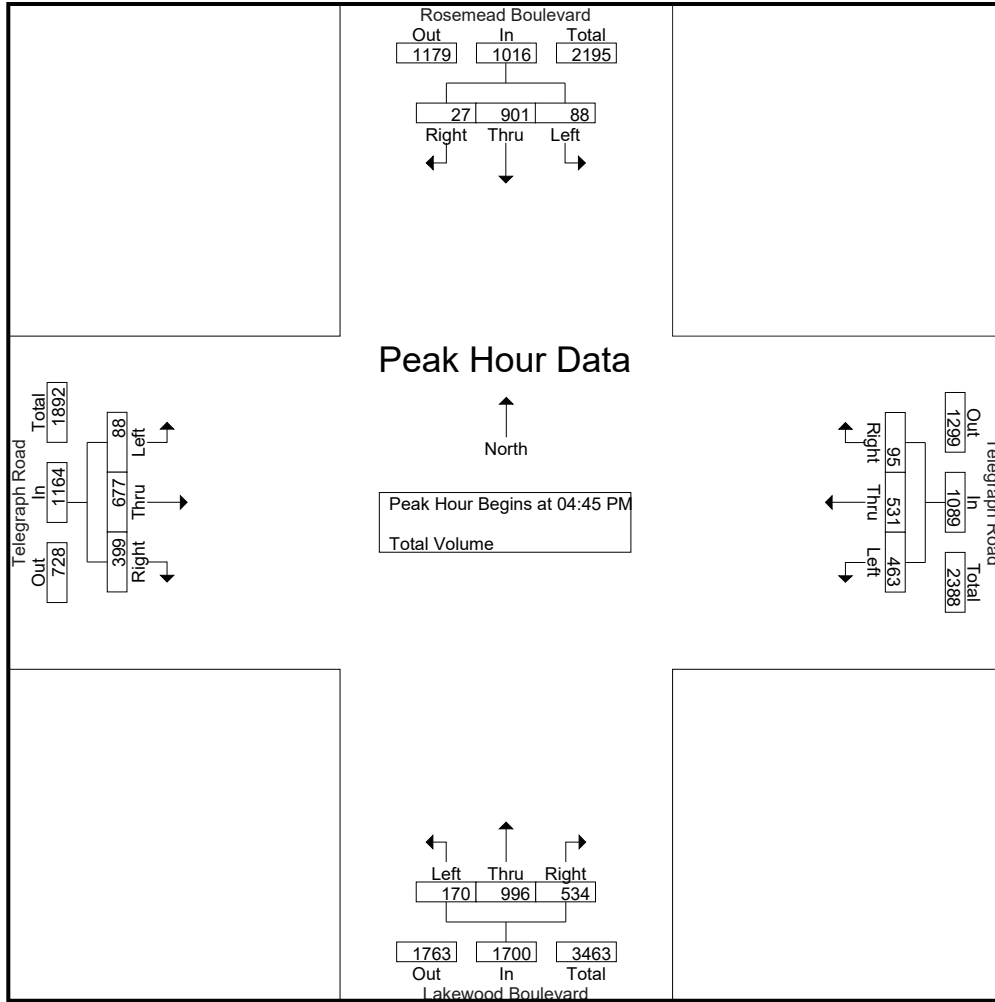
Groups Printed- Total Volume

Start Time	Rosemead Boulevard Southbound				Telegraph Road Westbound				Lakewood Boulevard Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	33	211	13	257	107	130	23	260	55	224	112	391	32	187	91	310	1218
04:15 PM	11	205	9	225	115	145	45	305	35	197	117	349	33	189	99	321	1200
04:30 PM	18	259	7	284	102	91	30	223	45	259	147	451	23	153	89	265	1223
04:45 PM	20	211	9	240	123	144	18	285	41	226	126	393	18	162	109	289	1207
Total	82	886	38	1006	447	510	116	1073	176	906	502	1584	106	691	388	1185	4848
05:00 PM	33	247	8	288	105	120	28	253	44	279	116	439	16	141	79	236	1216
05:15 PM	13	190	5	208	124	148	19	291	39	225	132	396	28	199	114	341	1236
05:30 PM	22	253	5	280	111	119	30	260	46	266	160	472	26	175	97	298	1310
05:45 PM	14	196	6	216	108	130	20	258	50	239	127	416	34	189	94	317	1207
Total	82	886	24	992	448	517	97	1062	179	1009	535	1723	104	704	384	1192	4969
Grand Total	164	1772	62	1998	895	1027	213	2135	355	1915	1037	3307	210	1395	772	2377	9817
Apprch %	8.2	88.7	3.1		41.9	48.1	10		10.7	57.9	31.4		8.8	58.7	32.5		
Total %	1.7	18.1	0.6	20.4	9.1	10.5	2.2	21.7	3.6	19.5	10.6	33.7	2.1	14.2	7.9	24.2	

Start Time	Rosemead Boulevard Southbound				Telegraph Road Westbound				Lakewood Boulevard Northbound				Telegraph Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	20	211	<b>9</b>	240	123	144	18	285	41	226	126	393	18	162	109	289	1207
05:00 PM	<b>33</b>	247	8	<b>288</b>	105	120	28	253	44	<b>279</b>	116	439	16	141	79	236	1216
05:15 PM	13	190	5	208	<b>124</b>	<b>148</b>	19	<b>291</b>	39	225	132	396	<b>28</b>	<b>199</b>	<b>114</b>	<b>341</b>	1236
05:30 PM	22	<b>253</b>	5	280	111	119	<b>30</b>	260	<b>46</b>	266	<b>160</b>	<b>472</b>	26	175	97	298	<b>1310</b>
Total Volume	88	901	27	1016	463	531	95	1089	170	996	534	1700	88	677	399	1164	4969
% App. Total	8.7	88.7	2.7		42.5	48.8	8.7		10	58.6	31.4		7.6	58.2	34.3		
PHF	.667	.890	.750	.882	.933	.897	.792	.936	.924	.892	.834	.900	.786	.851	.875	.853	.948

City of Pico Rivera  
 N/S: Rosemead Blvd/Lakewood Blvd  
 E/W: Telegraph Road  
 Weather: Clear

File Name : 08\_PRV\_Rose\_Tele PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM				04:45 PM				05:00 PM				05:00 PM			
+0 mins.	11	205	9	225	123	144	18	285	44	<b>279</b>	116	439	16	141	79	236
+15 mins.	18	<b>259</b>	7	284	105	120	28	253	39	225	132	396	28	<b>199</b>	<b>114</b>	<b>341</b>
+30 mins.	20	211	9	240	<b>124</b>	<b>148</b>	19	<b>291</b>	46	266	<b>160</b>	<b>472</b>	26	175	97	298
+45 mins.	<b>33</b>	247	8	<b>288</b>	111	119	<b>30</b>	260	<b>50</b>	239	127	416	<b>34</b>	189	94	317
Total Volume	82	922	33	1037	463	531	95	1089	179	1009	535	1723	104	704	384	1192
% App. Total	7.9	88.9	3.2		42.5	48.8	8.7		10.4	58.6	31.1		8.7	59.1	32.2	
PHF	.621	.890	.917	.900	.933	.897	.792	.936	.895	.904	.836	.913	.765	.884	.842	.874

Location: Pico Rivera  
 N/S: Rosemead Blvd/Lakewood Blvd  
 E/W: Telegraph Road



Date: 10/6/2021  
 Day: Wednesday

**PEDESTRIANS**

	North Leg Rosemead Boulevard Pedestrians	East Leg Telegraph Road Pedestrians	South Leg Lakewood Boulevard Pedestrians	West Leg Telegraph Road Pedestrians	
7:00 AM	0	2	4	3	9
7:15 AM	1	2	1	0	4
7:30 AM	1	3	5	0	9
7:45 AM	1	2	2	2	7
8:00 AM	5	2	3	2	12
8:15 AM	2	2	5	1	10
8:30 AM	12	5	3	2	22
8:45 AM	5	0	5	5	15
<b>TOTAL VOLUMES:</b>	<b>27</b>	<b>18</b>	<b>28</b>	<b>15</b>	<b>88</b>

	North Leg Rosemead Boulevard Pedestrians	East Leg Telegraph Road Pedestrians	South Leg Lakewood Boulevard Pedestrians	West Leg Telegraph Road Pedestrians	
4:00 PM	6	7	2	3	18
4:15 PM	3	3	3	0	9
4:30 PM	1	2	1	0	4
4:45 PM	3	5	1	3	12
5:00 PM	4	4	1	6	15
5:15 PM	2	1	4	3	10
5:30 PM	3	1	5	3	12
5:45 PM	0	3	4	0	7
<b>TOTAL VOLUMES:</b>	<b>22</b>	<b>26</b>	<b>21</b>	<b>18</b>	<b>87</b>

Location: Pico Rivera  
 N/S: Rosemead Blvd/Lakewood Blvd  
 E/W: Telegraph Road



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Rosemead Boulevard			Westbound Telegraph Road			Northbound Lakewood Boulevard			Eastbound Telegraph Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
8:30 AM	0	0	0	0	1	4	0	0	0	0	0	0	5
8:45 AM	0	0	0	0	0	0	0	1	0	0	1	0	2
TOTAL VOLUMES:	0	0	0	0	2	4	0	2	0	0	2	0	10

	Southbound Rosemead Boulevard			Westbound Telegraph Road			Northbound Lakewood Boulevard			Eastbound Telegraph Road			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	2
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	1	2
4:30 PM	0	0	0	1	1	0	0	0	0	0	1	1	4
4:45 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	1	0	2
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
TOTAL VOLUMES:	0	0	0	1	3	0	0	0	0	1	7	2	14

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: I-5 Northbound Ramps  
 Weather: Clear

File Name : 09\_PRV\_Para\_5N AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

Groups Printed- Total Volume

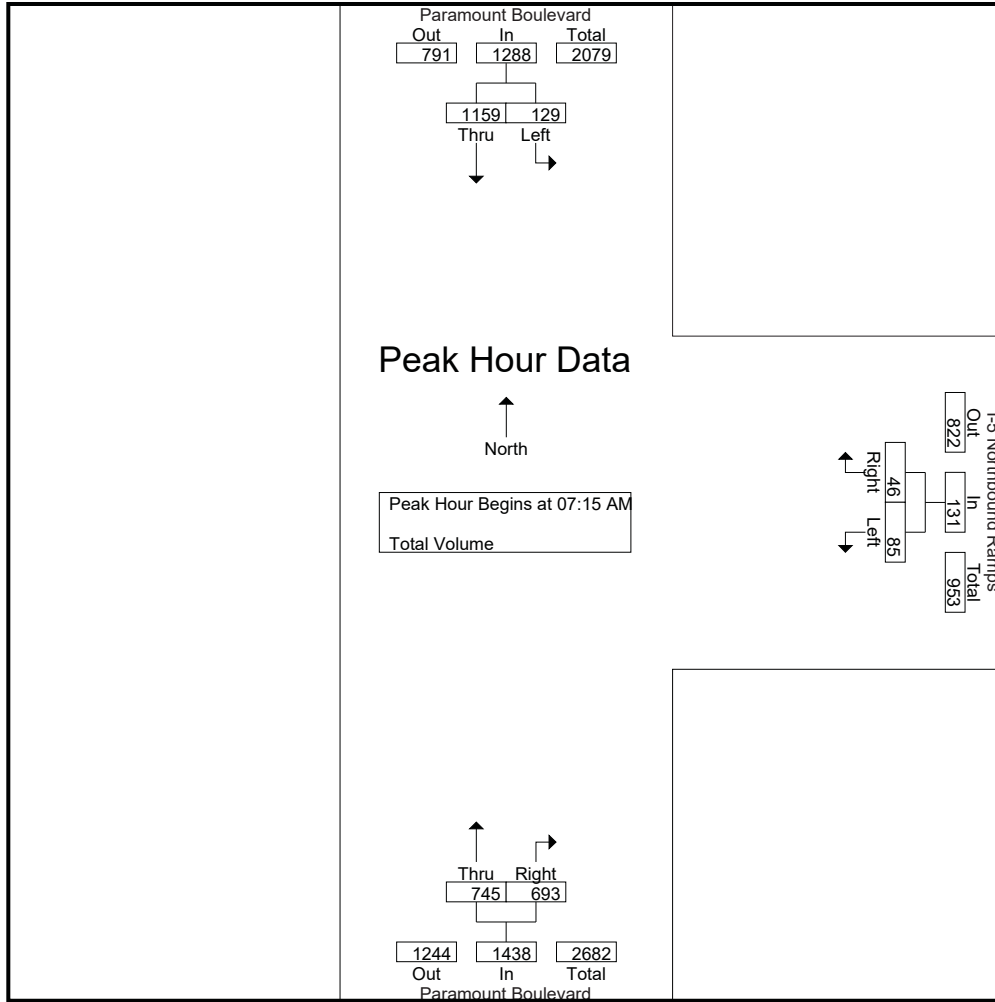
Start Time	Paramount Boulevard Southbound			I-5 Northbound Ramps Westbound			Paramount Boulevard Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
07:00 AM	34	197	231	24	11	35	154	124	278	544
07:15 AM	39	337	376	19	11	30	127	151	278	684
07:30 AM	44	326	370	22	11	33	178	173	351	754
07:45 AM	23	291	314	28	14	42	203	182	385	741
Total	140	1151	1291	93	47	140	662	630	1292	2723
08:00 AM	23	205	228	16	10	26	237	187	424	678
08:15 AM	13	263	276	10	9	19	164	178	342	637
08:30 AM	16	210	226	32	13	45	163	116	279	550
08:45 AM	14	215	229	21	21	42	150	101	251	522
Total	66	893	959	79	53	132	714	582	1296	2387
Grand Total	206	2044	2250	172	100	272	1376	1212	2588	5110
Apprch %	9.2	90.8		63.2	36.8		53.2	46.8		
Total %	4	40	44	3.4	2	5.3	26.9	23.7	50.6	

Start Time	Paramount Boulevard Southbound			I-5 Northbound Ramps Westbound			Paramount Boulevard Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	39	<b>337</b>	<b>376</b>	19	11	30	127	151	278	684
07:30 AM	<b>44</b>	326	370	22	11	33	178	173	351	<b>754</b>
07:45 AM	23	291	314	<b>28</b>	<b>14</b>	<b>42</b>	203	182	385	741
08:00 AM	23	205	228	16	10	26	<b>237</b>	<b>187</b>	<b>424</b>	678
Total Volume	129	1159	1288	85	46	131	745	693	1438	2857
% App. Total	10	90		64.9	35.1		51.8	48.2		
PHF	.733	.860	.856	.759	.821	.780	.786	.926	.848	.947



City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: I-5 Northbound Ramps  
 Weather: Clear

File Name : 09\_PRV\_Para\_5N AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM			07:00 AM			07:30 AM		
+0 mins.	34	197	231	24	11	35	178	173	351
+15 mins.	39	<b>337</b>	<b>376</b>	19	11	30	203	182	385
+30 mins.	<b>44</b>	326	370	22	11	33	<b>237</b>	<b>187</b>	<b>424</b>
+45 mins.	23	291	314	<b>28</b>	<b>14</b>	<b>42</b>	164	178	342
Total Volume	140	1151	1291	93	47	140	782	720	1502
% App. Total	10.8	89.2		66.4	33.6		52.1	47.9	
PHF	.795	.854	.858	.830	.839	.833	.825	.963	.886

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: I-5 Northbound Ramps  
 Weather: Clear

File Name : 09\_PRV\_Para\_5N PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

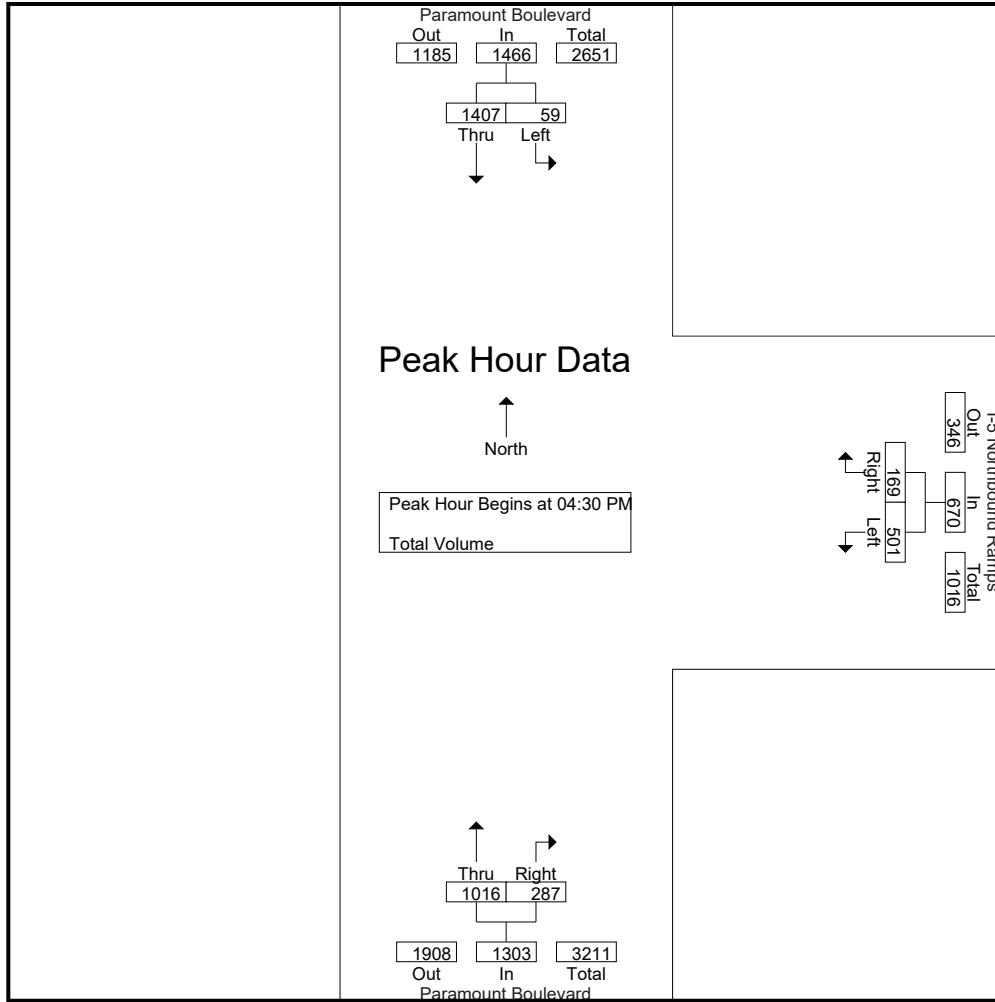
Groups Printed- Total Volume

Start Time	Paramount Boulevard Southbound			I-5 Northbound Ramps Westbound			Paramount Boulevard Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
04:00 PM	16	310	326	117	40	157	225	76	301	784
04:15 PM	10	293	303	122	33	155	243	87	330	788
04:30 PM	15	344	359	124	40	164	267	64	331	854
04:45 PM	18	386	404	114	55	169	247	80	327	900
Total	59	1333	1392	477	168	645	982	307	1289	3326
05:00 PM	15	323	338	140	33	173	267	70	337	848
05:15 PM	11	354	365	123	41	164	235	73	308	837
05:30 PM	7	380	387	122	37	159	240	65	305	851
05:45 PM	12	367	379	125	53	178	223	48	271	828
Total	45	1424	1469	510	164	674	965	256	1221	3364
Grand Total	104	2757	2861	987	332	1319	1947	563	2510	6690
Apprch %	3.6	96.4		74.8	25.2		77.6	22.4		
Total %	1.6	41.2	42.8	14.8	5	19.7	29.1	8.4	37.5	

Start Time	Paramount Boulevard Southbound			I-5 Northbound Ramps Westbound			Paramount Boulevard Northbound			Int. Total
	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:30 PM										
04:30 PM	15	344	359	124	40	164	<b>267</b>	64	331	854
04:45 PM	<b>18</b>	<b>386</b>	<b>404</b>	114	<b>55</b>	169	247	<b>80</b>	327	<b>900</b>
05:00 PM	15	323	338	<b>140</b>	33	<b>173</b>	267	70	<b>337</b>	848
05:15 PM	11	354	365	123	41	164	235	73	308	837
Total Volume	59	1407	1466	501	169	670	1016	287	1303	3439
% App. Total	4	96		74.8	25.2		78	22		
PHF	.819	.911	.907	.895	.768	.968	.951	.897	.967	.955

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: I-5 Northbound Ramps  
 Weather: Clear

File Name : 09\_PRV\_Para\_5N PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM			05:00 PM			04:15 PM		
+0 mins.	<b>18</b>	<b>386</b>	<b>404</b>	<b>140</b>	33	173	<b>243</b>	<b>87</b>	330
+15 mins.	15	323	338	123	41	164	<b>267</b>	64	331
+30 mins.	11	354	365	122	37	159	247	80	327
+45 mins.	7	380	387	125	<b>53</b>	<b>178</b>	267	70	<b>337</b>
Total Volume	51	1443	1494	510	164	674	1024	301	1325
% App. Total	3.4	96.6		75.7	24.3		77.3	22.7	
PHF	.708	.935	.925	.911	.774	.947	.959	.865	.983

Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: I-5 NB Ramps



Date: 10/6/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Paramount Blvd	East Leg I-5 NB Ramps	South Leg Paramount Blvd	West Leg I-5 NB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Paramount Blvd	East Leg I-5 NB Ramps	South Leg Paramount Blvd	West Leg I-5 NB Ramps	
	Pedestrians	Pedestrians	Pedestrians	Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: I-5 NB Ramps



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Paramount Blvd			Westbound I-5 NB Ramps			Northbound Paramount Blvd			Eastbound I-5 NB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Paramount Blvd			Westbound I-5 NB Ramps			Northbound Paramount Blvd			Eastbound I-5 NB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1



City of Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 NB Off Ramp/Vista Del Rosa St  
 Weather: Clear

File Name : 10\_PRV\_Lake\_5N AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

Groups Printed- Total Volume

Start Time	Lakewood Boulevard Southbound				I-5 Northbound Off Ramp Westbound				Lakewood Boulevard Northbound				Vista Del Rosa Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	367	4	371	29	1	23	53	9	200	0	209	0	0	27	27	660
07:15 AM	0	463	1	464	52	3	16	71	19	250	0	269	1	0	43	44	848
07:30 AM	0	438	2	440	61	3	20	84	8	298	0	306	1	0	46	47	877
07:45 AM	0	390	0	390	31	4	30	65	19	338	0	357	2	0	31	33	845
Total	0	1658	7	1665	173	11	89	273	55	1086	0	1141	4	0	147	151	3230
08:00 AM	0	365	4	369	31	7	20	58	14	305	0	319	4	0	25	29	775
08:15 AM	0	354	6	360	39	8	26	73	14	258	0	272	4	0	34	38	743
08:30 AM	0	359	7	366	36	6	38	80	15	260	0	275	2	0	30	32	753
08:45 AM	0	336	4	340	32	5	37	74	16	274	0	290	3	0	31	34	738
Total	0	1414	21	1435	138	26	121	285	59	1097	0	1156	13	0	120	133	3009
Grand Total	0	3072	28	3100	311	37	210	558	114	2183	0	2297	17	0	267	284	6239
Apprch %	0	99.1	0.9		55.7	6.6	37.6		5	95	0		6	0	94		
Total %	0	49.2	0.4	49.7	5	0.6	3.4	8.9	1.8	35	0	36.8	0.3	0	4.3	4.6	

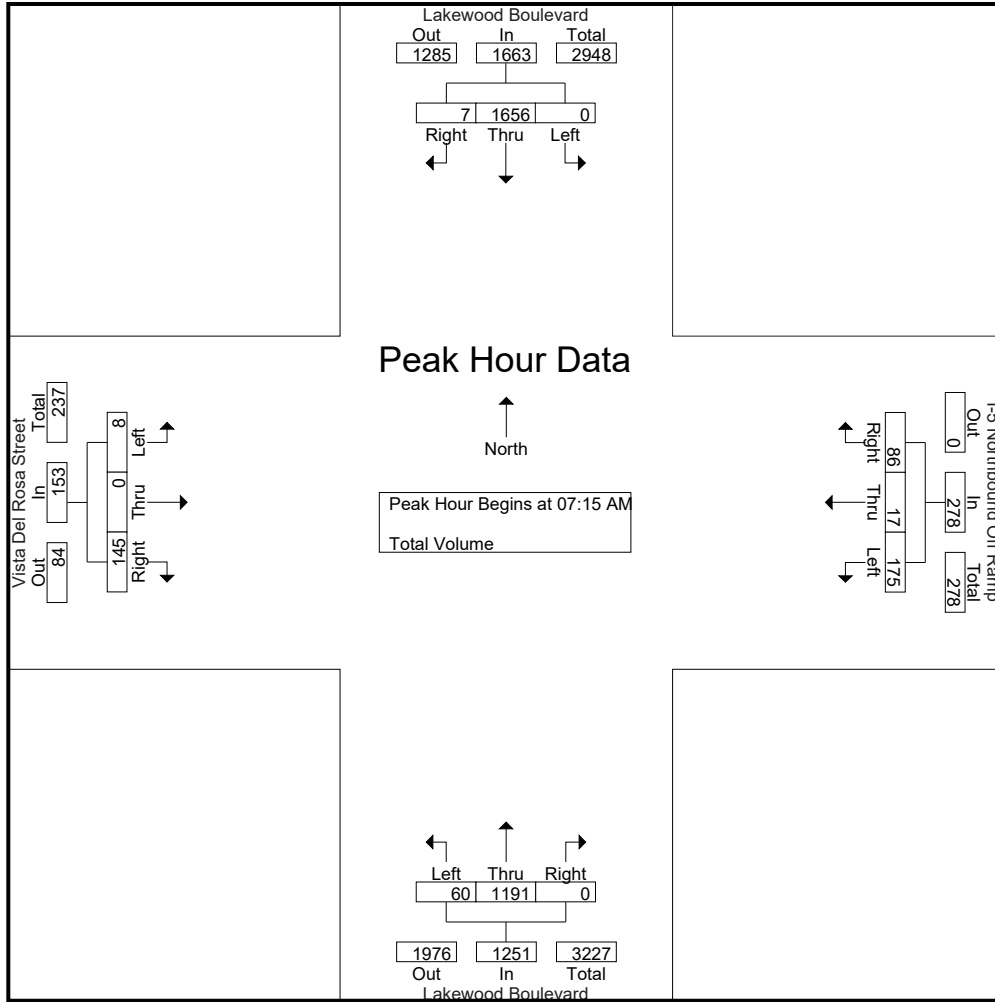
Start Time	Lakewood Boulevard Southbound				I-5 Northbound Off Ramp Westbound				Lakewood Boulevard Northbound				Vista Del Rosa Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:15 AM	0	<b>463</b>	1	<b>464</b>	52	3	16	71	<b>19</b>	250	0	269	1	0	43	44	848
07:30 AM	0	438	2	440	<b>61</b>	3	20	<b>84</b>	8	298	0	306	1	0	<b>46</b>	<b>47</b>	<b>877</b>
07:45 AM	0	390	0	390	31	4	<b>30</b>	65	19	<b>338</b>	0	<b>357</b>	2	0	31	33	845
08:00 AM	0	365	<b>4</b>	369	31	<b>7</b>	20	58	14	305	0	319	<b>4</b>	0	25	29	775
Total Volume	0	1656	7	1663	175	17	86	278	60	1191	0	1251	8	0	145	153	3345
% App. Total	0	99.6	0.4		62.9	6.1	30.9		4.8	95.2	0		5.2	0	94.8		
PHF	.000	.894	.438	.896	.717	.607	.717	.827	.789	.881	.000	.876	.500	.000	.788	.814	.954

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 NB Off Ramp/Vista Del Rosa St  
 Weather: Clear

File Name : 10\_PRV\_Lake\_5N AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:00 AM				08:00 AM				07:30 AM				07:15 AM			
+0 mins.	0	367	4	371	31	7	20	58	8	298	0	306	1	0	43	44
+15 mins.	0	<b>463</b>	1	<b>464</b>	<b>39</b>	<b>8</b>	26	73	<b>19</b>	<b>338</b>	0	<b>357</b>	1	0	<b>46</b>	<b>47</b>
+30 mins.	0	438	2	440	36	6	<b>38</b>	<b>80</b>	14	305	0	319	2	0	31	33
+45 mins.	0	390	0	390	32	5	37	74	14	258	0	272	<b>4</b>	0	25	29
Total Volume	0	1658	7	1665	138	26	121	285	55	1199	0	1254	8	0	145	153
% App. Total	0	99.6	0.4		48.4	9.1	42.5		4.4	95.6	0		5.2	0	94.8	
PHF	.000	.895	.438	.897	.885	.813	.796	.891	.724	.887	.000	.878	.500	.000	.788	.814

City of Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 NB Off Ramp/Vista Del Rosa St  
 Weather: Clear

File Name : 10\_PRV\_Lake\_5N PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

Groups Printed- Total Volume

Start Time	Lakewood Boulevard Southbound				I-5 Northbound Off Ramp Westbound				Lakewood Boulevard Northbound				Vista Del Rosa Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	383	1	384	42	8	42	92	16	332	0	348	6	0	36	42	866
04:15 PM	0	448	5	453	51	9	59	119	20	367	0	387	0	0	30	30	989
04:30 PM	0	443	4	447	35	4	56	95	12	375	0	387	6	0	37	43	972
04:45 PM	0	444	1	445	58	7	75	140	20	362	0	382	7	0	31	38	1005
Total	0	1718	11	1729	186	28	232	446	68	1436	0	1504	19	0	134	153	3832
05:00 PM	0	433	4	437	51	8	94	153	12	345	0	357	3	0	50	53	1000
05:15 PM	0	432	3	435	51	6	65	122	14	365	0	379	1	0	51	52	988
05:30 PM	0	459	4	463	54	10	88	152	20	402	0	422	1	0	43	44	1081
05:45 PM	0	378	4	382	58	8	91	157	16	350	0	366	4	0	35	39	944
Total	0	1702	15	1717	214	32	338	584	62	1462	0	1524	9	0	179	188	4013
Grand Total	0	3420	26	3446	400	60	570	1030	130	2898	0	3028	28	0	313	341	7845
Apprch %	0	99.2	0.8		38.8	5.8	55.3		4.3	95.7	0		8.2	0	91.8		
Total %	0	43.6	0.3	43.9	5.1	0.8	7.3	13.1	1.7	36.9	0	38.6	0.4	0	4	4.3	

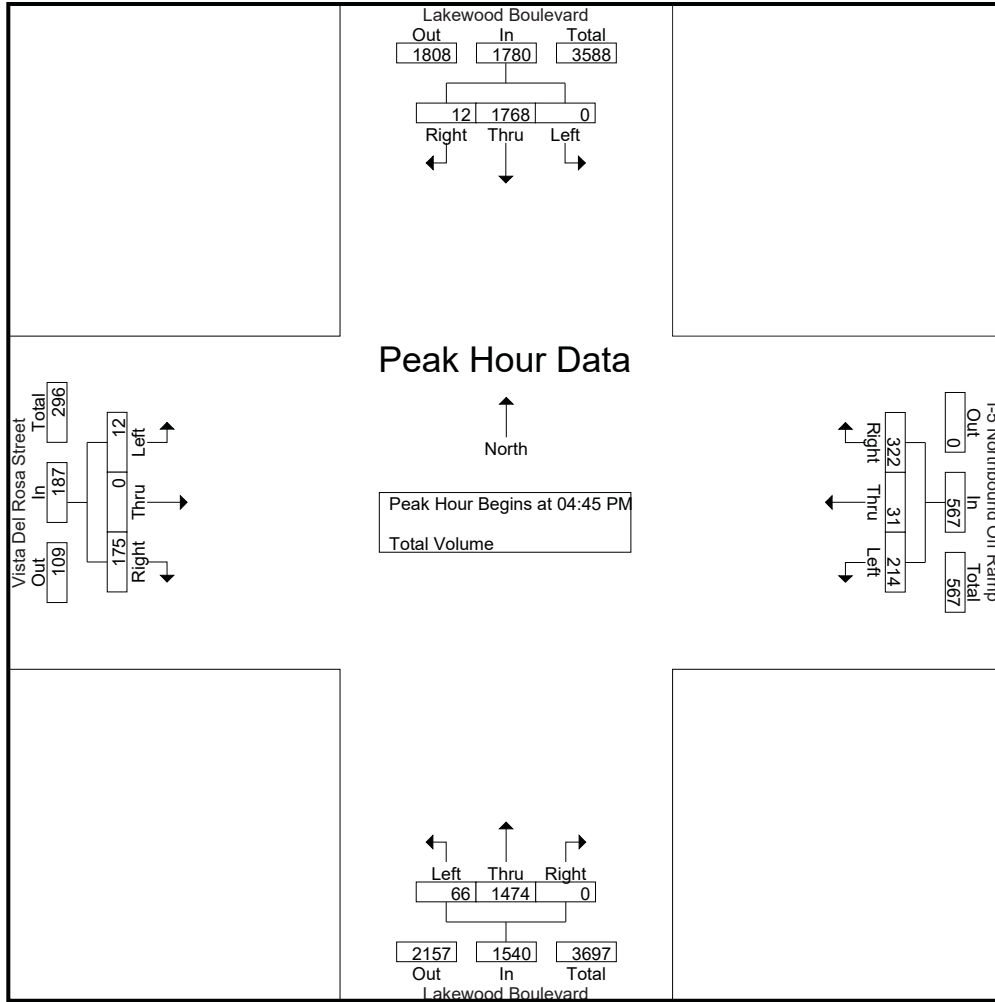
Start Time	Lakewood Boulevard Southbound				I-5 Northbound Off Ramp Westbound				Lakewood Boulevard Northbound				Vista Del Rosa Street Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	0	444	1	445	<b>58</b>	7	75	140	<b>20</b>	362	0	382	<b>7</b>	0	31	<b>38</b>	1005
05:00 PM	0	433	<b>4</b>	437	51	8	<b>94</b>	<b>153</b>	12	345	0	357	3	0	50	<b>53</b>	1000
05:15 PM	0	432	3	435	51	6	65	122	14	365	0	379	1	0	<b>51</b>	52	988
05:30 PM	0	<b>459</b>	4	<b>463</b>	54	<b>10</b>	88	152	20	<b>402</b>	0	<b>422</b>	1	0	43	44	<b>1081</b>
Total Volume	0	1768	12	1780	214	31	322	567	66	1474	0	1540	12	0	175	187	4074
% App. Total	0	99.3	0.7		37.7	5.5	56.8		4.3	95.7	0		6.4	0	93.6		
PHF	.000	.963	.750	.961	.922	.775	.856	.926	.825	.917	.000	.912	.429	.000	.858	.882	.942

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

City of Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 NB Off Ramp/Vista Del Rosa St  
 Weather: Clear

File Name : 10\_PRV\_Lake\_5N PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:15 PM				05:00 PM				04:45 PM				05:00 PM			
+0 mins.	0	<b>448</b>	<b>5</b>	<b>453</b>	51	8	<b>94</b>	153	<b>20</b>	362	0	382	3	0	50	<b>53</b>
+15 mins.	0	443	4	447	51	6	65	122	12	345	0	357	1	0	<b>51</b>	52
+30 mins.	0	444	1	445	54	<b>10</b>	88	152	14	365	0	379	1	0	43	44
+45 mins.	0	433	4	437	<b>58</b>	8	91	<b>157</b>	20	<b>402</b>	0	<b>422</b>	<b>4</b>	0	35	39
Total Volume	0	1768	14	1782	214	32	338	584	66	1474	0	1540	9	0	179	188
% App. Total	0	99.2	0.8		36.6	5.5	57.9		4.3	95.7	0		4.8	0	95.2	
PHF	.000	.987	.700	.983	.922	.800	.899	.930	.825	.917	.000	.912	.563	.000	.877	.887

Location: Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 NB Ramps



Date: 10/6/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Lakewood Boulevard Pedestrians	East Leg I-5 NB Ramps Pedestrians	South Leg Lakewood Boulevard Pedestrians	West Leg I-5 NB Ramps Pedestrians	
7:00 AM	1	0	0	1	2
7:15 AM	0	0	0	0	0
7:30 AM	1	2	0	0	3
7:45 AM	0	2	0	0	2
8:00 AM	0	1	0	1	2
8:15 AM	0	1	0	0	1
8:30 AM	0	1	0	2	3
8:45 AM	0	3	0	1	4
TOTAL VOLUMES:	2	10	0	5	17

	North Leg Lakewood Boulevard Pedestrians	East Leg I-5 NB Ramps Pedestrians	South Leg Lakewood Boulevard Pedestrians	West Leg I-5 NB Ramps Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	0	0	0
5:00 PM	0	1	0	0	1
5:15 PM	0	3	0	1	4
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	1	2
TOTAL VOLUMES:	0	6	0	2	8



Location: Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 NB Ramps



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Lakewood Boulevard			Westbound I-5 NB Ramps			Northbound Lakewood Boulevard			Eastbound I-5 NB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	1	0	0	0	0	2
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:45 AM	0	0	0	1	0	0	0	1	0	0	0	0	2
TOTAL VOLUMES:	0	2	0	1	0	0	0	2	0	0	0	0	5

	Southbound Lakewood Boulevard			Westbound I-5 NB Ramps			Northbound Lakewood Boulevard			Eastbound I-5 NB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	1	0	1	0	0	0	1	0	0	0	1	4
4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL VOLUMES:	0	2	0	1	0	0	1	3	0	0	0	1	8

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: I-5 Southbound Ramps  
 Weather: Clear

File Name : 11\_PRV\_Para\_5S AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

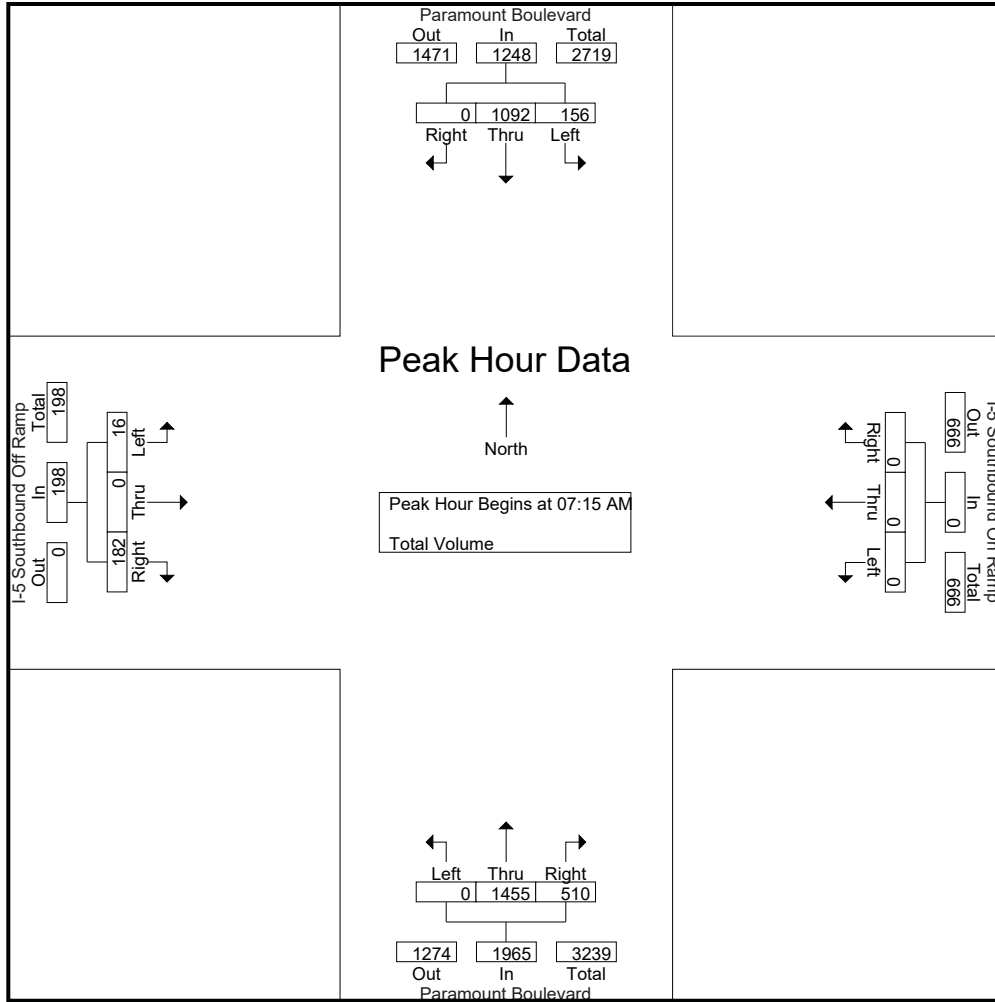
Groups Printed- Total Volume

Start Time	Paramount Boulevard Southbound				I-5 Southbound On Ramp Westbound				Paramount Boulevard Northbound				I-5 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	34	189	0	223	0	0	0	0	0	280	133	413	4	0	37	41	677
07:15 AM	42	320	0	362	0	0	0	0	0	277	101	378	5	0	49	54	794
07:30 AM	35	303	0	338	0	0	0	0	0	353	149	502	6	0	44	50	890
07:45 AM	41	274	0	315	0	0	0	0	0	388	124	512	1	0	45	46	873
Total	152	1086	0	1238	0	0	0	0	0	1298	507	1805	16	0	175	191	3234
08:00 AM	38	195	0	233	0	0	0	0	0	437	136	573	4	0	44	48	854
08:15 AM	51	213	0	264	0	0	0	0	0	317	105	422	9	0	38	47	733
08:30 AM	56	199	0	255	0	0	0	0	0	286	114	400	6	0	41	47	702
08:45 AM	36	199	0	235	0	0	0	0	0	236	78	314	3	0	50	53	602
Total	181	806	0	987	0	0	0	0	0	1276	433	1709	22	0	173	195	2891
Grand Total	333	1892	0	2225	0	0	0	0	0	2574	940	3514	38	0	348	386	6125
Apprch %	15	85	0		0	0	0		0	73.2	26.8		9.8	0	90.2		
Total %	5.4	30.9	0	36.3	0	0	0	0	0	42	15.3	57.4	0.6	0	5.7	6.3	

Start Time	Paramount Boulevard Southbound				I-5 Southbound On Ramp Westbound				Paramount Boulevard Northbound				I-5 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	<b>42</b>	<b>320</b>	0	<b>362</b>	0	0	0	0	0	277	101	378	5	0	<b>49</b>	<b>54</b>	794
07:30 AM	35	303	0	338	0	0	0	0	0	353	<b>149</b>	502	<b>6</b>	0	44	50	<b>890</b>
07:45 AM	41	274	0	315	0	0	0	0	0	388	124	512	1	0	45	46	873
08:00 AM	38	195	0	233	0	0	0	0	0	<b>437</b>	136	<b>573</b>	4	0	44	48	854
Total Volume	156	1092	0	1248	0	0	0	0	0	1455	510	1965	16	0	182	198	3411
% App. Total	12.5	87.5	0		0	0	0		0	74	26		8.1	0	91.9		
PHF	.929	.853	.000	.862	.000	.000	.000	.000	.000	.832	.856	.857	.667	.000	.929	.917	.958

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: I-5 Southbound Ramps  
 Weather: Clear

File Name : 11\_PRV\_Para\_5S AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:30 AM				07:15 AM			
+0 mins.	42	320	0	362	0	0	0	0	0	353	149	502	5	0	49	54
+15 mins.	35	303	0	338	0	0	0	0	0	388	124	512	6	0	44	50
+30 mins.	41	274	0	315	0	0	0	0	0	437	136	573	1	0	45	46
+45 mins.	38	195	0	233	0	0	0	0	0	317	105	422	4	0	44	48
Total Volume	156	1092	0	1248	0	0	0	0	0	1495	514	2009	16	0	182	198
% App. Total	12.5	87.5	0		0	0	0	0	0	74.4	25.6		8.1	0	91.9	
PHF	.929	.853	.000	.862	.000	.000	.000	.000	.000	.855	.862	.877	.667	.000	.929	.917

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: I-5 Southbound Ramps  
 Weather: Clear

File Name : 11\_PRV\_Para\_5S PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

Groups Printed- Total Volume

Start Time	Paramount Boulevard Southbound				I-5 Southbound On Ramp Westbound				Paramount Boulevard Northbound				I-5 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	55	365	0	420	0	0	0	0	0	305	124	429	5	0	34	39	888
04:15 PM	41	364	0	405	0	0	0	0	0	333	103	436	1	0	41	42	883
04:30 PM	45	412	0	457	0	0	0	0	0	328	123	451	1	0	55	56	964
04:45 PM	65	438	0	503	0	0	0	0	0	330	117	447	2	0	50	52	1002
Total	206	1579	0	1785	0	0	0	0	0	1296	467	1763	9	0	180	189	3737
05:00 PM	55	408	0	463	0	0	0	0	0	335	124	459	2	0	41	43	965
05:15 PM	66	413	0	479	0	0	0	0	0	319	119	438	3	0	49	52	969
05:30 PM	77	425	0	502	0	0	0	0	0	308	121	429	0	0	46	46	977
05:45 PM	82	418	0	500	0	0	0	0	0	270	107	377	2	0	45	47	924
Total	280	1664	0	1944	0	0	0	0	0	1232	471	1703	7	0	181	188	3835
Grand Total	486	3243	0	3729	0	0	0	0	0	2528	938	3466	16	0	361	377	7572
Apprch %	13	87	0		0	0	0		0	72.9	27.1		4.2	0	95.8		
Total %	6.4	42.8	0	49.2	0	0	0	0	0	33.4	12.4	45.8	0.2	0	4.8	5	

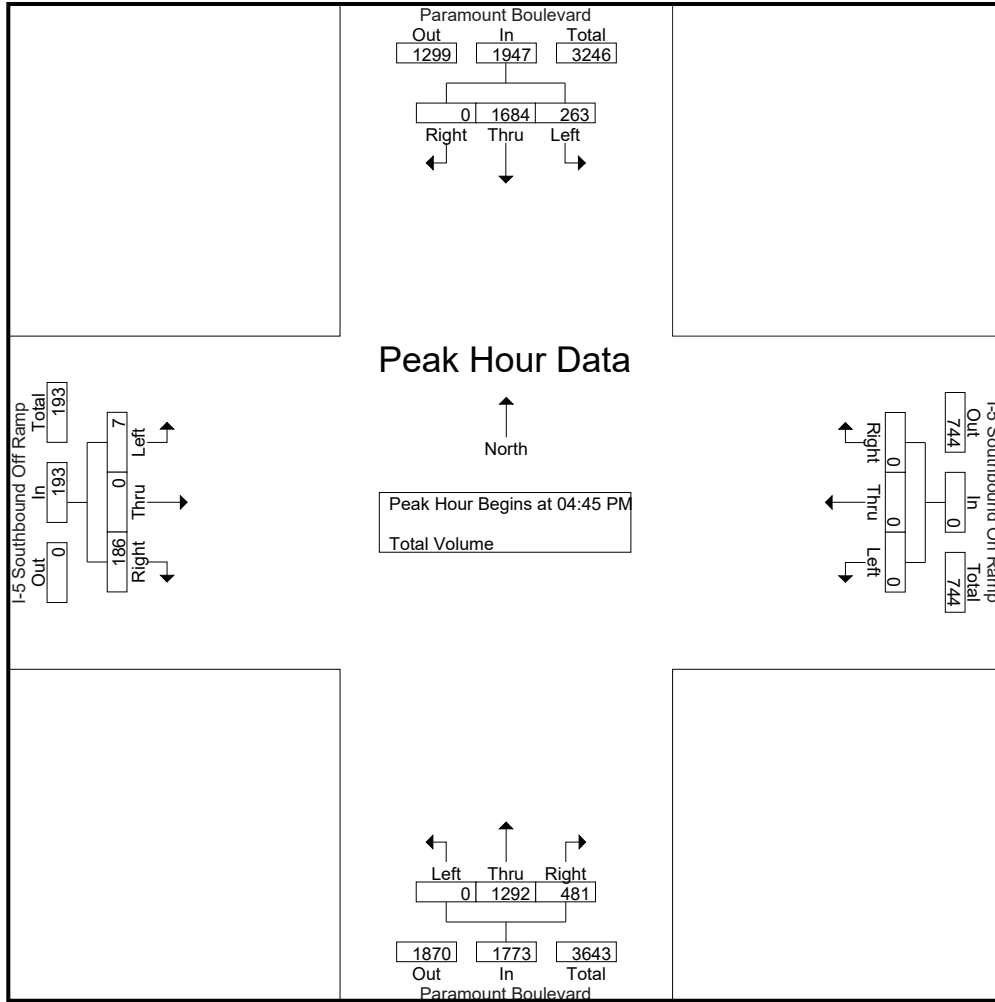
Start Time	Paramount Boulevard Southbound				I-5 Southbound On Ramp Westbound				Paramount Boulevard Northbound				I-5 Southbound Off Ramp Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	65	<b>438</b>	0	<b>503</b>	0	0	0	0	0	330	117	447	2	0	<b>50</b>	<b>52</b>	<b>1002</b>
05:00 PM	55	408	0	463	0	0	0	0	0	<b>335</b>	<b>124</b>	<b>459</b>	2	0	41	43	965
05:15 PM	66	413	0	479	0	0	0	0	0	319	119	438	3	0	49	52	969
05:30 PM	<b>77</b>	425	0	502	0	0	0	0	0	308	121	429	0	0	46	46	977
Total Volume	263	1684	0	1947	0	0	0	0	0	1292	481	1773	7	0	186	193	3913
% App. Total	13.5	86.5	0		0	0	0		0	72.9	27.1		3.6	0	96.4		
PHF	.854	.961	.000	.968	.000	.000	.000	.000	.000	.964	.970	.966	.583	.000	.930	.928	.976

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

City of Pico Rivera  
 N/S: Paramount Boulevard  
 E/W: I-5 Southbound Ramps  
 Weather: Clear

File Name : 11\_PRV\_Para\_5S PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:30 PM				04:30 PM			
+0 mins.	65	<b>438</b>	0	<b>503</b>	0	0	0	0	0	328	123	451	1	0	<b>55</b>	<b>56</b>
+15 mins.	55	408	0	463	0	0	0	0	0	330	117	447	2	0	50	52
+30 mins.	66	413	0	479	0	0	0	0	0	<b>335</b>	<b>124</b>	<b>459</b>	2	0	41	43
+45 mins.	<b>77</b>	425	0	502	0	0	0	0	0	319	119	438	<b>3</b>	0	49	52
Total Volume	263	1684	0	1947	0	0	0	0	0	1312	483	1795	8	0	195	203
% App. Total	13.5	86.5	0		0	0	0	0	0	73.1	26.9		3.9	0	96.1	
PHF	.854	.961	.000	.968	.000	.000	.000	.000	.000	.979	.974	.978	.667	.000	.886	.906



Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: I-5 SB Ramps



Date: 10/6/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Paramount Blvd Pedestrians	East Leg I-5 SB Ramps Pedestrians	South Leg Paramount Blvd Pedestrians	West Leg I-5 SB Ramps Pedestrians	
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

	North Leg Paramount Blvd Pedestrians	East Leg I-5 SB Ramps Pedestrians	South Leg Paramount Blvd Pedestrians	West Leg I-5 SB Ramps Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	0	0	0	0
4:30 PM	0	0	0	0	0
4:45 PM	0	0	0	0	0
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

Location: Pico Rivera  
 N/S: Paramount Blvd  
 E/W: I-5 SB Ramps



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Paramount Blvd			Westbound I-5 SB Ramps			Northbound Paramount Blvd			Eastbound I-5 SB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

	Southbound Paramount Blvd			Westbound I-5 SB Ramps			Northbound Paramount Blvd			Eastbound I-5 SB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

City of Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 Southbound Ramps  
 Weather: Clear

File Name : 12\_PRV\_Lake\_5S AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

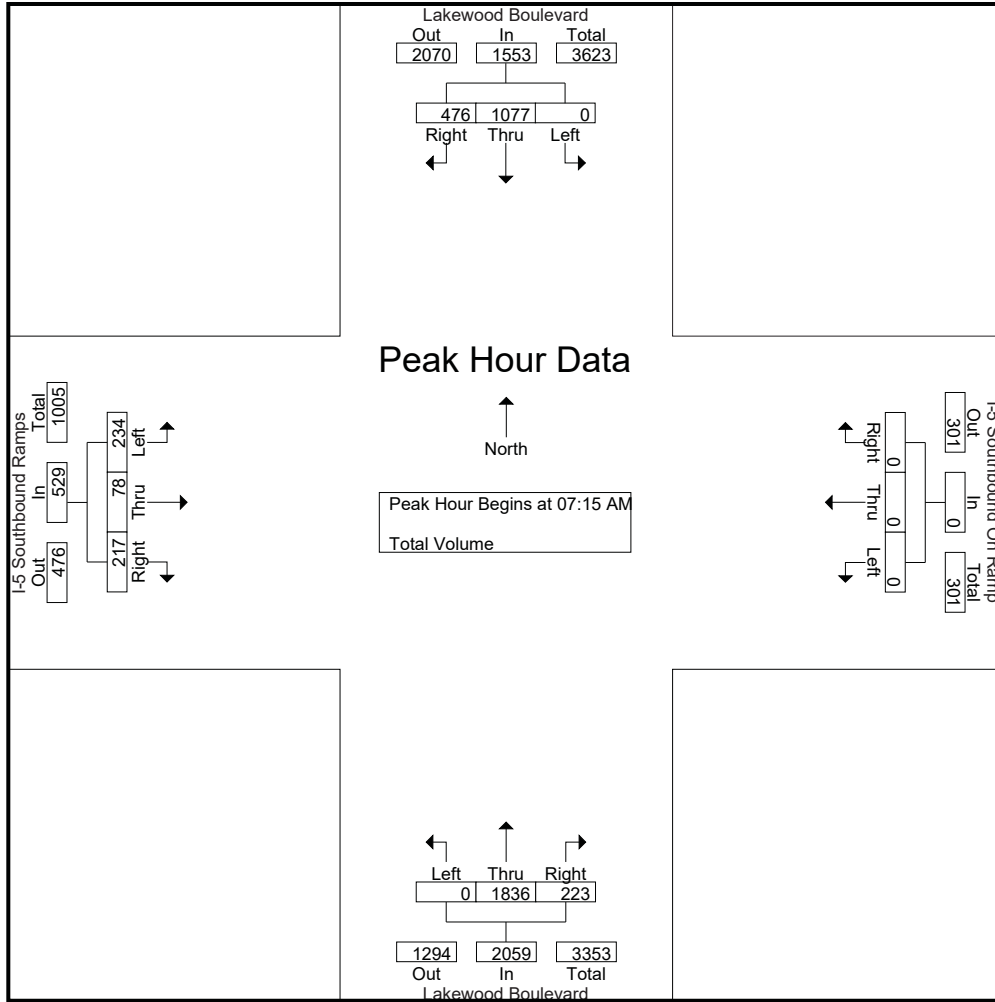
Groups Printed- Total Volume

Start Time	Lakewood Boulevard Southbound				I-5 Southbound On Ramp Westbound				Lakewood Boulevard Northbound				I-5 Southbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	196	91	287	0	0	0	0	0	402	48	450	29	7	39	75	812
07:15 AM	0	267	102	369	0	0	0	0	0	421	38	459	48	19	57	124	952
07:30 AM	0	313	113	426	0	0	0	0	0	458	74	532	46	13	59	118	1076
07:45 AM	0	245	135	380	0	0	0	0	0	452	62	514	79	22	57	158	1052
Total	0	1021	441	1462	0	0	0	0	0	1733	222	1955	202	61	212	475	3892
08:00 AM	0	252	126	378	0	0	0	0	0	505	49	554	61	24	44	129	1061
08:15 AM	0	220	95	315	0	0	0	0	0	406	60	466	42	22	40	104	885
08:30 AM	0	225	75	300	0	0	0	0	0	297	47	344	41	22	62	125	769
08:45 AM	0	216	73	289	0	0	0	0	0	387	47	434	41	13	54	108	831
Total	0	913	369	1282	0	0	0	0	0	1595	203	1798	185	81	200	466	3546
Grand Total	0	1934	810	2744	0	0	0	0	0	3328	425	3753	387	142	412	941	7438
Apprch %	0	70.5	29.5		0	0	0		0	88.7	11.3		41.1	15.1	43.8		
Total %	0	26	10.9	36.9	0	0	0		0	44.7	5.7	50.5	5.2	1.9	5.5	12.7	

Start Time	Lakewood Boulevard Southbound				I-5 Southbound On Ramp Westbound				Lakewood Boulevard Northbound				I-5 Southbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	267	102	369	0	0	0	0	0	421	38	459	48	19	57	124	952
07:30 AM	0	<b>313</b>	113	<b>426</b>	0	0	0	0	0	458	<b>74</b>	532	46	13	<b>59</b>	118	<b>1076</b>
07:45 AM	0	245	<b>135</b>	380	0	0	0	0	0	452	62	514	<b>79</b>	22	57	<b>158</b>	1052
08:00 AM	0	252	126	378	0	0	0	0	0	<b>505</b>	49	<b>554</b>	61	<b>24</b>	44	129	1061
Total Volume	0	1077	476	1553	0	0	0	0	0	1836	223	2059	234	78	217	529	4141
% App. Total	0	69.3	30.7		0	0	0		0	89.2	10.8		44.2	14.7	41		
PHF	.000	.860	.881	.911	.000	.000	.000	.000	.000	.909	.753	.929	.741	.813	.919	.837	.962

City of Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 Southbound Ramps  
 Weather: Clear

File Name : 12\_PRV\_Lake\_5S AM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:00 AM				07:30 AM				07:15 AM			
+0 mins.	0	267	102	369	0	0	0	0	0	458	<b>74</b>	532	48	19	57	124
+15 mins.	0	<b>313</b>	113	<b>426</b>	0	0	0	0	0	452	62	514	46	13	<b>59</b>	118
+30 mins.	0	245	<b>135</b>	380	0	0	0	0	0	<b>505</b>	49	<b>554</b>	<b>79</b>	22	57	<b>158</b>
+45 mins.	0	252	126	378	0	0	0	0	0	406	60	466	61	<b>24</b>	44	129
Total Volume	0	1077	476	1553	0	0	0	0	0	1821	245	2066	234	78	217	529
% App. Total	0	69.3	30.7		0	0	0	0	0	88.1	11.9		44.2	14.7	41	
PHF	.000	.860	.881	.911	.000	.000	.000	.000	.000	.901	.828	.932	.741	.813	.919	.837

City of Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 Southbound Ramps  
 Weather: Clear

File Name : 12\_PRV\_Lake\_5S PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 1

Groups Printed- Total Volume

Start Time	Lakewood Boulevard Southbound				I-5 Southbound On Ramp Westbound				Lakewood Boulevard Northbound				I-5 Southbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	330	135	465	0	0	0	0	0	452	50	502	59	13	47	119	1086
04:15 PM	0	293	135	428	0	0	0	0	0	407	29	436	58	14	29	101	965
04:30 PM	0	301	116	417	0	0	0	0	0	421	46	467	60	18	27	105	989
04:45 PM	0	347	135	482	0	0	0	0	0	413	45	458	74	12	47	133	1073
Total	0	1271	521	1792	0	0	0	0	0	1693	170	1863	251	57	150	458	4113
05:00 PM	0	335	160	495	0	0	0	0	0	438	65	503	71	25	61	157	1155
05:15 PM	0	320	133	453	0	0	0	0	0	386	65	451	76	19	43	138	1042
05:30 PM	0	331	146	477	0	0	0	0	0	368	54	422	68	16	47	131	1030
05:45 PM	0	373	112	485	0	0	0	0	0	426	43	469	46	13	49	108	1062
Total	0	1359	551	1910	0	0	0	0	0	1618	227	1845	261	73	200	534	4289
Grand Total	0	2630	1072	3702	0	0	0	0	0	3311	397	3708	512	130	350	992	8402
Apprch %	0	71	29		0	0	0		0	89.3	10.7		51.6	13.1	35.3		
Total %	0	31.3	12.8	44.1	0	0	0	0	0	39.4	4.7	44.1	6.1	1.5	4.2	11.8	

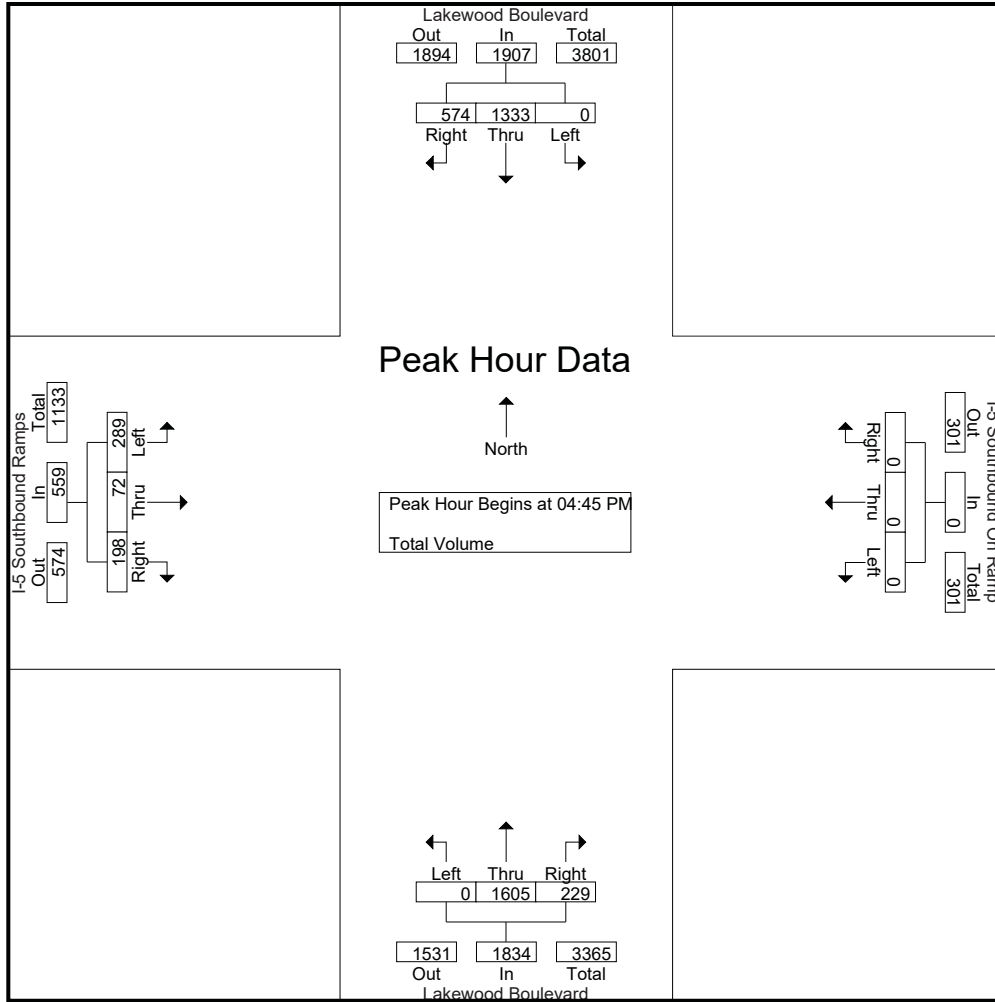
Start Time	Lakewood Boulevard Southbound				I-5 Southbound On Ramp Westbound				Lakewood Boulevard Northbound				I-5 Southbound Ramps Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:45 PM	0	<b>347</b>	135	482	0	0	0	0	0	413	45	458	74	12	47	133	1073
05:00 PM	0	335	<b>160</b>	<b>495</b>	0	0	0	0	0	<b>438</b>	<b>65</b>	<b>503</b>	71	<b>25</b>	<b>61</b>	<b>157</b>	<b>1155</b>
05:15 PM	0	320	133	453	0	0	0	0	0	386	65	451	<b>76</b>	19	43	138	1042
05:30 PM	0	331	146	477	0	0	0	0	0	368	54	422	68	16	47	131	1030
Total Volume	0	1333	574	1907	0	0	0	0	0	1605	229	1834	289	72	198	559	4300
% App. Total	0	69.9	30.1		0	0	0		0	87.5	12.5		51.7	12.9	35.4		
PHF	.000	.960	.897	.963	.000	.000	.000	.000	.000	.916	.881	.912	.951	.720	.811	.890	.931

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:45 PM

City of Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 Southbound Ramps  
 Weather: Clear

File Name : 12\_PRV\_Lake\_5S PM  
 Site Code : 12221549  
 Start Date : 10/6/2021  
 Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:30 PM				04:45 PM			
+0 mins.	0	335	<b>160</b>	<b>495</b>	0	0	0	0	0	421	46	467	74	12	47	133
+15 mins.	0	320	133	453	0	0	0	0	0	413	45	458	71	<b>25</b>	<b>61</b>	<b>157</b>
+30 mins.	0	331	146	477	0	0	0	0	0	<b>438</b>	<b>65</b>	<b>503</b>	<b>76</b>	19	43	138
+45 mins.	0	<b>373</b>	112	485	0	0	0	0	0	386	65	451	68	16	47	131
Total Volume	0	1359	551	1910	0	0	0	0	0	1658	221	1879	289	72	198	559
% App. Total	0	71.2	28.8		0	0	0	0	0	88.2	11.8		51.7	12.9	35.4	
PHF	.000	.911	.861	.965	.000	.000	.000	.000	.000	.946	.850	.934	.951	.720	.811	.890



Location: Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 SB Ramps



Date: 10/6/2021  
 Day: Wednesday

PEDESTRIANS

	North Leg Lakewood Boulevard Pedestrians	East Leg I-5 SB Ramps Pedestrians	South Leg Lakewood Boulevard Pedestrians	West Leg I-5 SB Ramps Pedestrians	
7:00 AM	0	1	0	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	1	0	1	2
7:45 AM	0	2	0	0	2
8:00 AM	0	1	0	0	1
8:15 AM	0	0	0	1	1
8:30 AM	0	0	0	0	0
8:45 AM	0	1	0	0	1
TOTAL VOLUMES:	0	6	0	2	8

	North Leg Lakewood Boulevard Pedestrians	East Leg I-5 SB Ramps Pedestrians	South Leg Lakewood Boulevard Pedestrians	West Leg I-5 SB Ramps Pedestrians	
4:00 PM	0	0	0	0	0
4:15 PM	0	1	0	0	1
4:30 PM	0	0	0	1	1
4:45 PM	0	2	0	0	2
5:00 PM	0	1	0	0	1
5:15 PM	0	0	0	1	1
5:30 PM	0	0	0	0	0
5:45 PM	0	1	0	0	1
TOTAL VOLUMES:	0	5	0	2	7

Location: Pico Rivera  
 N/S: Lakewood Boulevard  
 E/W: I-5 SB Ramps



Date: 10/6/2021  
 Day: Wednesday

BICYCLES

	Southbound Lakewood Boulevard			Westbound I-5 SB Ramps			Northbound Lakewood Boulevard			Eastbound I-5 SB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
7:45 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	3	0	0	0	0	0	1	0	0	0	0	4

	Southbound Lakewood Boulevard			Westbound I-5 SB Ramps			Northbound Lakewood Boulevard			Eastbound I-5 SB Ramps			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	2	0	0	0	0	2







# Counts Unlimited, Inc.

City of Pico Rivera  
 Rosemead Boulevard  
 B/ Washington Boulevard - Slauson Avenue  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: (951) 268-6268  
 email: counts@countsunlimited.com

PRV012  
 Site Code: 122-21549

Start Time	06-Oct-21 Wed	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		39	245			28	247				
12:15		34	193			24	233				
12:30		20	240			28	272				
12:45		16	197	109	875	17	260	97	1012	206	1887
01:00		20	195			10	249				
01:15		14	183			18	221				
01:30		24	190			13	256				
01:45		11	177	69	745	14	213	55	939	124	1684
02:00		6	169			11	227				
02:15		17	192			14	210				
02:30		14	220			9	224				
02:45		7	227	44	808	13	227	47	888	91	1696
03:00		12	269			13	216				
03:15		13	246			11	273				
03:30		19	262			21	288				
03:45		18	232	62	1009	21	264	66	1041	128	2050
04:00		16	260			32	300				
04:15		16	261			39	298				
04:30		31	305			47	284				
04:45		26	<b>306</b>	89	1132	51	306	169	1188	258	2320
05:00		41	<b>307</b>			49	<b>294</b>				
05:15		36	<b>284</b>			69	<b>339</b>				
05:30		62	<b>331</b>			94	<b>309</b>				
05:45		72	303	211	1225	109	<b>330</b>	321	1272	532	2497
06:00		47	247			106	272				
06:15		54	258			128	225				
06:30		95	231			153	203				
06:45		99	174	295	910	167	186	554	886	849	1796
07:00		136	184			218	185				
07:15		<b>174</b>	135			<b>272</b>	170				
07:30		<b>257</b>	150			<b>277</b>	149				
07:45		<b>279</b>	138	846	607	<b>350</b>	126	1117	630	1963	1237
08:00		<b>257</b>	112			<b>319</b>	140				
08:15		172	102			263	134				
08:30		176	68			243	115				
08:45		138	79	743	361	240	123	1065	512	1808	873
09:00		278	82			190	102				
09:15		166	57			171	91				
09:30		144	97			209	66				
09:45		145	70	733	306	192	91	762	350	1495	656
10:00		130	77			181	86				
10:15		143	58			208	55				
10:30		158	57			212	51				
10:45		154	44	585	236	192	47	793	239	1378	475
11:00		152	48			204	50				
11:15		157	46			180	24				
11:30		129	53			217	45				
11:45		160	48	598	195	280	26	881	145	1479	340
<b>Total</b>		<b>4384</b>	<b>8409</b>	<b>4384</b>	<b>8409</b>	<b>5927</b>	<b>9102</b>	<b>5927</b>	<b>9102</b>	<b>10311</b>	<b>17511</b>
<b>Combined Total</b>		<b>12793</b>		<b>12793</b>		<b>15029</b>		<b>15029</b>		<b>27822</b>	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	967	-	-	-	1218	-	-	-	-	-
P.H.F.	-	0.866	-	-	-	0.870	-	-	-	-	-
PM Peak	-	-	04:45	-	-	-	05:00	-	-	-	-
Vol.	-	-	1228	-	-	-	1272	-	-	-	-
P.H.F.	-	-	0.927	-	-	-	0.938	-	-	-	-
Percentage		34.3%	65.7%			39.4%	60.6%				
ADT/AADT		ADT 27,822		AADT 27,822							





# Counts Unlimited, Inc.

City of Pico Rivera  
 Slauson Avenue  
 B/ Paramount Boulevard - Rosemead Boulevard  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: (951) 268-6268  
 email: counts@countsunlimited.com

PRV004  
 Site Code: 122-21549

Start Time	06-Oct-21 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		37	171			36	199				
12:15		31	175			32	182				
12:30		33	205			29	228				
12:45		24	180	125	731	24	215	121	824	246	1555
01:00		24	179			24	208				
01:15		22	230			22	224				
01:30		29	229			24	195				
01:45		18	213	93	851	24	230	94	857	187	1708
02:00		18	220			27	171				
02:15		15	235			18	241				
02:30		18	267			23	226				
02:45		28	312	79	1034	24	<b>279</b>	92	917	171	1951
03:00		31	281			25	<b>223</b>				
03:15		33	266			22	<b>254</b>				
03:30		58	342			44	<b>258</b>				
03:45		77	290	199	1179	45	238	136	973	335	2152
04:00		50	339			44	234				
04:15		48	302			75	247				
04:30		86	319			108	233				
04:45		82	327	266	1287	112	233	339	947	605	2234
05:00		69	<b>362</b>			101	234				
05:15		94	<b>378</b>			192	235				
05:30		133	<b>330</b>			245	257				
05:45		125	<b>355</b>	421	1425	240	196	778	922	1199	2347
06:00		132	287			204	202				
06:15		135	246			240	196				
06:30		154	253			<b>327</b>	177				
06:45		171	222	592	1008	<b>340</b>	158	1111	733	1703	1741
07:00		170	189			<b>368</b>	136				
07:15		195	157			<b>321</b>	126				
07:30		<b>215</b>	157			317	109				
07:45		<b>268</b>	143	848	646	342	99	1348	470	2196	1116
08:00		<b>225</b>	114			345	82				
08:15		<b>203</b>	122			317	103				
08:30		180	92			272	72				
08:45		172	101	780	429	253	83	1187	340	1967	769
09:00		160	91			229	87				
09:15		141	79			227	70				
09:30		155	90			198	87				
09:45		151	105	607	365	182	73	836	317	1443	682
10:00		122	83			173	73				
10:15		165	94			176	93				
10:30		164	75			206	71				
10:45		162	64	613	316	196	61	751	298	1364	614
11:00		153	52			173	49				
11:15		149	44			166	54				
11:30		148	39			150	43				
11:45		171	35	621	170	151	47	640	193	1261	363
<b>Total</b>		5244	9441	5244	9441	7433	7791	7433	7791	12677	17232
<b>Combined Total</b>		14685		14685		15224		15224		29909	
AM Peak	-	07:30	-	-	-	06:30	-	-	-	-	-
Vol.	-	911	-	-	-	1356	-	-	-	-	-
P.H.F.		0.850				0.921					
PM Peak	-	-	05:00	-	-	-	02:45	-	-	-	-
Vol.	-	-	1425	-	-	-	1014	-	-	-	-
P.H.F.			0.942				0.909				
Percentage		35.7%	64.3%			48.8%	51.2%				
ADT/AADT		ADT 29,909		AADT 29,909							

# Counts Unlimited, Inc.

City of Pico Rivera  
 Slauson Avenue  
 E/ Rosemead Boulevard  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: (951) 268-6268  
 email: counts@countsunlimited.com

PRV005  
 Site Code: 122-21549

Start Time	06-Oct-21 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		36	186			42	249				
12:15		31	202			35	256				
12:30		37	208			31	280				
12:45		26	214	130	810	22	271	130	1056	260	1866
01:00		20	201			25	263				
01:15		16	242			21	247				
01:30		28	230			30	242				
01:45		18	215	82	888	29	292	105	1044	187	1932
02:00		21	233			23	220				
02:15		16	248			18	259				
02:30		23	280			18	276				
02:45		22	319	82	1080	29	307	88	1062	170	2142
03:00		25	349			25	258				
03:15		34	295			31	320				
03:30		54	300			51	208				
03:45		84	342	197	1286	50	<b>290</b>	157	1076	354	2362
04:00		57	342			57	<b>264</b>				
04:15		57	322			80	<b>305</b>				
04:30		74	345			116	<b>311</b>				
04:45		91	305	279	1314	141	259	394	1139	673	2453
05:00		72	<b>329</b>			124	277				
05:15		90	<b>328</b>			229	280				
05:30		146	<b>353</b>			252	288				
05:45		129	<b>344</b>	437	1354	256	244	861	1089	1298	2443
06:00		107	314			253	261				
06:15		125	284			278	224				
06:30		144	254			333	239				
06:45		160	232	536	1084	378	184	1242	908	1778	1992
07:00		190	197			380	156				
07:15		<b>215</b>	175			<b>379</b>	175				
07:30		<b>253</b>	161			<b>398</b>	131				
07:45		<b>274</b>	149	932	682	<b>375</b>	137	1532	599	2464	1281
08:00		<b>239</b>	105			<b>384</b>	120				
08:15		197	127			373	161				
08:30		222	95			307	87				
08:45		185	113	843	440	293	104	1357	472	2200	912
09:00		176	92			252	92				
09:15		150	96			276	84				
09:30		158	82			219	115				
09:45		174	105	658	375	456	105	1203	396	1861	771
10:00		148	88			206	88				
10:15		162	80			231	98				
10:30		180	88			239	83				
10:45		174	61	664	317	228	73	904	342	1568	659
11:00		159	62			188	57				
11:15		201	57			238	70				
11:30		190	49			212	50				
11:45		199	34	749	202	227	51	865	228	1614	430
<b>Total</b>		<b>5589</b>	<b>9832</b>	<b>5589</b>	<b>9832</b>	<b>8838</b>	<b>9411</b>	<b>8838</b>	<b>9411</b>	<b>14427</b>	<b>19243</b>
<b>Combined Total</b>		<b>15421</b>		<b>15421</b>		<b>18249</b>		<b>18249</b>		<b>33670</b>	
AM Peak	-	07:15	-	-	-	07:15	-	-	-	-	-
Vol.	-	981	-	-	-	1536	-	-	-	-	-
P.H.F.	-	0.895	-	-	-	0.965	-	-	-	-	-
PM Peak	-	-	05:00	-	-	-	03:45	-	-	-	-
Vol.	-	-	1354	-	-	-	1170	-	-	-	-
P.H.F.	-	-	0.959	-	-	-	0.914	-	-	-	-
Percentage		36.2%	63.8%			48.4%	51.6%				
ADT/AADT		ADT 33,670		AADT 33,670							

# Counts Unlimited, Inc.

City of Pico Rivera  
 Slauson Avenue  
 W/ Paramount Boulevard  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: (951) 268-6268  
 email: counts@countsunlimited.com

PRV003  
 Site Code: 122-21549

Start Time	06-Oct-21 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		38	189			51	199				
12:15		25	192			37	194				
12:30		40	215			28	244				
12:45		30	195	133	791	25	220	141	857	274	1648
01:00		27	176			28	229				
01:15		22	249			29	247				
01:30		28	225			24	250				
01:45		18	241	95	891	29	247	110	973	205	1864
02:00		15	229			18	214				
02:15		20	259			22	258				
02:30		27	255			27	266				
02:45		33	319	95	1062	34	258	101	996	196	2058
03:00		39	278			26	215				
03:15		34	253			30	<b>258</b>				
03:30		71	332			59	<b>269</b>				
03:45		92	277	236	1140	60	<b>245</b>	175	987	411	2127
04:00		53	336			50	<b>275</b>				
04:15		64	299			78	239				
04:30		101	311			116	270				
04:45		117	328	335	1274	139	221	383	1005	718	2279
05:00		71	<b>350</b>			119	252				
05:15		126	<b>376</b>			212	235				
05:30		154	<b>319</b>			271	269				
05:45		167	<b>342</b>	518	1387	266	196	868	952	1386	2339
06:00		155	295			228	205				
06:15		154	252			267	194				
06:30		161	263			<b>354</b>	190				
06:45		202	225	672	1035	<b>351</b>	170	1200	759	1872	1794
07:00		168	196			<b>381</b>	165				
07:15		<b>207</b>	181			<b>297</b>	151				
07:30		<b>225</b>	162			309	140				
07:45		<b>247</b>	145	847	684	317	112	1304	568	2151	1252
08:00		<b>206</b>	152			343	87				
08:15		197	119			331	124				
08:30		187	106			294	96				
08:45		174	119	764	496	264	103	1232	410	1996	906
09:00		180	98			266	96				
09:15		151	90			230	73				
09:30		155	102			212	98				
09:45		146	110	632	400	213	97	921	364	1553	764
10:00		148	75			192	81				
10:15		167	106			188	109				
10:30		174	85			208	94				
10:45		174	75	663	341	212	60	800	344	1463	685
11:00		159	55			188	59				
11:15		159	49			188	64				
11:30		152	47			166	57				
11:45		172	37	642	188	179	51	721	231	1363	419
<b>Total</b>		5632	9689	5632	9689	7956	8446	7956	8446	13588	18135
<b>Combined Total</b>		15321		15321		16402		16402		31723	
AM Peak	-	07:15	-	-	-	06:30	-	-	-	-	-
Vol.	-	885	-	-	-	1383	-	-	-	-	-
P.H.F.	-	0.896	-	-	-	0.907	-	-	-	-	-
PM Peak	-	-	05:00	-	-	-	03:15	-	-	-	-
Vol.	-	-	1387	-	-	-	1047	-	-	-	-
P.H.F.	-	-	0.922	-	-	-	0.952	-	-	-	-
Percentage		36.8%	63.2%			48.5%	51.5%				
ADT/AADT		ADT 31,723		AADT 31,723							

# Counts Unlimited, Inc.

City of Pico Rivera  
 Telegraph Road  
 B/ Paramount Boulevard - Rosemead Boulevard  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: (951) 268-6268  
 email: counts@countsunlimited.com

PRV007  
 Site Code: 122-21549

Start Time	06-Oct-21 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		23	127			31	117				
12:15		26	150			20	110				
12:30		26	154			23	125				
12:45		11	157	86	588	18	132	92	484	178	1072
01:00		15	166			16	166				
01:15		18	161			16	144				
01:30		8	173			18	136				
01:45		16	172	57	672	9	129	59	575	116	1247
02:00		9	199			13	155				
02:15		13	219			11	142				
02:30		15	211			13	162				
02:45		10	251	47	880	16	<b>208</b>	53	667	100	1547
03:00		8	217			13	<b>188</b>				
03:15		17	251			9	<b>191</b>				
03:30		20	204			20	<b>172</b>				
03:45		14	254	59	926	22	159	64	710	123	1636
04:00		27	310			19	198				
04:15		35	321			23	189				
04:30		40	265			40	143				
04:45		41	289	143	1185	46	194	128	724	271	1909
05:00		31	236			38	172				
05:15		46	<b>341</b>			46	192				
05:30		64	<b>298</b>			95	170				
05:45		81	<b>317</b>	222	1192	125	186	304	720	526	1912
06:00		74	<b>259</b>			102	163				
06:15		83	268			112	132				
06:30		107	243			154	126				
06:45		130	177	394	947	178	108	546	529	940	1476
07:00		120	168			<b>205</b>	125				
07:15		<b>219</b>	111			<b>285</b>	99				
07:30		<b>209</b>	114			<b>225</b>	111				
07:45		<b>206</b>	94	754	487	<b>216</b>	80	931	415	1685	902
08:00		<b>205</b>	100			201	91				
08:15		191	72			198	79				
08:30		158	70			251	80				
08:45		133	83	687	325	181	83	831	333	1518	658
09:00		133	57			157	83				
09:15		99	56			110	53				
09:30		122	57			129	110				
09:45		121	60	475	230	100	54	496	300	971	530
10:00		119	56			111	66				
10:15		104	51			100	55				
10:30		121	51			98	53				
10:45		105	36	449	194	84	44	393	218	842	412
11:00		134	42			91	39				
11:15		136	55			117	24				
11:30		154	32			117	29				
11:45		135	28	559	157	117	32	442	124	1001	281
<b>Total</b>		<b>3932</b>	<b>7783</b>	<b>3932</b>	<b>7783</b>	<b>4339</b>	<b>5799</b>	<b>4339</b>	<b>5799</b>	<b>8271</b>	<b>13582</b>
<b>Combined Total</b>		<b>11715</b>		<b>11715</b>		<b>10138</b>		<b>10138</b>		<b>21853</b>	
AM Peak	-	07:15	-	-	-	07:00	-	-	-	-	-
Vol.	-	839	-	-	-	931	-	-	-	-	-
P.H.F.	-	0.958	-	-	-	0.817	-	-	-	-	-
PM Peak	-	-	05:15	-	-	-	02:45	-	-	-	-
Vol.	-	-	1215	-	-	-	759	-	-	-	-
P.H.F.	-	-	0.891	-	-	-	0.912	-	-	-	-
Percentage		33.6%	66.4%			42.8%	57.2%				
ADT/AADT		ADT 21,853		AADT 21,853							

# Counts Unlimited, Inc.

City of Pico Rivera  
 Telegraph Road  
 E/ Rosemead Boulevard  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: (951) 268-6268  
 email: counts@countsunlimited.com

PRV008  
 Site Code: 122-21549

Start Time	06-Oct-21 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		27	180			27	191				
12:15		34	160			22	201				
12:30		38	184			30	198				
12:45		16	159	115	683	23	222	102	812	217	1495
01:00		27	203			18	244				
01:15		17	204			23	264				
01:30		15	170			17	214				
01:45		9	226	68	803	12	226	70	948	138	1751
02:00		12	250			19	221				
02:15		17	236			16	206				
02:30		11	290			19	234				
02:45		18	272	58	1048	20	<b>296</b>	74	957	132	2005
03:00		11	276			17	<b>316</b>				
03:15		16	267			18	<b>246</b>				
03:30		25	261			22	<b>250</b>				
03:45		23	251	75	1055	29	256	86	1068	161	2123
04:00		21	295			28	275				
04:15		38	263			30	245				
04:30		32	321			54	227				
04:45		46	269	137	1148	64	278	176	1025	313	2173
05:00		36	250			68	270				
05:15		62	<b>310</b>			93	258				
05:30		53	<b>331</b>			130	297				
05:45		74	<b>295</b>	225	1186	185	224	476	1049	701	2235
06:00		76	<b>318</b>			163	244				
06:15		89	284			166	219				
06:30		106	243			237	174				
06:45		143	225	414	1070	<b>295</b>	153	861	790	1275	1860
07:00		117	231			<b>278</b>	178				
07:15		196	180			<b>455</b>	144				
07:30		<b>201</b>	160			<b>338</b>	177				
07:45		<b>271</b>	144	785	715	290	135	1361	634	2146	1349
08:00		<b>256</b>	140			280	127				
08:15		<b>225</b>	124			308	117				
08:30		164	112			320	125				
08:45		169	103	814	479	263	101	1171	470	1985	949
09:00		131	109			178	79				
09:15		124	88			206	80				
09:30		118	93			178	113				
09:45		121	79	494	369	184	83	746	355	1240	724
10:00		128	73			154	92				
10:15		124	70			181	72				
10:30		135	72			184	62				
10:45		126	66	513	281	142	55	661	281	1174	562
11:00		147	65			131	37				
11:15		157	63			183	38				
11:30		156	51			179	41				
11:45		155	44	615	223	173	29	666	145	1281	368
<b>Total</b>		4313	9060	4313	9060	6450	8534	6450	8534	10763	17594
<b>Combined Total</b>		13373		13373		14984		14984		28357	
AM Peak	-	07:30	-	-	-	06:45	-	-	-	-	-
Vol.	-	953	-	-	-	1366	-	-	-	-	-
P.H.F.	-	0.879	-	-	-	0.751	-	-	-	-	-
PM Peak	-	-	05:15	-	-	-	02:45	-	-	-	-
Vol.	-	-	1254	-	-	-	1108	-	-	-	-
P.H.F.	-	-	0.947	-	-	-	0.877	-	-	-	-
Percentage		32.3%	67.7%			43.0%	57.0%				
ADT/AADT		ADT 28,357		AADT 28,357							





# Counts Unlimited, Inc.

City of Pico Rivera  
 Washington Boulevard  
 B/ Paramount Boulevard - Rosemead Boulevard  
 24 Hour Directional Volume Count

PO Box 1178  
 Corona, CA 92878  
 Phone: (951) 268-6268  
 email: counts@countsunlimited.com

PRV001  
 Site Code: 122-21549

Start Time	06-Oct-21 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		51	249			44	234				
12:15		49	252			30	311				
12:30		36	279			31	257				
12:45		25	265	161	1045	18	295	123	1097	284	2142
01:00		27	301			26	239				
01:15		26	275			30	287				
01:30		30	324			28	229				
01:45		23	284	106	1184	28	251	112	1006	218	2190
02:00		24	320			27	245				
02:15		21	337			36	255				
02:30		28	302			33	260				
02:45		26	340	99	1299	34	264	130	1024	229	2323
03:00		27	309			28	257				
03:15		25	368			36	<b>277</b>				
03:30		29	353			53	<b>319</b>				
03:45		46	409	127	1439	57	<b>276</b>	174	1129	301	2568
04:00		51	401			48	<b>276</b>				
04:15		39	411			63	260				
04:30		64	396			93	273				
04:45		67	392	221	1600	119	285	323	1094	544	2694
05:00		64	<b>434</b>			115	268				
05:15		81	<b>392</b>			134	283				
05:30		76	<b>403</b>			181	282				
05:45		106	<b>407</b>	327	1636	226	234	656	1067	983	2703
06:00		85	371			209	256				
06:15		128	361			230	193				
06:30		117	308			248	239				
06:45		181	298	511	1338	344	185	1031	873	1542	2211
07:00		150	272			327	224				
07:15		205	262			<b>321</b>	217				
07:30		261	225			<b>386</b>	187				
07:45		232	173	848	932	<b>317</b>	166	1351	794	2199	1726
08:00		215	200			<b>385</b>	144				
08:15		198	165			303	175				
08:30		187	182			285	113				
08:45		200	152	800	699	259	121	1232	553	2032	1252
09:00		178	152			240	112				
09:15		166	121			256	91				
09:30		208	117			220	86				
09:45		174	125	726	515	244	115	960	404	1686	919
10:00		200	131			226	91				
10:15		193	117			231	76				
10:30		220	133			221	62				
10:45		198	80	811	461	257	66	935	295	1746	756
11:00		<b>222</b>	102			210	53				
11:15		<b>222</b>	62			241	53				
11:30		<b>234</b>	66			233	33				
11:45		<b>275</b>	49	953	279	215	34	899	173	1852	452
<b>Total</b>		5690	12427	5690	12427	7926	9509	7926	9509	13616	21936
<b>Combined Total</b>		18117		18117		17435		17435		35552	
AM Peak	-	11:00	-	-	-	07:15	-	-	-	-	-
Vol.	-	953	-	-	-	1409	-	-	-	-	-
P.H.F.	-	0.866	-	-	-	0.913	-	-	-	-	-
PM Peak	-	-	05:00	-	-	-	03:15	-	-	-	-
Vol.	-	-	1636	-	-	-	1148	-	-	-	-
P.H.F.	-	-	0.942	-	-	-	0.900	-	-	-	-
Percentage		31.4%	68.6%			45.5%	54.5%				
ADT/AADT		ADT 35,552		AADT 35,552							



Location: 8.32\_RTE 5 SB & Lakewood BLVD

Designed By: Sohel Ahmed

System:

District: 7

Installed By: Sohel Ahmed

Master At: RTE 5 NB & Lakewood BLVD

I/C:

Service Info: TSCP 3.10 Build 006

Timing Change:

Date Start:

Date End:

Designed:

Installed:

## Intersection Layout

	FLASH
1)	[ ]
P 2) NB Lakewood BLVD	[ ]
H 3)	[ ]
A 4) SB RTE 5 off Ramp	[ ]
S 5)	[ ]
E 6) SB Lakewood BLVD	[ ]
7)	[ ]
8)	[ ]
O A)	[ ]
V B)	[ ]
E C)	[ ]
R D)	[ ]
L E)	[ ]
A F)	[ ]
P	[ ]

**Comments and Notes:**

04/14/2021: Updated software TSCP 3.10 Build 006

**RAM Checksum**

Page 2: B827	Page 8: DE74
Page 3: 4633	Page 9: E841
Page 4: A828	Page 10: 354A
Page 5: 191A	Page 11: C838
Page 6: 191A	Page 12: 1FB3
Page 7: 12D9	Page 13: 86F7

### CONFIGURATION PHASE FLAGS

Cabinet ( 9-3 )	
332	
Configuration	
CALTRANS	

Phases ( 2-1-1-1 )	
Permitted	. 2 . 4 . 6 . .
Restricted	. . . . . . .

Phase Features ( 2-1-1-4 )	
Double Entry	. . . . . . .
Rest In Walk	. . . . . . .
Rest In Red	. . . . . . .
Walk 2	. . . . . . .
Max Green 2	. . . . . . .
Max Green 3	. . . . . . .

Startup ( 2-1-1-5 )	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . . . . .
Vehicle Calls	. 2 . 4 . 6 . .
Pedestrian Calls	. 2 . 4 . 6 . .
Yellow Start Overlaps	. . . . . . .
Startup All-Red	6.0

Phase Recalls ( 2-1-1-2 )	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . . . .
Pedestrian	. 2 . . . . .
Bicycle	. . . . . . .

Phase Locks ( 2-1-1-3 )	
Red	. 2 . 4 . 6 . .
Yellow	. 2 . 4 . 6 . .
Force/Max	. . . . . . .

Call To Phase ( 2-1-2-1 )		Omit On Green	
1	. . . . . . .	1	. . . . . . .
2	. . . . . . .	2	. . . . . . .
3	. . . . . . .	3	. . . . . . .
4	. . . . . . .	4	. . . . . . .
5	. . . . . . .	5	. . . . . . .
6	. . . . . . .	6	. . . . . . .
7	. . . . . . .	7	. . . . . . .
8	. . . . . . .	8	. . . . . . .

Flashing Colors ( 2-1-2-2 )	
Yellow Flash Phases	. . . . . . .
Yellow Flash Overlaps	. . . . . . .
Flash In Red Phases	. . . . . . .
Flash In Red Overlaps	. . . . . . .

Special Operation ( 2-1-2-3 )	
Single Exit Phase	. . . . . . .
Driveway Signal Phases	. . . . . . .
Driveway Signal Overlaps	. . . . . . .
Leading Ped Phases	. . . . . . .

Protected Permissive ( 2-1-2-4 )	
Protected Permissive	. . . . . . .

Pedestrian ( 2-1-3 )	
P1	. . . . . . .
P2	. 2 . . . . .
P3	. . . . . . .
P4	. . . 4 . . . .
P5	. . . . . . .
P6	. . . . . 6 . .
P7	. . . . . . .
P8	. . . . . . .

Overlap ( 2-1-4 )				
Overlap	Parent	Omit	No Start	Not
A	. . . . . . .	. . . . . . .	. . . . . . .	. . . . . . .
B	. . . . . . .	. . . . . . .	. . . . . . .	. . . . . . .
C	. . . . . . .	. . . . . . .	. . . . . . .	. . . . . . .
D	. . . . . . .	. . . . . . .	. . . . . . .	. . . . . . .
E	. . . . . . .	. . . . . . .	. . . . . . .	. . . . . . .
F	. . . . . . .	. . . . . . .	. . . . . . .	. . . . . . .

**PHASE TIMING**

Phase ( 2-2 )	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	10	0	7	0	10	0	0
Flash Don't Walk	0	10	0	30	0	12	0	0
Minimum Green	0	10	0	10	0	10	0	0
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	20	0	0	0	20	0	0
Max Green 1	0	30	0	35	0	30	0	0
Max Green 2	0	30	0	35	0	30	0	0
Max Green 3	0	30	0	35	0	30	0	0
Extension	0.0	5.0	0.0	2.0	0.0	5.0	0.0	0.0
Maximum Gap	0.0	6.0	0.0	2.0	0.0	6.0	0.0	0.0
Minimum Gap	0.0	2.0	0.0	2.0	0.0	2.0	0.0	0.0
Add Per Vehicle	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0
Reduce Gap By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
Yellow	5.0	4.4	5.0	4.1	5.0	4.4	5.0	5.0
All-Red	0.0	1.0	0.0	1.0	0.0	1.0	0.0	0.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**OVERLAP TIMING**

Overlap ( 2-4 )	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

**Red Revert**

Red Revert ( 2-5 )	
Time	5.0
All-Red Sec/Min ( 2-6 )	
All-Red Sec/Min:	OFF

**Max 2 Extension**

Max/Gap Out ( 2-7 )	
Max Cnt	0
Gap Cnt	0



**Local Plan 1...9 (7-1) TIMING DATA**

**COORDINATION**

		[ Offsets ]			Green Factors or Press [F] to Select Force-Off											
		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-	
Plan 1	Green Factor	95		.....	64				46		37		46			
Plan 2	Green Factor	105		.....	94				56		37		56			
Plan 3	Green Factor	105		.....	58				56		37		56			
Plan 4	Green Factor			.....												
Plan 5	Green Factor			.....												
Plan 6	Green Factor			.....												
Plan 7	Green Factor			.....												
Plan 8	Green Factor			.....												
Plan 9	Green Factor			.....												

Master Timer Sync ( 7-A )	
Enable in Plans	
1-9	.....
11-19	.....
21-29	.....
Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS	
( 7-E ) Free	
Lag	Omit
. 2 . 4 . 6 . 8	.....
Veh Min	Veh Max
. 2 ... 6 ..	.....
Ped	Bike
.....	.....
Cond	Cond Grn
.....	10

**Local Plan 1...9 (7-1) PHASE FLAGS**

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	. 2 . 4 . 6 . 8	. 2 ... 6 ..	.....	.....	.....	.....	. 2 ... 6 ..	.....
Plan 2	. 2 . 4 . 6 . 8	. 2 ... 6 ..	.....	.....	.....	.....	. 2 ... 6 ..	.....
Plan 3	. 2 . 4 . 6 . 8	. 2 ... 6 ..	.....	.....	.....	.....	. 2 ... 6 ..	.....
Plan 4	.....	.....	.....	.....	.....	.....	.....	.....
Plan 5	.....	.....	.....	.....	.....	.....	.....	.....
Plan 6	.....	.....	.....	.....	.....	.....	.....	.....
Plan 7	.....	.....	.....	.....	.....	.....	.....	.....
Plan 8	.....	.....	.....	.....	.....	.....	.....	.....
Plan 9	.....	.....	.....	.....	.....	.....	.....	.....

MANUAL COMMANDS			
Manual Plan (4-1)			
Plan	OffSet		
	A		
Plan: 1-29 254 = Flash 255 = Free Offset A, B, or C			
Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL
Detector Reset		(4-3)	
Local Manual (4-4)		OFF	

**Local Plan 11...19 (7-2) TIMING DATA**

**COORDINATION**

[ Offsets ]

Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

**Local Plan 11...19 (7-2) PHASE FLAGS**

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

**Local Plan 21...29 (7-3) TIMING DATA**

**COORDINATION**

[ Offsets ]

Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

**Local Plan 21...29 (7-3) PHASE FLAGS**

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

### DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	COUNT+CALL+EXTEND	1.....	NO	I1U	1			10	3.2
2	COUNT+CALL+EXTEND	1.....	NO	I1L	2			10	7.2
3	COUNT+CALL+EXTEND	.2.....	NO	I2U	3			10	1.1
4	COUNT+CALL+EXTEND	.2.....	NO	I2L	4			10	1.5
5	COUNT+CALL+EXTEND	.2.....	NO	I3U	5			10	4.5
6	CALL+EXTEND	.2.....	NO	I3L	6			10	6.2
7	LIMITED	.2.....	NO	I4U	7			10	2.1
8	COUNT+CALL+EXTEND	.2.....	NO	I4L	8			10	7.4
9	COUNT+CALL+EXTEND	..3.....	NO	I5U	9			10	3.4
10	COUNT+CALL+EXTEND	..3.....	NO	I5L	10			10	7.6
11	COUNT+CALL+EXTEND	...4....	NO	I6U	11			10	1.3
12	COUNT+CALL+EXTEND	...4....	NO	I6L	12			10	1.7
13	COUNT+CALL+EXTEND	...4....	NO	I7U	13			10	4.7
14	CALL+EXTEND	...4....	NO	I7L	14			10	6.4
15	LIMITED	...4....	NO	I8U	15			10	2.3
16	COUNT+CALL+EXTEND	...4....	NO	I8L	16			10	7.8
17	COUNT+CALL+EXTEND	1.....	NO	I9U	17			10	3.6
18	COUNT+CALL+EXTEND	..3.....	NO	I9L	18			10	3.8
19	COUNT+CALL+EXTEND	.2.....	NO	I10U	19			10	4.1
20	COUNT+CALL+EXTEND	...4....	NO	I10L	20			10	4.2
21	COUNT+CALL+EXTEND	...5...	NO	J1U	21			10	3.1
22	COUNT+CALL+EXTEND	...5...	NO	J1L	22			10	7.1
23	COUNT+CALL+EXTEND	....6..	NO	J2U	23			10	1.2
24	COUNT+CALL+EXTEND	....6..	NO	J2L	24			10	1.6
25	COUNT+CALL+EXTEND	....6..	NO	J3U	25			10	4.6
26	CALL+EXTEND	....6..	NO	J3L	26			10	6.3
27	LIMITED	....6..	NO	J4U	27			10	2.2
28	COUNT+CALL+EXTEND	....6..	NO	J4L	28			10	7.3
29	COUNT+CALL+EXTEND	.....7.	NO	J5U	29			10	3.3
30	COUNT+CALL+EXTEND	.....7.	NO	J5L	30			10	7.5
31	COUNT+CALL+EXTEND	.....8	NO	J6U	31			10	1.4
32	COUNT+CALL+EXTEND	.....8	NO	J6L	32			10	1.8
33	COUNT+CALL+EXTEND	.....8	NO	J7U	33			10	4.8
34	CALL+EXTEND	.....8	NO	J7L	34			10	6.5
35	LIMITED	.....8	NO	J8U	35			10	2.4
36	COUNT+CALL+EXTEND	.....8	NO	J8L	36			10	7.7
37	COUNT+CALL+EXTEND	...5...	NO	J9U	37			10	3.5
38	COUNT+CALL+EXTEND	.....7.	NO	J9L	38			10	3.7
39	COUNT+CALL+EXTEND	....6..	NO	J10U	39			10	4.3
40	COUNT+CALL+EXTEND	.....8	NO	J10L	40			10	4.4
41	PEDESTRIAN	.2.....	NO	I12U	41			10	5.1
42	PEDESTRIAN	...4....	NO	I12L	42			10	5.3
43	PEDESTRIAN	....6..	NO	I13U	43			10	5.2
44	PEDESTRIAN	.....8	NO	I13L	44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	.....
Detectors 9-16	.....
Detectors 17-24	.....
Detectors 25-32	.....
Detectors 33-40	.....
Detectors 41-44	.....

#### System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

#### CIC Operation (5-6-1)

Enable in Plans	.....
-----------------	-------

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

#### Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

### Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

### TOD SCHEDULE

Table 1 (8-2-1)			Table 2 (8-2-2)			Table 3 (8-2-3)			Table 4 (8-2-4)			Table 5 (8-2-5)			Table 6 (8-2-6)		
Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS
0600	2	A	0920	2	A			A			A			A			A
0920	1	A	2100	255	A			A			A			A			A
1500	3	A			A			A			A			A			A
1900	1	A			A			A			A			A			A
2100	255	A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A

### WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2

**HOLIDAY TABLES**

Floating Holiday Table (8-2-8)				
#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)				
#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Daylight Saving (8-1)			
Enabled	YES	Month	Sunday
		Start	MAR 2nd
		End	NOV 1st

Solar Clock Data (8-4)	
North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)	
Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

**TOD FUNCTIONS**

TOD Functions (8-3)					
#	Start	End	DOW	Action	Phases
1			.....		.....
2			.....		.....
3			.....		.....
4			.....		.....
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

- Action Codes:**
- 0. None
  - 1. Permitted
  - 2. Restricted
  - 4. Veh Min Recall
  - 5. Veh Max Recall
  - 6. Ped Recall
  - 7. Bike Recall
  - 8. Red Lock
  - 9. Yellow Lock
  - 10. Force/Max Lock
  - 11. Double Entry
  - 12. Y-Coord C
  - 13. Y-Coord D
  - 14. Free
  - 15. Flashing
  - 16. Walk 2
  - 17. Max Green 2
  - 18. Max Green 3
  - 19. Rest in Walk
  - 20. Rest in Red
  - 21. Free Lag Phases
  - 22. Special Functions
  - 23. Truck Preempt
  - 24. Conditional Service
  - 25. Conditional Service
  - 26. Leading Ped
  - 27. Traffic Actuated Max 2
  - 41. Protected Permissive
  - 42. Protected Permissive

Action Code = Phases added to normal setting  
 100+Action Code = Phases removed  
 200+Action Code = Phases replaced



### COMMUNICATIONS

	C2 (6-1-1)	C20 (6-1-2)	C21 (6-1-3)
Address	1		
Baud	9600	1200	1200
Protocol	AB3418	AB3418	AB3418
Data Bits	8	8	8
Parity	NONE	NONE	NONE
Stop Bits	1	1	1
RTS On Time	20	20	20
RTS Off Time	20	20	20
Handshaking	NORMAL	NORMAL	NORMAL
Access Level	0	0	0

### SOFT LOGIC

Soft Logic ( 6-2 )							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

\*Refer to User's Manual for Data and OP Codes

### CALLBACK NUMBERS

Callback Numbers (6-3...3)			
Line Out			
Long Distance			
Local Toll			
Delay	10	10	10
Area Code			
Phone Number			

### NETWORK

Network Parameters (6-4)	
Address	
Protocol	AB3418
Port	27000
Type	STATIC
Central Access	
Field Access	
ATSPM	OFF

IP Address	0	.	0	.	0	.	0
Netmask	255	.	255	.	255	.	0
Broadcast	0	.	0	.	0	.	255
Gateway	0	.	0	.	0	.	254

SPAT Network (6-5)		
SPAT	1	2
Protocol	NONE	NONE
UDP Port	0	0

IP Address 0 . 0 . 0 . 0

### Access Levels:

- 0-Full Access
- 1-Status Only
- 2-Status, Set Pattern, Time
- 3-Status, Set Pattern, Time, Manual Plan
- 4-Reserved
- 5-Full Access with No Set Pattern
- 6-Full Access with No Set Time
- 7-Full Access with No Set Pattern, Manual Plan
- 8-Full Access with No Set Time, Pattern, Manual Plan

### RAILROAD PREEMPTION

<b>RR 1</b>	<b>Timing (3-1-1)</b>		<b>Phase Flags (3-1-2)</b>			<b>Pedestrian Flags (3-1-3)</b>			<b>Overlap Flags (3-1-4)</b>						
	Clear 1	15	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash				
	Clear 2	5	. 2 . . 5 . . .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....				
	Clear 3		. 2 . . 5 . . .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....				
	Hold		.....	.....	.....	.....	.....	.....	.....	.....	.....				
	Min Gr		1 . . 4 . . 7 8	.....	.....	.....	... 4 ... 8	. 2 . . . 6 . .	.....	.....	.....				
	Delay		<b>Exit Parameters (3-1-5)</b>				<b>Configuration (3-1-6)</b>								
	Exit		Phase Green	Ovrlap Green	Veh Permit/Call	Ped Permit/Call	PR	XR	Gate	Isld	APP	Sign	Sign	Max On	Latching
	Ped Clr		. 2 . . . 6 . .	.....	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8	1							5	NO
							2			Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8 Valid Outputs: 11.x, 12.x, 13.x, 14.x, 15.x, 16.x, 17.x, 18.x x=1 to 8					

<b>RR 2</b>	<b>Timing (3-2-1)</b>		<b>Phase Flags (3-2-2)</b>			<b>Pedestrian Flags (3-2-3)</b>			<b>Overlap Flags (3-2-4)</b>						
	Clear 1	15	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash				
	Clear 2	5	. . . 4 . . 7 .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....				
	Clear 3		. . . 4 . . 7 .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....				
	Hold		.....	.....	.....	.....	.....	.....	.....	.....	.....				
	Min Gr		1 2 3 . . 6 . .	.....	.....	.....	. 2 . . . 6 . .	. . . 4 . . . 8	.....	.....	.....				
	Delay		<b>Exit Parameters (3-2-5)</b>				<b>Configuration (3-2-6)</b>								
	Exit		Phase Green	Ovrlap Green	Veh Permit/Call	Ped Permit/Call	PR	XR	Gate	Isld	APP	Sign	Sign	Max On	Latching
	Ped Clr		. 2 . . . 6 . .	.....	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8	1							5	NO
							2			Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8 Valid Outputs: 11.x, 12.x, 13.x, 14.x, 15.x, 16.x, 17.x, 18.x x=1 to 8					

### EMERGENCY VEHICLE PREEMPTION

<b>EVA (3-A)</b>	<b>Preempt Timers</b>			<b>Phase Green</b>	<b>Overlap Green</b>
	Delay	Clear	Max		
		30	30	. 2 . . 5 . . .	.....
<b>Port</b>		<b>Latching</b>	<b>Phase Termination</b>		
		NO	ADVANCE		

<b>EVB (3-B)</b>	<b>Preempt Timers</b>			<b>Phase Green</b>	<b>Overlap Green</b>
	Delay	Clear	Max		
		30	30	. . . 4 . . 7 .	.....
<b>Port</b>		<b>Latching</b>	<b>Phase Termination</b>		
		NO	ADVANCE		

<b>EVC (3-C)</b>	<b>Preempt Timers</b>			<b>Phase Green</b>	<b>Overlap Green</b>
	Delay	Clear	Max		
		30	30	1 . . . . 6 . .	.....
<b>Port</b>		<b>Latching</b>	<b>Phase Termination</b>		
		NO	ADVANCE		

<b>EVD (3-D)</b>	<b>Preempt Timers</b>			<b>Phase Green</b>	<b>Overlap Green</b>
	Delay	Clear	Max		
		30	30	. . 3 . . . . 8	.....
<b>Port</b>		<b>Latching</b>	<b>Phase Termination</b>		
		NO	ADVANCE		

### INPUTS

		7 Wire I/C ( 2-1-5-1 )			
Enable	NO	Input	Port	Input	Port
Max ON		RR1		Free	
Max OFF		RR2		D2	
		RR3		D3	

Manual Control ( 2-1-5-2 )	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status ( 2-1-5-3 )	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function ( 2-1-5-4 )	
Input	Port
1	
2	
3	
4	

Battery Backup ( 2-1-5-5 )	
Port	Operation
	NORMAL

Y-Coordination ( 2-1-5-6 )	
Port C	Port D

### OUTPUTS

Loadswitch Assignments ( 2-1-6 )							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

- 0 Unused (no output)
- 1-8 Vehicle 1-8
- 9-14 Overlap A-F
- 21-28 Ped 1-8
- 41-47 Special Functions
- 41 Protected Permissive Flashing Phase 1
- 43 Protected Permissive Flashing Phase 3
- 45 Protected Permissive Flashing Phase 5
- 47 Protected Permissive Flashing Phase 7
- 51-57 Special Functions
- 71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6  
Channel 9 and 10

### INTERVAL CONTROL

Interval Control (3-3-1)	
Step	Time
Step 1	
Step 2	
Step 3	
Step 4	
Step 5	
Step 6	
Step 7	
Step 8	

Phase Control (3-3-2)		
Hold	Force	Advance
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Phase Recall (3-3-3)		
Veh Call	Ped Call	Int Call
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Phase Permitted (3-3-4)		
Phs Permit	Ped Permit	Ovrlap Permit
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Configuration (3-3-5)			
Input	Port	Delay	HRI Cross
1			
2			

### HRI

HRI Configuration (3-4)			
RailRoad	51	WAYSIDE	ATC
Line		Subnode	
Group		Device	

**TRANSIT PRIORITY**

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Enable in Local Plans (3-E-3)	
Plan 1-9	.....
Plan 11-19	.....

Queue Jump (3-E-4)	
Grn Hold	Hold Phase
	.....
	.....

Input	
Type	Port
NONE	0.0
NONE	0.0

Output	
Stop	Go
0	0
0	0

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	.....

Access Utilities (9-5)	
Password	Timeout
***	30

**YELLOW YIELD COORDINATION**

Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	Force-Offs								Coord	Lag	Min Recall	Restricted
					-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-				
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....

**TRUCK PRIORITY**

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					.....	0.0	0.0	0.0	0	0.0	0

Location: PM: 8:96\_RTE 5 NB & Paramount Blvd

Designed By: Sohel Ahmed

System:

District: 07

Installed By: Sohel Ahmed

Master At: N/A

I/C:

Service Info: TSCP 3.1 Build 006

Timing Change:

Date Start:

Date End:

Designed:

Installed:

4/14/2021

4/14/2021

4/14/2021

## Intersection Layout

**FLASH**

1) SBLT Paramount BLVD	[ ]
P 2) NB Paramount BLVD	[ ]
H 3)	[ ]
A 4)	[ ]
S 5)	[ ]
E 6) SB Paramount BLVD	[ ]
7)	[ ]
8) NB 5 Off Ramp	[ ]
O A)	[ ]
V B)	[ ]
E C)	[ ]
R D)	[ ]
L E)	[ ]
A F)	[ ]
P	[ ]

**Comments and Notes:**

04/14/2021: Upgrade software to TSCP 3.1 Build 006

**RAM Checksum**

Page 2: 6163	Page 8: 85AF
Page 3: E899	Page 9: E841
Page 4: F29E	Page 10: A30C
Page 5: 191A	Page 11: C838
Page 6: 191A	Page 12: 1BB3
Page 7: 41A4	Page 13: 86F7

### CONFIGURATION PHASE FLAGS

<b>Cabinet ( 9-3 )</b>
332
<b>Configuration</b>
CALTRANS

<b>Phases ( 2-1-1-1 )</b>	
Permitted	1 2 . . . 6 . 8
Restricted	. . . . .

<b>Phase Features ( 2-1-1-4 )</b>	
Double Entry	. . . . .
Rest In Walk	. . . . .
Rest In Red	. . . . .
Walk 2	. . . . .
Max Green 2	. . . . .
Max Green 3	. . . . .

<b>Startup ( 2-1-1-5 )</b>	
First Green Phases	. 2 . . . 6 . .
Yellow Start Phases	. . . . .
Vehicle Calls	1 2 . . . 6 . 8
Pedestrian Calls	. . . . .
Yellow Start Overlaps	. . . . .
Startup All-Red	6.0

<b>Phase Recalls ( 2-1-1-2 )</b>	
Vehicle Min	. 2 . . . 6 . .
Vehicle Max	. . . . .
Pedestrian	. . . . .
Bicycle	. . . . .

<b>Phase Locks ( 2-1-1-3 )</b>	
Red	. 2 . . . 6 . .
Yellow	. 2 . . . 6 . .
Force/Max	. . . . .

<b>Call To Phase ( 2-1-2-1 )</b>		<b>Omit On Green</b>	
1	. . . . .	1	. . . . .
2	. . . . .	2	. . . . .
3	. . . . .	3	. . . . .
4	. . . . .	4	. . . . .
5	. . . . .	5	. . . . .
6	. . . . .	6	. . . . .
7	. . . . .	7	. . . . .
8	. . . . .	8	. . . . .

<b>Flashing Colors ( 2-1-2-2 )</b>	
Yellow Flash Phases	. . . . .
Yellow Flash Overlaps	. . . . .
Flash In Red Phases	. . . . .
Flash In Red Overlaps	. . . . .

<b>Special Operation ( 2-1-2-3 )</b>	
Single Exit Phase	. . . . .
Driveway Signal Phases	. . . . .
Driveway Signal Overlaps	. . . . .
Leading Ped Phases	. . . . .

<b>Protected Permissive ( 2-1-2-4 )</b>	
Protected Permissive	. . . . .

<b>Pedestrian ( 2-1-3 )</b>	
P1	. . . . .
P2	. 2 . . . . .
P3	. . . . .
P4	. . . 4 . . . .
P5	. . . . .
P6	. . . . . 6 . .
P7	. . . . .
P8	. . . . . 8

<b>Overlap ( 2-1-4 )</b>				
Overlap	Parent	Omit	No Start	Not
A	. . . . .	. . . . .	. . . . .	. . . . .
B	. . . . .	. . . . .	. . . . .	. . . . .
C	. . . . .	. . . . .	. . . . .	. . . . .
D	. . . . .	. . . . .	. . . . .	. . . . .
E	. . . . .	. . . . .	. . . . .	. . . . .
F	. . . . .	. . . . .	. . . . .	. . . . .



**PHASE TIMING**

Phase ( 2-2 )	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	0	0	0	0	0	0	0
Flash Don't Walk	0	0	0	0	0	0	0	0
Minimum Green	10	10	0	0	0	10	0	10
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	20	0	0	0	20	0	0
Max Green 1	15	40	0	0	0	40	0	20
Max Green 2	15	30	0	0	0	30	0	20
Max Green 3	15	30	0	0	0	30	0	20
Extension	2.5	4.0	0.0	0.0	0.0	4.0	0.0	3.0
Maximum Gap	2.5	5.0	0.0	0.0	0.0	5.0	0.0	3.0
Minimum Gap	2.5	2.5	0.0	0.0	0.0	2.5	0.0	3.0
Add Per Vehicle	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0
Reduce Gap By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
Yellow	3.7	4.4	5.0	5.0	5.0	4.4	5.0	4.1
All-Red	1.0	1.0	0.0	0.0	0.0	1.0	0.0	1.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**OVERLAP TIMING**

Overlap ( 2-4 )	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

**Red Revert**

Red Revert ( 2-5 )	
Time	5.0
All-Red Sec/Min ( 2-6 )	
All-Red Sec/Min:	OFF

**Max 2 Extension**

Max/Gap Out ( 2-7 )	
Max Cnt	0
Gap Cnt	0

**Local Plan 1...9 (7-1) TIMING DATA**

**COORDINATION**

[ Offsets ] Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor			.....											
Plan 2	Green Factor			.....											
Plan 3	Green Factor			.....											
Plan 4	Green Factor			.....											
Plan 5	Green Factor			.....											
Plan 6	Green Factor			.....											
Plan 7	Green Factor			.....											
Plan 8	Green Factor			.....											
Plan 9	Green Factor			.....											

<b>Master Timer Sync ( 7-A )</b>	
<b>Enable in Plans</b>	
1-9	.....
11-19	.....
21-29	.....

<b>Master Sub Master</b>	
Input	
Output	

**FREE PLAN PHASE FLAGS**

<b>( 7-E ) Free</b>	
<b>Lag</b>	<b>Omit</b>
. 2 . 4 . 6 . 8	.....
<b>Veh Min</b>	<b>Veh Max</b>
. 2 ... 6 ..	.....
<b>Ped</b>	<b>Bike</b>
.....	.....
<b>Cond</b>	<b>Cond Grn</b>
.....	10

**Local Plan 1...9 (7-1) PHASE FLAGS**

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	.....	.....	.....	.....	.....	.....	.....	.....
Plan 2	.....	.....	.....	.....	.....	.....	.....	.....
Plan 3	.....	.....	.....	.....	.....	.....	.....	.....
Plan 4	.....	.....	.....	.....	.....	.....	.....	.....
Plan 5	.....	.....	.....	.....	.....	.....	.....	.....
Plan 6	.....	.....	.....	.....	.....	.....	.....	.....
Plan 7	.....	.....	.....	.....	.....	.....	.....	.....
Plan 8	.....	.....	.....	.....	.....	.....	.....	.....
Plan 9	.....	.....	.....	.....	.....	.....	.....	.....

**MANUAL COMMANDS**

<b>Manual Plan (4-1)</b>		Plan: 1-29
<b>Plan</b>	<b>OffSet</b>	254 = Flash
	A	255 = Free
		Offset A, B, or C

**Special Function Override (4-2)**

#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

<b>Detector Reset</b>	(4-3)
<b>Local Manual (4-4)</b>	OFF

**Local Plan 11...19 (7-2) TIMING DATA**

**COORDINATION**

[ Offsets ]

Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

**Local Plan 11...19 (7-2) PHASE FLAGS**

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

**Local Plan 21...29 (7-3) TIMING DATA**

**COORDINATION**

[ Offsets ]

Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

**Local Plan 21...29 (7-3) PHASE FLAGS**

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

### DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	COUNT+CALL+EXTEND	1.....	NO	I1U	1			10	3.2
2	COUNT+CALL+EXTEND	1.....	NO	I1L	2			10	7.2
3	COUNT+CALL+EXTEND	.2.....	NO	I2U	3			10	1.1
4	COUNT+CALL+EXTEND	.2.....	NO	I2L	4			10	1.5
5	COUNT+CALL+EXTEND	.2.....	NO	I3U	5			10	4.5
6	CALL+EXTEND	.2.....	NO	I3L	6			10	6.2
7	LIMITED	.2.....	NO	I4U	7			10	2.1
8	COUNT+CALL+EXTEND	.2.....	NO	I4L	8			10	7.4
9	COUNT+CALL+EXTEND	..3.....	NO	I5U	9			10	3.4
10	COUNT+CALL+EXTEND	..3.....	NO	I5L	10			10	7.6
11	COUNT+CALL+EXTEND	...4....	NO	I6U	11			10	1.3
12	COUNT+CALL+EXTEND	...4....	NO	I6L	12			10	1.7
13	COUNT+CALL+EXTEND	...4....	NO	I7U	13			10	4.7
14	CALL+EXTEND	...4....	NO	I7L	14			10	6.4
15	LIMITED	...4....	NO	I8U	15			10	2.3
16	COUNT+CALL+EXTEND	...4....	NO	I8L	16			10	7.8
17	COUNT+CALL+EXTEND	1.....	NO	I9U	17			10	3.6
18	COUNT+CALL+EXTEND	..3.....	NO	I9L	18			10	3.8
19	COUNT+CALL+EXTEND	.2.....	NO	I10U	19			10	4.1
20	COUNT+CALL+EXTEND	...4....	NO	I10L	20			10	4.2
21	COUNT+CALL+EXTEND	...5...	NO	J1U	21			10	3.1
22	COUNT+CALL+EXTEND	...5...	NO	J1L	22			10	7.1
23	COUNT+CALL+EXTEND	....6..	NO	J2U	23			10	1.2
24	COUNT+CALL+EXTEND	....6..	NO	J2L	24			10	1.6
25	COUNT+CALL+EXTEND	....6..	NO	J3U	25			10	4.6
26	CALL+EXTEND	....6..	NO	J3L	26			10	6.3
27	LIMITED	....6..	NO	J4U	27			10	2.2
28	COUNT+CALL+EXTEND	....6..	NO	J4L	28			10	7.3
29	COUNT+CALL+EXTEND	.....7.	NO	J5U	29			10	3.3
30	COUNT+CALL+EXTEND	.....7.	NO	J5L	30			10	7.5
31	COUNT+CALL+EXTEND	.....8	NO	J6U	31			10	1.4
32	COUNT+CALL+EXTEND	.....8	NO	J6L	32	5		10	1.8
33	COUNT+CALL+EXTEND	.....8	NO	J7U	33			10	4.8
34	CALL+EXTEND	.....8	NO	J7L	34			10	6.5
35	LIMITED	.....8	NO	J8U	35			10	2.4
36	COUNT+CALL+EXTEND	.....8	NO	J8L	36			10	7.7
37	COUNT+CALL+EXTEND	...5...	NO	J9U	37			10	3.5
38	COUNT+CALL+EXTEND	.....7.	NO	J9L	38			10	3.7
39	COUNT+CALL+EXTEND	....6..	NO	J10U	39			10	4.3
40	COUNT+CALL+EXTEND	.....8	NO	J10L	40			10	4.4
41	PEDESTRIAN	.2.....	NO	I12U	41			10	5.1
42	PEDESTRIAN	...4....	NO	I12L	42			10	5.3
43	PEDESTRIAN	....6..	NO	I13U	43			10	5.2
44	PEDESTRIAN	.....8	NO	I13L	44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	.....
Detectors 9-16	.....
Detectors 17-24	.....
Detectors 25-32	.....
Detectors 33-40	.....
Detectors 41-44	.....

#### System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)	
Enable in Plans	.....

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

#### Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

### Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

### TOD SCHEDULE

Table 1 (8-2-1)			Table 2 (8-2-2)			Table 3 (8-2-3)			Table 4 (8-2-4)			Table 5 (8-2-5)			Table 6 (8-2-6)		
Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A

### WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2



**HOLIDAY TABLES**

Floating Holiday Table (8-2-8)				
#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)				
#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Daylight Saving (8-1)			
Enabled	YES	Month	Sunday
		Start	MAR 2nd
		End	NOV 1st

Solar Clock Data (8-4)	
North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)	
Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

**TOD FUNCTIONS**

TOD Functions (8-3)					
#	Start	End	DOW	Action	Phases
1			.....		.....
2			.....		.....
3			.....		.....
4			.....		.....
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

- Action Codes:**
- 0. None
  - 1. Permitted
  - 2. Restricted
  - 4. Veh Min Recall
  - 5. Veh Max Recall
  - 6. Ped Recall
  - 7. Bike Recall
  - 8. Red Lock
  - 9. Yellow Lock
  - 10. Force/Max Lock
  - 11. Double Entry
  - 12. Y-Coord C
  - 13. Y-Coord D
  - 14. Free
  - 15. Flashing
  - 16. Walk 2
  - 17. Max Green 2
  - 18. Max Green 3
  - 19. Rest in Walk
  - 20. Rest in Red
  - 21. Free Lag Phases
  - 22. Special Functions
  - 23. Truck Preempt
  - 24. Conditional Service
  - 25. Conditional Service
  - 26. Leading Ped
  - 27. Traffic Actuated Max 2
  - 41. Protected Permissive
  - 42. Protected Permissive

Action Code = Phases added to normal setting  
 100+Action Code = Phases removed  
 200+Action Code = Phases replaced

### COMMUNICATIONS

	C2 (6-1-1)	C20 (6-1-2)	C21 (6-1-3)
Address			
Baud	1200	1200	1200
Protocol	AB3418	AB3418	AB3418
Data Bits	8	8	8
Parity	NONE	NONE	NONE
Stop Bits	1	1	1
RTS On Time	20	20	20
RTS Off Time	20	20	20
Handshaking	NORMAL	NORMAL	NORMAL
Access Level	0	0	0

### SOFT LOGIC

Soft Logic ( 6-2 )							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

\*Refer to User's Manual for Data and OP Codes

### CALLBACK NUMBERS

Callback Numbers (6-3...3)			
Line Out			
Long Distance			
Local Toll			
Delay	10	10	10
Area Code			
Phone Number			

### NETWORK

Network Parameters (6-4)	
Address	
Protocol	AB3418
Port	27000
Type	STATIC
Central Access	
Field Access	
ATSPM	OFF

IP Address	0	.	0	.	0	.	0
Netmask	255	.	255	.	255	.	0
Broadcast	0	.	0	.	0	.	255
Gateway	0	.	0	.	0	.	254

SPAT Network (6-5)		
SPAT	1	2
Protocol	NONE	NONE
UDP Port	0	0

IP Address 0 . 0 . 0 . 0

### Access Levels:

- 0-Full Access
- 1-Status Only
- 2-Status, Set Pattern, Time
- 3-Status, Set Pattern, Time, Manual Plan
- 4-Reserved
- 5-Full Access with No Set Pattern
- 6-Full Access with No Set Time
- 7-Full Access with No Set Pattern, Manual Plan
- 8-Full Access with No Set Time, Pattern, Manual Plan

### RAILROAD PREEMPTION

<b>RR 1</b>	<b>Timing (3-1-1)</b>		<b>Phase Flags (3-1-2)</b>			<b>Pedestrian Flags (3-1-3)</b>			<b>Overlap Flags (3-1-4)</b>					
	Clear 1	15	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash			
	Clear 2	5	. 2 . . 5 . . .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....			
	Clear 3		. 2 . . 5 . . .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....			
	Hold		.....	.....	.....	.....	.....	.....	.....	.....	.....			
	Min Gr		1 . . 4 . . 7 8	.....	.....	.....	.....	. . . 4 . . . 8	. 2 . . . 6 . .	.....	.....	.....		
Delay		<b>Exit Parameters (3-1-5)</b>				<b>Configuration (3-1-6)</b>								
Exit		Phase Green	Ovrlap Green	Veh Permit/Call	Ped Permit/Call	PR	XR	Gate	Isld	APP	Sign	Sign	Max On	Latching
Ped Clr		. 2 . . . 6 . .	.....	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8	1							5	NO
						2			Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8 Valid Outputs: 11.x, 12.x, 13.x, 14.x, 15.x, 16.x, 17.x, 18.x x=1 to 8					

<b>RR 2</b>	<b>Timing (3-2-1)</b>		<b>Phase Flags (3-2-2)</b>			<b>Pedestrian Flags (3-2-3)</b>			<b>Overlap Flags (3-2-4)</b>					
	Clear 1	15	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash			
	Clear 2	5	. . . 4 . . 7 .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....			
	Clear 3		. . . 4 . . 7 .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....			
	Hold		.....	.....	.....	.....	.....	.....	.....	.....	.....			
	Min Gr		1 2 3 . . 6 . .	.....	.....	.....	.....	. 2 . . . 6 . .	. . . 4 . . . 8	.....	.....	.....		
Delay		<b>Exit Parameters (3-2-5)</b>				<b>Configuration (3-2-6)</b>								
Exit		Phase Green	Ovrlap Green	Veh Permit/Call	Ped Permit/Call	PR	XR	Gate	Isld	APP	Sign	Sign	Max On	Latching
Ped Clr		. 2 . . . 6 . .	.....	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8	1							5	NO
						2			Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8 Valid Outputs: 11.x, 12.x, 13.x, 14.x, 15.x, 16.x, 17.x, 18.x x=1 to 8					

### EMERGENCY VEHICLE PREEMPTION

<b>EVA (3-A)</b>	<b>Preempt Timers</b>			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. 2 . . 5 . . .	.....
	Port	Latching	Phase Termination		
		NO	ADVANCE		

<b>EVB (3-B)</b>	<b>Preempt Timers</b>			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. . . 4 . . 7 .	.....
	Port	Latching	Phase Termination		
		NO	ADVANCE		

<b>EVC (3-C)</b>	<b>Preempt Timers</b>			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	1 . . . . 6 . .	.....
	Port	Latching	Phase Termination		
		NO	ADVANCE		

<b>EVD (3-D)</b>	<b>Preempt Timers</b>			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. . 3 . . . . 8	.....
	Port	Latching	Phase Termination		
		NO	ADVANCE		

### INPUTS

		7 Wire I/C ( 2-1-5-1 )			
Enable	NO	Input	Port	Input	Port
Max ON		RR1	3.8	Free	3.6
Max OFF		RR2	3.5	D2	2.8
		RR3	3.7	D3	6.1

Manual Control ( 2-1-5-2 )	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status ( 2-1-5-3 )	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function ( 2-1-5-4 )	
Input	Port
1	
2	
3	
4	

Battery Backup ( 2-1-5-5 )	
Port	Operation
	NORMAL

Y-Coordination ( 2-1-5-6 )	
Port C	Port D
6.1	2.8

### OUTPUTS

Loadswitch Assignments ( 2-1-6 )							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

- Loadswitch Codes:
- 0 Unused (no output)
  - 1-8 Vehicle 1-8
  - 9-14 Overlap A-F
  - 21-28 Ped 1-8
  - 41-47 Special Functions
  - 41 Protected Permissive Flashing Phase 1
  - 43 Protected Permissive Flashing Phase 3
  - 45 Protected Permissive Flashing Phase 5
  - 47 Protected Permissive Flashing Phase 7
  - 51-57 Special Functions
  - 71-72 Seven Wire I/C
- + middle output of loadswitches 3 and 6  
Channel 9 and 10

### INTERVAL CONTROL

Interval Control (3-3-1)	
Step	Time
Step 1	
Step 2	
Step 3	
Step 4	
Step 5	
Step 6	
Step 7	
Step 8	

Phase Control (3-3-2)		
Hold	Force	Advance
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Phase Recall (3-3-3)		
Veh Call	Ped Call	Int Call
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Phase Permitted (3-3-4)		
Phs Permit	Ped Permit	Ovrlap Permit
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Configuration (3-3-5)			
Input	Port	Delay	HRI Cross
1			
2			

### HRI

HRI Configuration (3-4)			
RailRoad	51	WAYSIDE	ATC
Line		Subnode	
Group		Device	

**TRANSIT PRIORITY**

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Enable in Local Plans (3-E-3)	
Plan 1-9	.....
Plan 11-19	.....

Queue Jump (3-E-4)	
Grn Hold	Hold Phase
	.....
	.....

Input	
Type	Port
NONE	0.0
NONE	0.0

Output	
Stop	Go
0	0
0	0

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	.....

Access Utilities (9-5)	
Password	Timeout
***	30

**YELLOW YIELD COORDINATION**

Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	Force-Offs								Coord	Lag	Min Recall	Restricted
					-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-				
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....

**TRUCK PRIORITY**

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					.....	0.0	0.0	0.0	0	0.0	0

Location: RTE 5\_NB & Lakewood Blvd

Designed By: Sohel Ahmed

System:

District: 07

Installed By: Sohel Ahmed

Master At: Here

I/C:

Service Info: TSCP 3.1 Build 006

Timing Change:

Date Start:

Date End:

Designed:

Installed:

4/14/2021

4/14/2021

## Intersection Layout

**FLASH**

1)	[ ]
P 2) NB Lakewood Blvd	[ ]
H 3) EB Vista Del Rosa Avenue	[ ]
A 4) RTE 5 NB Off Ramp	[ ]
S 5)	[ ]
E 6) SB Lakewood Blvd	[ ]
7)	[ ]
8) NS Crosswalk	[ ]
O A)	[ ]
V B)	[ ]
E C)	[ ]
R D)	[ ]
L E)	[ ]
A F)	[ ]
P	[ ]

**Comments and Notes:**

04/14/2021: Upgrade the software to TSCP 3.1 Build 006

**RAM Checksum**

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Page 3: 0154	Page 9: E841
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Page 6: 191A	Page 12: 1FB3
Page 7: 12D9	Page 13: 86F7



### CONFIGURATION PHASE FLAGS

Cabinet ( 9-3 )	
332	
Configuration	
CALTRANS	

Phases ( 2-1-1-1 )	
Permitted	. 2 3 4 . 6 . 8
Restricted	.....

Phase Features ( 2-1-1-4 )	
Double Entry	... 4 ... 8
Rest In Walk	.....
Rest In Red	.....
Walk 2	.....
Max Green 2	.....
Max Green 3	.....

Startup ( 2-1-1-5 )	
First Green Phases	. 2 ... 6 ..
Yellow Start Phases	.....
Vehicle Calls	. 2 3 4 . 6 ..
Pedestrian Calls	. 2 ... 6 . 8
Yellow Start Overlaps	.....
Startup All-Red	6.0

Phase Recalls ( 2-1-1-2 )	
Vehicle Min	. 2 ... 6 ..
Vehicle Max	.....
Pedestrian	.....
Bicycle	.....

Phase Locks ( 2-1-1-3 )	
Red	. 2 ... 6 ..
Yellow	. 2 ... 6 ..
Force/Max	.....

Call To Phase ( 2-1-2-1 )		Omit On Green	
1	.....	1	.....
2	.....	2	.....
3	.....	3	.....
4	.....	4	.....
5	.....	5	.....
6	.....	6	.....
7	.....	7	.....
8	.....	8	.....

Flashing Colors ( 2-1-2-2 )	
Yellow Flash Phases	.....
Yellow Flash Overlaps	.....
Flash In Red Phases	.....
Flash In Red Overlaps	.....

Special Operation ( 2-1-2-3 )	
Single Exit Phase	.....
Driveway Signal Phases	.....
Driveway Signal Overlaps	.....
Leading Ped Phases	.....

Protected Permissive ( 2-1-2-4 )	
Protected Permissive	.....

Pedestrian ( 2-1-3 )	
P1	.....
P2	. 2 .....
P3	.....
P4	.....
P5	.....
P6	..... 6 ..
P7	.....
P8	..... 8

Overlap ( 2-1-4 )				
Overlap	Parent	Omit	No Start	Not
A	.....	.....	.....	.....
B	.....	.....	.....	.....
C	.....	.....	.....	.....
D	.....	.....	.....	.....
E	.....	.....	.....	.....
F	.....	.....	.....	.....

**PHASE TIMING**

Phase ( 2-2 )	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 1 ---	0	7	0	0	0	7	0	7
Flash Don't Walk	0	10	0	0	0	17	0	30
Minimum Green	0	10	10	10	0	10	0	10
Det Limit	0	0	0	0	0	0	0	0
Max Initial	0	20	0	0	0	20	0	0
Max Green 1	0	30	15	30	0	30	0	30
Max Green 2	0	30	15	30	0	30	0	30
Max Green 3	0	30	15	30	0	30	0	30
Extension	0.0	5.0	2.0	2.0	0.0	5.0	0.0	2.0
Maximum Gap	0.0	6.0	2.0	2.0	0.0	6.0	0.0	2.0
Minimum Gap	0.0	2.0	2.0	2.0	0.0	2.0	0.0	2.0
Add Per Vehicle	0.0	2.0	0.0	0.0	0.0	2.0	0.0	0.0
Reduce Gap By	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Reduce Every	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0
Yellow	5.0	4.4	4.1	4.1	5.0	4.4	5.0	4.1
All-Red	0.0	1.0	1.0	1.0	0.0	1.0	0.0	1.0
Ped/Bike (2-3)	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
--- Walk 2 ---	0	0	0	0	0	0	0	0
Delay/Early Walk	0	0	0	0	0	0	0	0
Solid Don't Walk	0	0	0	0	0	0	0	0
Bike Green	0	0	0	0	0	0	0	0
Bike All-Red	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**OVERLAP TIMING**

Overlap ( 2-4 )	A	B	C	D	E	F
Green	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	5.0	5.0	5.0	5.0	5.0	5.0
Red	0.0	0.0	0.0	0.0	0.0	0.0

**Red Revert**

Red Revert ( 2-5 )	
Time	5.0
All-Red Sec/Min ( 2-6 )	
All-Red Sec/Min:	OFF

**Max 2 Extension**

Max/Gap Out ( 2-7 )	
Max Cnt	0
Gap Cnt	0

**Local Plan 1...9 (7-1) TIMING DATA**

**COORDINATION**

		[ Offsets ]			Green Factors or Press [F] to Select Force-Off										
		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 1	Green Factor	95		.....	58				30	10	37		30		37
Plan 2	Green Factor	105		.....	85				40	10	37		40		37
Plan 3	Green Factor	105		.....	78				40	10	37		40		37
Plan 4	Green Factor			.....											
Plan 5	Green Factor			.....											
Plan 6	Green Factor			.....											
Plan 7	Green Factor			.....											
Plan 8	Green Factor			.....											
Plan 9	Green Factor			.....											

Master Timer Sync ( 7-A )	
Enable in Plans	
1-9	.....
11-19	.....
21-29	.....

Master Sub Master	
Input	
Output	

FREE PLAN PHASE FLAGS	
( 7-E ) Free	
Lag	Omit
. 2 . 4 . 6 . 8	.....
Veh Min	Veh Max
. 2 ... 6 ..	.....
Ped	Bike
.....	.....
Cond	Cond Grn
.....	10

**Local Plan 1...9 (7-1) PHASE FLAGS**

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 1	. 2 . 4 . 6 . 8	. 2 ... 6 ..	.....	.....	.....	.....	. 2 ... 6 ..	.....
Plan 2	. 2 . 4 . 6 . 8	. 2 ... 6 ..	.....	.....	.....	.....	. 2 ... 6 ..	.....
Plan 3	. 2 . 4 . 6 . 8	. 2 ... 6 ..	.....	.....	.....	.....	. 2 ... 6 ..	.....
Plan 4	.....	.....	.....	.....	.....	.....	.....	.....
Plan 5	.....	.....	.....	.....	.....	.....	.....	.....
Plan 6	.....	.....	.....	.....	.....	.....	.....	.....
Plan 7	.....	.....	.....	.....	.....	.....	.....	.....
Plan 8	.....	.....	.....	.....	.....	.....	.....	.....
Plan 9	.....	.....	.....	.....	.....	.....	.....	.....

MANUAL COMMANDS	
Manual Plan (4-1)	Plan: 1-29
Plan	254 = Flash
Offset	255 = Free
	Offset A, B, or C
	A

Special Function Override (4-2)			
#	Control	#	Control
1	NORMAL	3	NORMAL
2	NORMAL	4	NORMAL

Detector Reset	(4-3)
Local Manual (4-4)	OFF

**Local Plan 11...19 (7-2) TIMING DATA**

**COORDINATION**

[ Offsets ]

Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 11	Green Factor			.....											
Plan 12	Green Factor			.....											
Plan 13	Green Factor			.....											
Plan 14	Green Factor			.....											
Plan 15	Green Factor			.....											
Plan 16	Green Factor			.....											
Plan 17	Green Factor			.....											
Plan 18	Green Factor			.....											
Plan 19	Green Factor			.....											

**Local Plan 11...19 (7-2) PHASE FLAGS**

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 11	.....	.....	.....	.....	.....	.....	.....	.....
Plan 12	.....	.....	.....	.....	.....	.....	.....	.....
Plan 13	.....	.....	.....	.....	.....	.....	.....	.....
Plan 14	.....	.....	.....	.....	.....	.....	.....	.....
Plan 15	.....	.....	.....	.....	.....	.....	.....	.....
Plan 16	.....	.....	.....	.....	.....	.....	.....	.....
Plan 17	.....	.....	.....	.....	.....	.....	.....	.....
Plan 18	.....	.....	.....	.....	.....	.....	.....	.....
Plan 19	.....	.....	.....	.....	.....	.....	.....	.....

**Local Plan 21...29 (7-3) TIMING DATA**

**COORDINATION**

[ Offsets ]

Green Factors or Press [F] to Select Force-Off

		Cycle	Multi	Lag Gap	A	B	C	-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-
Plan 21	Green Factor			.....											
Plan 22	Green Factor			.....											
Plan 23	Green Factor			.....											
Plan 24	Green Factor			.....											
Plan 25	Green Factor			.....											
Plan 26	Green Factor			.....											
Plan 27	Green Factor			.....											
Plan 28	Green Factor			.....											
Plan 29	Green Factor			.....											

**Local Plan 21...29 (7-3) PHASE FLAGS**

	Lag	Sync	Hold	Omit	Veh Min	Veh Max	Ped	Bike
Plan 21	.....	.....	.....	.....	.....	.....	.....	.....
Plan 22	.....	.....	.....	.....	.....	.....	.....	.....
Plan 23	.....	.....	.....	.....	.....	.....	.....	.....
Plan 24	.....	.....	.....	.....	.....	.....	.....	.....
Plan 25	.....	.....	.....	.....	.....	.....	.....	.....
Plan 26	.....	.....	.....	.....	.....	.....	.....	.....
Plan 27	.....	.....	.....	.....	.....	.....	.....	.....
Plan 28	.....	.....	.....	.....	.....	.....	.....	.....
Plan 29	.....	.....	.....	.....	.....	.....	.....	.....

### DETECTORS

Detector Attributes (5-1)				Slot	Detector Configuration (5-2)				
Det	Type	Phases	Lock		Det	Delay	Extend	Recall	Port
1	COUNT+CALL+EXTEND	1.....	NO	I1U	1			10	3.2
2	COUNT+CALL+EXTEND	1.....	NO	I1L	2			10	7.2
3	COUNT+CALL+EXTEND	.2.....	NO	I2U	3			10	1.1
4	COUNT+CALL+EXTEND	.2.....	NO	I2L	4			10	1.5
5	COUNT+CALL+EXTEND	.2.....	NO	I3U	5			10	4.5
6	CALL+EXTEND	.2.....	NO	I3L	6			10	6.2
7	LIMITED	.2.....	NO	I4U	7			10	2.1
8	COUNT+CALL+EXTEND	.2.....	NO	I4L	8			10	7.4
9	COUNT+CALL+EXTEND	..3.....	NO	I5U	9			10	3.4
10	COUNT+CALL+EXTEND	..3.....	NO	I5L	10			10	7.6
11	COUNT+CALL+EXTEND	...4....	NO	I6U	11			10	1.3
12	COUNT+CALL+EXTEND	...4....	NO	I6L	12			10	1.7
13	COUNT+CALL+EXTEND	...4....	NO	I7U	13			10	4.7
14	CALL+EXTEND	...4....	NO	I7L	14			10	6.4
15	LIMITED	...4....	NO	I8U	15			10	2.3
16	COUNT+CALL+EXTEND	...4....	NO	I8L	16			10	7.8
17	COUNT+CALL+EXTEND	1.....	NO	I9U	17			10	3.6
18	COUNT+CALL+EXTEND	..3.....	NO	I9L	18			10	3.8
19	COUNT+CALL+EXTEND	.2.....	NO	I10U	19			10	4.1
20	COUNT+CALL+EXTEND	...4....	NO	I10L	20			10	4.2
21	COUNT+CALL+EXTEND	...5...	NO	J1U	21			10	3.1
22	COUNT+CALL+EXTEND	...5...	NO	J1L	22			10	7.1
23	COUNT+CALL+EXTEND	....6..	NO	J2U	23			10	1.2
24	COUNT+CALL+EXTEND	....6..	NO	J2L	24			10	1.6
25	COUNT+CALL+EXTEND	....6..	NO	J3U	25			10	4.6
26	CALL+EXTEND	....6..	NO	J3L	26			10	6.3
27	LIMITED	....6..	NO	J4U	27			10	2.2
28	COUNT+CALL+EXTEND	....6..	NO	J4L	28			10	7.3
29	COUNT+CALL+EXTEND	.....7.	NO	J5U	29			10	3.3
30	COUNT+CALL+EXTEND	.....7.	NO	J5L	30			10	7.5
31	COUNT+CALL+EXTEND	.....8	NO	J6U	31			10	1.4
32	COUNT+CALL+EXTEND	.....8	NO	J6L	32			10	1.8
33	COUNT+CALL+EXTEND	.....8	NO	J7U	33			10	4.8
34	CALL+EXTEND	.....8	NO	J7L	34			10	6.5
35	LIMITED	.....8	NO	J8U	35			10	2.4
36	COUNT+CALL+EXTEND	.....8	NO	J8L	36			10	7.7
37	COUNT+CALL+EXTEND	...5...	NO	J9U	37			10	3.5
38	COUNT+CALL+EXTEND	.....7.	NO	J9L	38			10	3.7
39	COUNT+CALL+EXTEND	....6..	NO	J10U	39			10	4.3
40	COUNT+CALL+EXTEND	.....8	NO	J10L	40			10	4.4
41	PEDESTRIAN	.2.....	NO	I12U	41			10	5.1
42	PEDESTRIAN	...4....	NO	I12L	42			10	5.3
43	PEDESTRIAN	....6..	NO	I13U	43			10	5.2
44	PEDESTRIAN	.....8	NO	I13L	44			10	5.4

Failure Times(5-3)	Minutes
Maximum On Time	
Fail Reset Time	

Failure Override (5-4)	
Detectors 1-8	.....
Detectors 9-16	.....
Detectors 17-24	.....
Detectors 25-32	.....
Detectors 33-40	.....
Detectors 41-44	.....

#### System Detector Assignment (5-5)

Sys Det	1	2	3	4	5	6	7	8
Det Nu								
Sys Det	9	10	11	12	13	14	15	16
Det Nu								

CIC Operation (5-6-1)	
Enable in Plans	.....

CIC Values (5-6-2)	Volume	Occupancy	Demand
Smoothing	0.66	0.66	0.66
Multiplier	4.0	0.33	
Exponent	0.50	1.00	

#### Detector-to-Phase Assignment (5-6-3)

Sys Det	1	2	3	4	5	6	7	8
Phase								
Sys Det	9	10	11	12	13	14	15	16
Phase								

### Input File Port-Bit Assignments

332 Cabinet - For Reference Only

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
I-	3.2	1.1	4.5	2.1	3.4	1.3	4.7	2.3	3.6	4.1	6.6	5.1	5.2	6.7
	7.2	1.5	6.2	7.4	7.6	1.7	6.4	7.8	3.8	4.2	2.7	5.3	5.4	6.8
J-	3.1	1.2	4.6	2.2	3.3	1.4	4.8	2.4	3.5	4.3	2.8	5.5	5.6	2.5
	7.1	1.6	6.3	7.3	7.5	1.8	6.5	7.7	3.7	4.4	6.1	5.7	5.8	2.6

### TOD SCHEDULE

Table 1 (8-2-1)			Table 2 (8-2-2)			Table 3 (8-2-3)			Table 4 (8-2-4)			Table 5 (8-2-5)			Table 6 (8-2-6)		
Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS	Time	Plan	OS
0600	2	A	0920	1	A			A			A			A			A
0920	1	A	2100	255	A			A			A			A			A
1500	3	A			A			A			A			A			A
1900	1	A			A			A			A			A			A
2100	255	A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A
		A			A			A			A			A			A

### WEEKDAY ASSIGNMENT

Weekday Table Assignments (8-2-7)						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
1	1	1	1	1	2	2



**HOLIDAY TABLES**

Floating Holiday Table (8-2-8)				
#	Mnth	Week	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Fixed Holiday Table (8-2-9)				
#	Mnth	Day	DOW	Table
1			.....	
2			.....	
3			.....	
4			.....	
5			.....	
6			.....	
7			.....	
8			.....	
9			.....	
10			.....	
11			.....	
12			.....	
13			.....	
14			.....	
15			.....	
16			.....	

Daylight Saving (8-1)			
Enabled	YES	Month	Sunday
		Start	MAR 2nd
		End	NOV 1st

Solar Clock Data (8-4)	
North Latitude	34
West Longitude	118
Local Time Zone	8

Sabbatical Clock (8-5)	
Hebrew	Ped Recall
Sabbath	.....
Holiday	.....

**TOD FUNCTIONS**

TOD Functions (8-3)					
#	Start	End	DOW	Action	Phases
1			.....		.....
2			.....		.....
3			.....		.....
4			.....		.....
5			.....		.....
6			.....		.....
7			.....		.....
8			.....		.....
9			.....		.....
10			.....		.....
11			.....		.....
12			.....		.....
13			.....		.....
14			.....		.....
15			.....		.....
16			.....		.....

- Action Codes:
- 0. None
  - 1. Permitted
  - 2. Restricted
  - 4. Veh Min Recall
  - 5. Veh Max Recall
  - 6. Ped Recall
  - 7. Bike Recall
  - 8. Red Lock
  - 9. Yellow Lock
  - 10. Force/Max Lock
  - 11. Double Entry
  - 12. Y-Coord C
  - 13. Y-Coord D
  - 14. Free
  - 15. Flashing
  - 16. Walk 2
  - 17. Max Green 2

- 18. Max Green 3
- 19. Rest in Walk
- 20. Rest in Red
- 21. Free Lag Phases
- 22. Special Functions
- 23. Truck Preempt
- 24. Conditional Service
- 25. Conditional Service
- 26. Leading Ped
- 27. Traffic Actuated Max 2
- 41. Protected Permissive
- 42. Protected Permissive

Action Code = Phases added to normal setting  
 100+Action Code = Phases removed  
 200+Action Code = Phases replaced

### COMMUNICATIONS

	C2 (6-1-1)	C20 (6-1-2)	C21 (6-1-3)
Address			
Baud	9600	1200	1200
Protocol	MASTER	AB3418	UTB
Data Bits	8	8	8
Parity	NONE	NONE	NONE
Stop Bits	1	1	1
RTS On Time	20	20	20
RTS Off Time	20	20	20
Handshaking	NORMAL	NORMAL	NORMAL
Access Level	0	0	0

### SOFT LOGIC

Soft Logic ( 6-2 )							
#	Data	OP	Data	OP	Data	OP	Data
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							

### CALLBACK NUMBERS

Callback Numbers (6-3...3)			
Line Out			
Long Distance			
Local Toll			
Delay	10	10	10
Area Code			
Phone Number			

### NETWORK

Network Parameters (6-4)	
Address	
Protocol	AB3418
Port	27000
Type	STATIC
Central Access	
Field Access	
ATSPM	OFF

IP Address	0	.	0	.	0	.	0
Netmask	255	.	255	.	255	.	0
Broadcast	0	.	0	.	0	.	255
Gateway	0	.	0	.	0	.	254

### Access Levels:

- 0-Full Access
- 1-Status Only
- 2-Status, Set Pattern, Time
- 3-Status, Set Pattern, Time, Manual Plan
- 4-Reserved
- 5-Full Access with No Set Pattern
- 6-Full Access with No Set Time
- 7-Full Access with No Set Pattern, Manual Plan
- 8-Full Access with No Set Time, Pattern, Manual Plan

SPAT Network (6-5)		
SPAT	1	2
Protocol	NONE	NONE
UDP Port	0	0

IP Address 0 . 0 . 0 . 0

\*Refer to User's Manual for Data and OP Codes

### RAILROAD PREEMPTION

<b>RR 1</b>	<b>Timing (3-1-1)</b>		<b>Phase Flags (3-1-2)</b>			<b>Pedestrian Flags (3-1-3)</b>			<b>Overlap Flags (3-1-4)</b>					
	Clear 1	15	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash			
	Clear 2	5	. 2 . . 5 . . .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....			
	Clear 3		. 2 . . 5 . . .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....			
	Hold		.....	.....	.....	.....	.....	.....	.....	.....	.....			
	Min Gr		1 . . 4 . . 7 8	.....	.....	.....	... 4 ... 8	. 2 ... 6 ..	.....	.....	.....			
	Delay		<b>Exit Parameters (3-1-5)</b>				<b>Configuration (3-1-6)</b>							
Exit		Phase Green	Ovrlap Green	Veh Permit/Call	Ped Permit/Call	PR	XR	Gate	Isld	APP	Sign	Sign	Max On	Latching
Ped Clr		. 2 ... 6 ..	.....	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8	1							5	NO
						2			Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8 Valid Outputs: 11.x, 12.x, 13.x, 14.x, 15.x, 16.x, 17.x, 18.x x=1 to 8					

<b>RR 2</b>	<b>Timing (3-2-1)</b>		<b>Phase Flags (3-2-2)</b>			<b>Pedestrian Flags (3-2-3)</b>			<b>Overlap Flags (3-2-4)</b>					
	Clear 1	15	Grn Hold	Yel Flash	Red Flash	Walk	Flash DW	Solid DW	Grn Hold	Yel Flash	Red Flash			
	Clear 2	5	. . . 4 . . 7 .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....			
	Clear 3		. . . 4 . . 7 .	.....	.....	.....	.....	. 2 . 4 . 6 . 8	.....	.....	.....			
	Hold		.....	.....	.....	.....	.....	.....	.....	.....	.....			
	Min Gr		1 2 3 . . 6 ..	.....	.....	.....	. 2 ... 6 ..	... 4 ... 8	.....	.....	.....			
	Delay		<b>Exit Parameters (3-2-5)</b>				<b>Configuration (3-2-6)</b>							
Exit		Phase Green	Ovrlap Green	Veh Permit/Call	Ped Permit/Call	PR	XR	Gate	Isld	APP	Sign	Sign	Max On	Latching
Ped Clr		. 2 ... 6 ..	.....	1 2 3 4 5 6 7 8	. 2 . 4 . 6 . 8	1							5	NO
						2			Valid Inputs: 1.x, 2.x, 3.x, 4.x, 5.x, 6.x, 7.x, 8.x x=1 to 8 Valid Outputs: 11.x, 12.x, 13.x, 14.x, 15.x, 16.x, 17.x, 18.x x=1 to 8					

### EMERGENCY VEHICLE PREEMPTION

<b>EVA (3-A)</b>	<b>Preempt Timers</b>			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. 2 . . 5 . . .	.....
	Port	Latching	Phase Termination		
		NO	ADVANCE		

<b>EVB (3-B)</b>	<b>Preempt Timers</b>			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. . . 4 . . 7 .	.....
	Port	Latching	Phase Termination		
		NO	ADVANCE		

<b>EVC (3-C)</b>	<b>Preempt Timers</b>			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	1 . . . . 6 . .	.....
	Port	Latching	Phase Termination		
		NO	ADVANCE		

<b>EVD (3-D)</b>	<b>Preempt Timers</b>			Phase Green	Overlap Green
	Delay	Clear	Max		
		30	30	. . 3 . . . . 8	.....
	Port	Latching	Phase Termination		
		NO	ADVANCE		

### INPUTS

		7 Wire I/C ( 2-1-5-1 )			
Enable	NO	Input	Port	Input	Port
Max ON		RR1		Free	
Max OFF		RR2		D2	
		RR3		D3	

Manual Control ( 2-1-5-2 )	
Input	Port
Manual Advance	
Advance Enable	

Cabinet Status ( 2-1-5-3 )	
Input	Port
Flash Bus	
Door Ajar	
Flash Sense	6.7
Stop Time	6.8

Special Function ( 2-1-5-4 )	
Input	Port
1	
2	
3	
4	

Battery Backup ( 2-1-5-5 )	
Port	Operation
	NORMAL

Y-Coordination ( 2-1-5-6 )	
Port C	Port D

### OUTPUTS

Loadswitch Assignments ( 2-1-6 )							
A	1	2	22	3	4	24	9
B	5	6	26	7	8	28	10
X	13	14	0	11	12	0	0

Loadswitch Codes:

- 0 Unused (no output)
- 1-8 Vehicle 1-8
- 9-14 Overlap A-F
- 21-28 Ped 1-8
- 41-47 Special Functions
- 41 Protected Permissive Flashing Phase 1
- 43 Protected Permissive Flashing Phase 3
- 45 Protected Permissive Flashing Phase 5
- 47 Protected Permissive Flashing Phase 7
- 51-57 Special Functions
- 71-72 Seven Wire I/C

+ middle output of loadswitches 3 and 6  
Channel 9 and 10

### INTERVAL CONTROL

Interval Control (3-3-1)	
Step	Time
Step 1	
Step 2	
Step 3	
Step 4	
Step 5	
Step 6	
Step 7	
Step 8	

Phase Control (3-3-2)		
Hold	Force	Advance
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Phase Recall (3-3-3)		
Veh Call	Ped Call	Int Call
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Phase Permitted (3-3-4)		
Phs Permit	Ped Permit	Ovrlap Permit
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

Configuration (3-3-5)			
Input	Port	Delay	HRI Cross
1			
2			

### HRI

HRI Configuration (3-4)			
RailRoad	51	WAYSIDE	ATC
Line		Subnode	
Group		Device	

**TRANSIT PRIORITY**

Local Plans (3-E) 1...9 11...19		Early Green	Green Extend	Inhibit Cycles	Phase 1 Minimum	Phase 2 Minimum	Phase 3 Minimum	Phase 4 Minimum	Phase 5 Minimum	Phase 6 Minimum	Phase 7 Minimum	Phase 8 Minimum
Plan 1	Green Factor											
Plan 2	Green Factor											
Plan 3	Green Factor											
Plan 4	Green Factor											
Plan 5	Green Factor											
Plan 6	Green Factor											
Plan 7	Green Factor											
Plan 8	Green Factor											
Plan 9	Green Factor											
Plan 11	Green Factor											
Plan 12	Green Factor											
Plan 13	Green Factor											
Plan 14	Green Factor											
Plan 15	Green Factor											
Plan 16	Green Factor											
Plan 17	Green Factor											
Plan 18	Green Factor											
Plan 19	Green Factor											

Enable in Local Plans (3-E-3)	
Plan 1-9	.....
Plan 11-19	.....

Queue Jump (3-E-4)	
Grn Hold	Hold Phase
	.....
	.....

Input	
Type	Port
NONE	0.0
NONE	0.0

Output	
Stop	Go
0	0
0	0

Free Plans (3-E-E)	
Max Grn Hold	Hold Phase
	.....

Access Utilities (9-5)	
Password	Timeout
***	30

**YELLOW YIELD COORDINATION**

Y-Coord Plans (7-C,D)	Long Grn	No Grn	Offset	Perm	Force-Offs								Coord	Lag	Min Recall	Restricted
					-1-	-2-	-3-	-4-	-5-	-6-	-7-	-8-				
Plan C													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....
Plan D													. 2 . . . 6 . .	. 2 . 4 . 6 . 8	.....	.....

**TRUCK PRIORITY**

Truck Priority (3-F)	Passage	CarryOver	Clearance	Next Priority	Phase Green	Det 2 Port	Det 3 Port	Det 4 Port	Sign Output	Slave Input	Slave Output
					.....	0.0	0.0	0.0	0	0.0	0

# Appendix C: Traffic Volume Development Worksheets

**1** Study Intersection: Paramount Blvd / Washington Blvd      OY Year: 2023      2040  
 North/South: Paramount Blvd      Ambient Growth: 0.4%  
 East/West: Washington Blvd      Years till opening: 2      17

Trip Gen							
ADT	AM Peak Hour			PM Peak Hour			
	Total	In	Out	Total	In	Out	
1146	150	133	17	148	22	126	

7:15      4:45

	Existing		Project Only				Existing With Project		OY		OY+P		Cum. Proj. Only		OY+CP		OY+CP+P		BO		BO With Proj.	
	AM	PM	Dist. %		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
			IN	OUT																		
NBL	243	359			0	0	243	359	245	362	245	362	1	3	246	365	246	365	263	390	263	390
NBT	382	813	2%		0	3	382	816	385	820	385	823	0	2	385	822	385	825	411	878	411	881
NBR	79	136			0	0	79	136	80	137	80	137	6	10	86	147	86	147	92	157	92	157
SBL	116	168			0	0	116	168	117	169	117	169	6	8	123	177	123	177	131	189	131	189
SBT	608	680	2%		3	1	611	681	613	685	616	686	2	0	615	685	618	686	657	732	660	733
SBR	212	111			0	0	212	111	214	112	214	112	0	0	214	112	214	112	229	120	229	120
EBL	92	208			0	0	92	208	93	210	93	210	2	0	95	210	95	210	101	224	101	224
EBT	759	1,346	5%		7	1	766	1,347	765	1,357	772	1,358	11	22	776	1,379	783	1,380	829	1,473	836	1,474
EBR	232	264			0	0	232	264	234	266	234	266	0	1	234	267	234	267	250	285	250	285
WBL	120	104			0	0	120	104	121	105	121	105	7	5	128	110	128	110	137	117	137	117
WBT	1,033	785		5%	1	6	1,034	791	1,041	791	1,042	797	21	16	1,062	807	1,063	813	1,134	862	1,135	868
WBR	63	119			0	0	63	119	64	120	64	120	9	5	73	125	73	125	78	134	78	134



2 Study Intersection: Rosemead Blvd / Washington Blvd

North/South: Rosemead Blvd  
 East/West: Washington Blvd

OY Year: 2023 2040  
 Ambient Growth: 0.4%  
 Years till opening: 2 17

Trip Gen							
ADT	AM Peak Hour			PM Peak Hour			ADT
	Total	In	Out	Total	In	Out	
1146	150	133	17	148	22	126	

7:15 4:45

	Existing		Project Only				Existing With Proj.		OY		OY+P		Cum. Proj. Only		OY+CP		OY+CP+P		BO		BO With Proj.	
	AM	PM	Dist. %		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
			IN	OUT																		
NBL	173	194		5%	1	6	174	200	174	196	175	202	6	12	180	208	181	214	192	222	193	228
NBT	581	770		5%	1	6	582	776	586	776	587	782	2	2	588	778	589	784	628	831	629	837
NBR	213	264		5%	1	6	214	270	215	266	216	272	0	0	215	266	216	272	230	284	231	290
SBL	187	211			0	0	187	211	188	213	188	213	18	13	206	226	206	226	220	241	220	241
SBT	792	851	5%		7	1	799	852	798	858	805	859	12	11	810	869	817	870	865	928	872	929
SBR	99	132			0	0	99	132	100	133	100	133	2	4	102	137	102	137	109	146	109	146
EBL	89	241			0	0	89	241	90	243	90	243	0	0	90	243	90	243	96	260	96	260
EBT	641	1,173			0	0	641	1,173	646	1,182	646	1,182	1	4	647	1,186	647	1,186	691	1,267	691	1,267
EBR	183	207	5%		7	1	190	208	184	209	191	210	0	0	184	209	191	210	197	223	204	224
WBL	243	190	5%		6	1	249	191	245	192	251	193	0	0	245	192	251	193	262	205	268	206
WBT	1,137	792			0	0	1,137	792	1,146	798	1,146	798	15	23	1,161	821	1,161	821	1,240	877	1,240	877
WBR	123	140			0	0	123	140	124	141	124	141	0	0	124	141	124	141	132	151	132	151

**3** Study Intersection: Slauson Ave / Telegraph Rd  
 North/South: Slauson Ave  
 East/West: Telegraph Rd

OY Year: 2023 2040  
 Ambient Growth: 0.4%  
 Years till opening: 2 17

Trip Gen							
ADT	AM Peak Hour			PM Peak Hour			
	Total	In	Out	Total	In	Out	
1146	150	133	17	148	22	126	

7:30 5:00

	Existing		Project Only				Existing With Proj.		OY		OY+P		Cum. Proj. Only		OY+CP		OY+CP+P		BO		BO With Proj.	
	AM	PM	Dist. %		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
			IN	OUT																		
NBL	175	88			0	0	175	88	176	89	176	89	0	0	176	89	176	89	177	95	177	95
NBT	926	1,071	6%		7	1	933	1,072	933	1,080	940	1,081	16	21	949	1,101	956	1,102	1,014	1,176	1,021	1,177
NBR	319	487			0	0	319	487	322	491	322	491	0	0	322	491	322	491	344	524	344	524
SBL	5	37			0	0	5	37	5	37	5	37	0	0	5	37	5	37	5	40	5	40
SBT	899	758		6%	1	8	900	766	906	764	907	772	13	20	919	784	920	792	981	837	982	845
SBR	438	179			0	0	438	179	442	180	442	180	0	0	442	180	442	180	472	192	472	192
EBL	107	163			0	0	107	163	108	164	108	164	0	0	108	164	108	164	115	175	115	175
EBT	323	925		5%	1	6	324	931	326	932	327	938	0	3	326	935	327	941	348	999	349	1,005
EBR	522	743			0	0	522	743	526	749	526	749	0	0	526	749	526	749	562	800	562	800
WBL	366	265			0	0	366	265	369	267	369	267	0	0	369	267	369	267	394	285	394	285
WBT	490	369	5%		7	1	497	370	494	372	501	373	4	0	498	372	505	373	532	397	539	398
WBR	21	18			0	0	21	18	21	18	21	18	0	0	21	18	21	18	22	19	22	19

4 Study Intersection: Slauson Ave / Paramount Blvd  
 North/South: Slauson Ave  
 East/West: Paramount Blvd

OY Year: 2023 2040  
 Ambient Growth: 0.4%  
 Years till opening: 2 17

Trip Gen						
ADT	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out
1146	150	133	17	148	22	126

7:30 4:30

	Existing		Project Only				Existing With Proj.		OY		OY+P		Cum. Proj. Only		OY+CP		OY+CP+P		BO		BO With Proj.	
	AM	PM	Dist. %		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
			IN	OUT																		
NBL	26	30			0	0	26	30	26	30	26	30	0	0	26	30	26	30	28	32	28	32
NBT	411	696			0	0	411	696	414	702	414	702	12	10	426	712	426	712	455	760	455	760
NBR	159	155	2%		3	1	162	156	160	156	163	157	0	0	160	156	163	157	171	167	174	168
SBL	89	134	2%		3	1	92	135	90	135	93	136	0	3	90	138	93	139	96	147	99	148
SBT	588	759			0	0	588	759	593	765	593	765	8	11	601	776	601	776	642	829	642	829
SBR	257	288			0	0	257	288	259	290	259	290	0	3	259	293	259	293	277	313	277	313
EBL	195	203			0	0	195	203	197	205	197	205	0	0	197	205	197	205	210	219	210	219
EBT	663	1,097	6%		7	1	670	1,098	668	1,106	675	1,107	1	1	669	1,107	676	1,108	714	1,182	721	1,183
EBR	17	65			0	0	17	65	17	66	17	66	4	0	21	66	21	66	22	70	22	70
WBL	186	156		2%	0	3	186	159	187	157	187	160	4	0	191	157	191	160	204	168	204	171
WBT	1,017	660		6%	1	8	1,018	668	1,025	665	1,026	673	1	1	1,026	666	1,027	674	1,096	711	1,097	719
WBR	118	119		2%	0	3	118	122	119	120	119	123	0	0	119	120	119	123	127	128	127	131

5 Study Intersection: Slauson Ave / Rosemead Blvd  
 North/South: Slauson Ave  
 East/West: Rosemead Blvd

OY Year: 2023 2040  
 Ambient Growth: 0.4%  
 Years till opening: 2 17

Trip Gen							
ADT	AM Peak Hour			PM Peak Hour			Total
	Total	In	Out	Total	In	Out	
1146	150	133	17	148	22	126	

7:15 4:45

	Existing		Project Only		Existing With Proj.		OY		OY+P		Cum. Proj. Only		OY+CP		OY+CP+P		BO		BO With Proj.			
	AM	PM	Dist. %		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM		
			IN	OUT																		
NBL	91	78		10%	2	13	93	91	92	79	94	92	0	0	92	79	94	92	98	84	100	97
NBT	600	914		15%	3	18	603	932	605	921	608	939	20	30	625	951	628	969	668	1,016	671	1,034
NBR	148	167		15%	3	19	151	186	149	168	152	187	0	0	149	168	152	187	159	179	162	198
SBL	96	123			0	0	96	123	97	124	97	124	0	0	97	124	97	124	104	132	104	132
SBT	758	957	15%		20	3	778	960	764	965	784	968	20	26	784	991	804	994	837	1,058	857	1,061
SBR	96	109			0	0	96	109	97	110	97	110	0	0	97	110	97	110	104	117	104	117
EBL	122	201			0	0	122	201	123	203	123	203	0	0	123	203	123	203	131	217	131	217
EBT	737	1,025			0	0	737	1,025	743	1,033	743	1,033	5	1	748	1,034	748	1,034	799	1,104	799	1,104
EBR	128	136	10%		13	3	141	139	129	137	142	140	0	0	129	137	142	140	138	146	151	149
WBL	252	230	15%		20	3	272	233	254	232	274	235	0	0	254	232	274	235	271	248	291	251
WBT	1,157	720			0	0	1,157	720	1,166	726	1,166	726	1	4	1,167	730	1,167	730	1,246	780	1,246	780
WBR	127	154			0	0	127	154	128	155	128	155	0	0	128	155	128	155	137	166	137	166



**7** Study Intersection: Telegraph Rd / Paramount Blvd  
 North/South: Telegraph Rd  
 East/West: Paramount Blvd

OY Year: 2023      2040  
 Ambient Growth: 0.4%  
 Years till opening: 2      17

Trip Gen						
ADT	AM Peak Hour			PM Peak Hour		
	Total	In	Out	Total	In	Out
1146	150	133	17	148	22	126

7:15      4:15

	Existing		Project Only				Existing With Proj.		OY		OY+P		Cum. Proj. Only		OY+CP		OY+CP+P		BO		BO With Proj.	
	AM	PM	Dist. %		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
			IN	OUT																		
NBL	142	156			0	0	142	156	143	157	143	157	0	0	143	157	143	157	153	168	153	168
NBT	410	738	2%		3	0	413	738	413	744	416	744	11	9	424	753	427	753	453	804	456	804
NBR	105	153			0	0	105	153	106	154	106	154	0	0	106	154	106	154	113	164	113	164
SBL	111	93			0	0	111	93	112	94	112	94	0	0	112	94	112	94	120	100	120	100
SBT	744	875		2%	0	3	744	878	750	882	750	885	8	10	758	892	758	895	810	953	810	956
SBR	37	24			0	0	37	24	37	24	37	24	0	0	37	24	37	24	40	26	40	26
EBL	39	50			0	0	39	50	39	50	39	50	0	0	39	50	39	50	42	53	42	53
EBT	492	901	5%		7	1	499	902	496	908	503	909	0	0	496	908	503	909	530	970	537	971
EBR	148	263			0	0	148	263	149	265	149	265	0	0	149	265	149	265	159	283	159	283
WBL	200	171			0	0	200	171	202	172	202	172	0	0	202	172	202	172	216	184	216	184
WBT	733	426		5%	1	6	734	432	739	429	740	435	0	0	739	429	740	435	789	458	790	464
WBR	75	58			0	0	75	58	76	58	76	58	0	0	76	58	76	58	81	62	81	62

8 Study Intersection: Telegraph Rd / Rosemead Blvd  
 North/South: Telegraph Rd  
 East/West: Rosemead Blvd

OY Year: 2023 2040  
 Ambient Growth: 0.4%  
 Years till opening: 2 17

Trip Gen							
ADT	AM Peak Hour			PM Peak Hour			
	Total	In	Out	Total	In	Out	
1146	150	133	17	148	22	126	

7:15 4:45

	Existing		Project Only				Existing With Proj.		OY		OY+P		Cum. Proj. Only		OY+CP		OY+CP+P		BO		BO With Proj.	
	AM	PM	Dist. %		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
			IN	OUT																		
NBL	225	170			0	0	225	170	227	171	227	171	0	0	227	171	227	171	242	183	242	183
NBT	624	996	45%		60	10	684	1,006	629	1,004	689	1,014	18	28	647	1,032	707	1,042	691	1,102	751	1,112
NBR	416	534			0	0	416	534	419	538	419	538	0	0	419	538	419	538	447	575	447	575
SBL	41	88		10%	2	13	43	101	41	89	43	102	0	0	41	89	43	102	44	95	46	108
SBT	907	901		45%	7	57	914	958	914	908	921	965	18	23	932	931	939	988	995	994	1,002	1,051
SBR	21	27		5%	1	6	22	33	21	27	22	33	0	0	21	27	22	33	22	29	23	35
EBL	60	88	5%		7	1	67	89	60	89	67	90	0	0	60	89	67	90	64	95	71	96
EBT	520	677			0	0	520	677	524	682	524	682	0	0	524	682	524	682	560	728	560	728
EBR	259	399			0	0	259	399	261	402	261	402	0	0	261	402	261	402	279	429	279	429
WBL	522	463			0	0	522	463	526	467	526	467	0	0	526	467	526	467	562	499	562	499
WBT	681	531			0	0	681	531	686	535	686	535	0	0	686	535	686	535	733	571	733	571
WBR	61	95	10%		13	2	74	97	61	96	74	98	0	0	61	96	74	98	65	103	78	105



9 Study Intersection: Paramount Blvd / I-5 NB Ramps  
 North/South: Paramount Blvd  
 East/West: I-5 NB Ramps

OY Year: 2023 2040  
 Ambient Growth: 0.4%  
 Years till opening: 2 17

Trip Gen							
ADT	AM Peak Hour			PM Peak Hour			
	Total	In	Out	Total	In	Out	
1146	150	133	17	148	22	126	

7:15 4:30

	Existing		Project Only				Existing With Proj.		OY		OY+P		Cum. Proj. Only		OY+CP		OY+CP+P		BO		BO With Proj.	
	AM	PM	Dist. %		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
			IN	OUT																		
NBL	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NBT	745	1,016	2%		3	0	748	1,016	751	1,024	754	1,024	11	9	762	1,033	765	1,033	814	1,103	817	1,103
NBR	693	287			0	0	693	287	699	289	699	289	0	0	699	289	699	289	747	309	747	309
SBL	129	59			0	0	129	59	130	59	130	59	0	0	130	59	130	59	139	63	139	63
SBT	1,159	1,407		2%	0	3	1,159	1,410	1,168	1,418	1,168	1,421	8	10	1,176	1,428	1,176	1,431	1,256	1,525	1,256	1,528
SBR	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBL	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBR	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBL	85	501			0	0	85	501	86	505	86	505	0	0	86	505	86	505	92	539	92	539
WBT	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WBR	46	169			0	0	46	169	46	170	46	170	0	0	46	170	46	170	49	182	49	182







# Appendix D: Cumulative Projects Information

# PROPOSED BEVERLY CROSSING TRAFFIC IMPACT ANALYSIS AND PARKING STUDY City of Pico Rivera, California



**PROPOSED BEVERLY CROSSING PROJECT  
TRAFFIC IMPACT ANALYSIS & PARKING STUDY  
City of Pico Rivera, California**

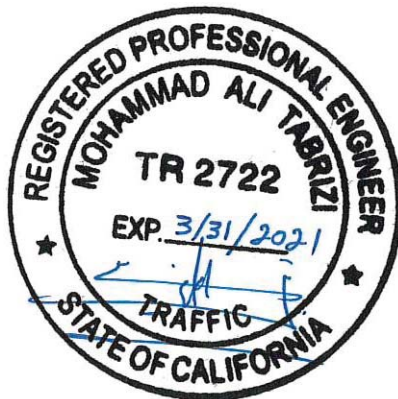
**Prepared for:**

SCALE(S) LAB ARCHITECTS  
970 N Broadway, Suite 107  
Los Angeles, CA 90012

**Prepared by:**

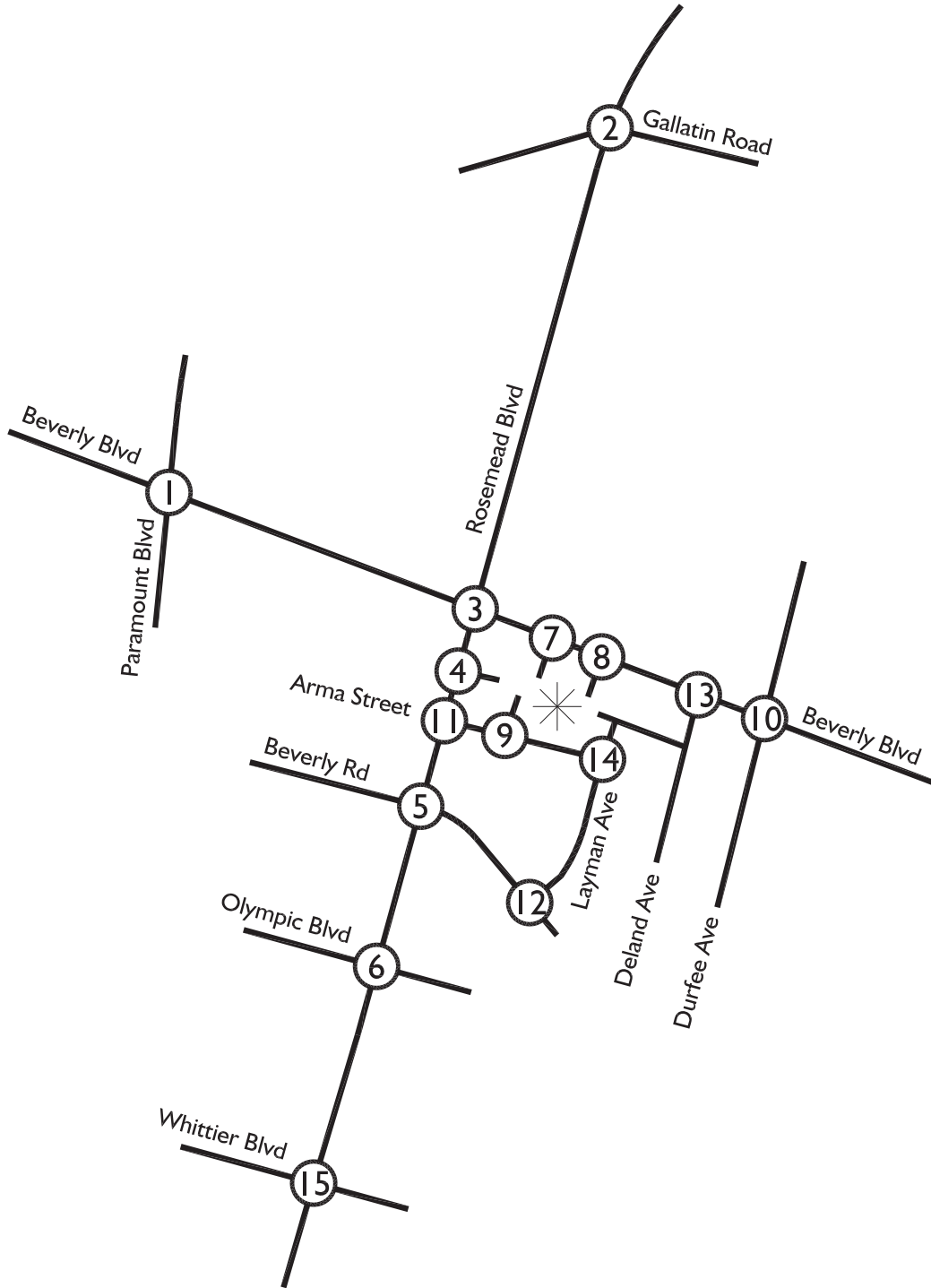
RK ENGINEERING GROUP, INC.  
4000 Westerly Place, Suite 280  
Newport Beach, CA 92660

**Alex Tabrizi, PE, TE  
Elias Bandek, EIT**



July 30, 2020





**Legend:**

① = Study Area Intersection

\* = Project Site

NOT TO SCALE



**Table 4-2  
Project Trip Generation Summary**

Land Use	Quantity	Units	Peak Hour						Daily
			AM Peak Hour			PM Peak Hour			
			In	Out	Total	In	Out	Total	
Health/Fitness Club	24.807	TSF	17	16	33	49	37	86	856
Retail	2.000	TSF	1	1	2	4	4	8	76
<i>Pass-by Adjustment (0% AM, 34% PM) <sup>1</sup></i>			0	0	0	-1	-1	-2	-13
<i>Subtotal Retail</i>			1	1	2	3	3	6	63
Supermarket	25.354	TSF	58	39	97	119	115	234	2,707
<i>Pass-by Adjustment (0% AM, 36% PM) <sup>1</sup></i>			0	0	0	-43	-41	-84	-487
<i>Subtotal Supermarket</i>			58	39	97	76	74	150	2,220
Coffee/Donut Shop w/ Drive Thru	1.800	TSF	82	78	160	39	39	78	1,477
<i>Pass-by Adjustment (49% AM, 50% PM) <sup>2</sup></i>			-40	-38	-78	-20	-20	-40	-731
<i>Subtotal Coffee/Donut Shop w/ Drive Thru</i>			42	40	82	19	19	38	746
<b>Subtotal Without Pass-by Adjustment</b>			<b>158</b>	<b>134</b>	<b>292</b>	<b>211</b>	<b>195</b>	<b>406</b>	<b>5,116</b>
<b>Subtotal after Pass-by Adjustment</b>			<b>118</b>	<b>96</b>	<b>214</b>	<b>147</b>	<b>133</b>	<b>280</b>	<b>3,885</b>
<i>Internal Trip Capture (5%) <sup>3</sup></i>			-6	-5	-11	-7	-7	-14	-194
<b>Project Total</b>			<b>112</b>	<b>91</b>	<b>203</b>	<b>140</b>	<b>126</b>	<b>266</b>	<b>3,691</b>

**Notes:**

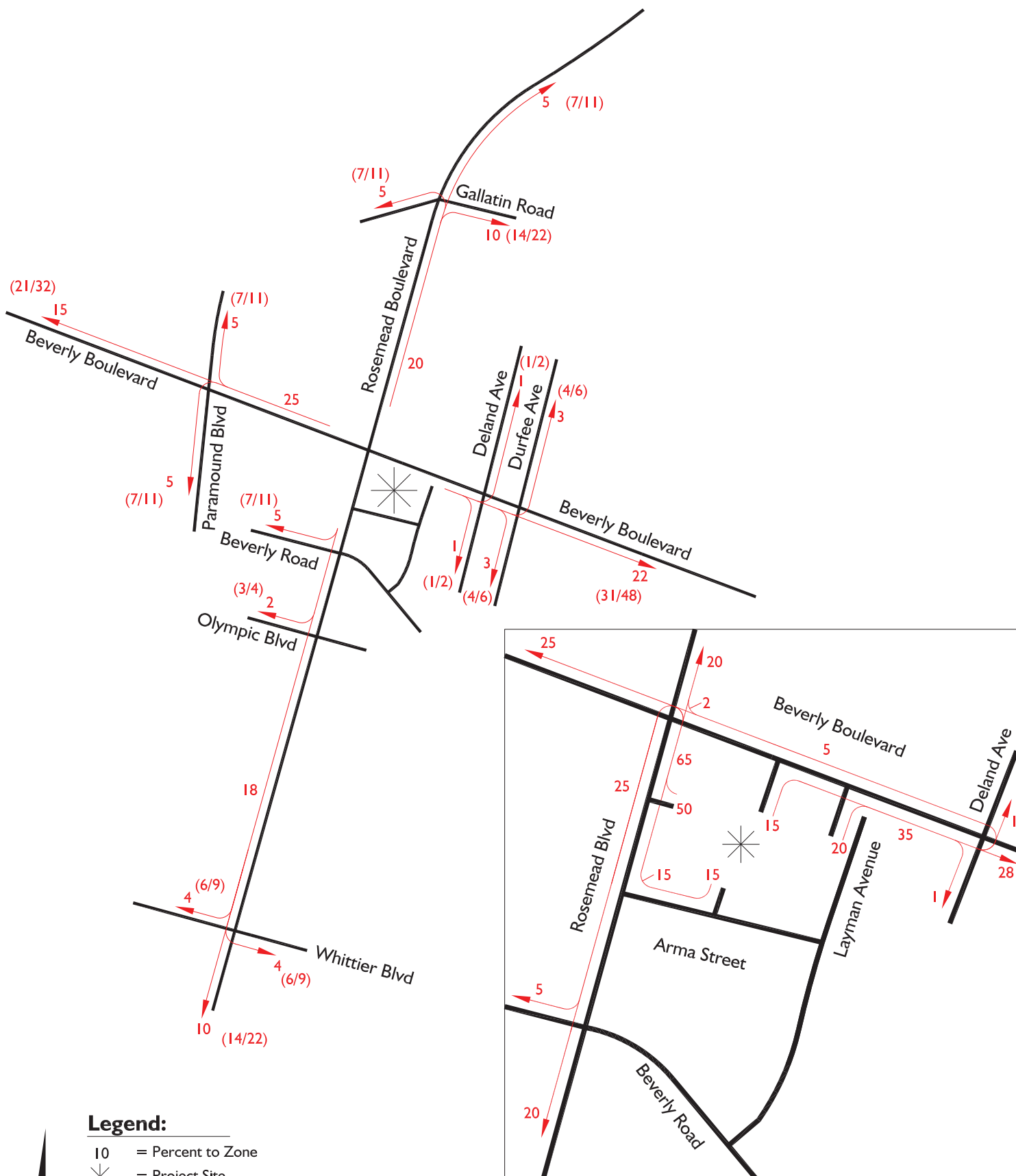
Trip Generation Source: 2017 ITE 10<sup>th</sup> edition Trip Generation Manual. TSF = thousand square feet.

1 Pass-by adjustment per ITE. For daily pass-by adjustment, the analysis utilizes the average between AM and PM peak hour.

2 Since ITE does not have pass-by rates for this land use, the analysis utilizes the ITE pass-by adjustment rates for fast food restaurant with drive through land use. For daily pass-by adjustment, the analysis utilizes the average between AM and PM peak hour.

3 ITE does not have recommended internal capture adjustment rates for the proposed uses. This analysis assumes an overall adjustment of five (5) percent for the project site.

# Project Outbound Trip Distribution



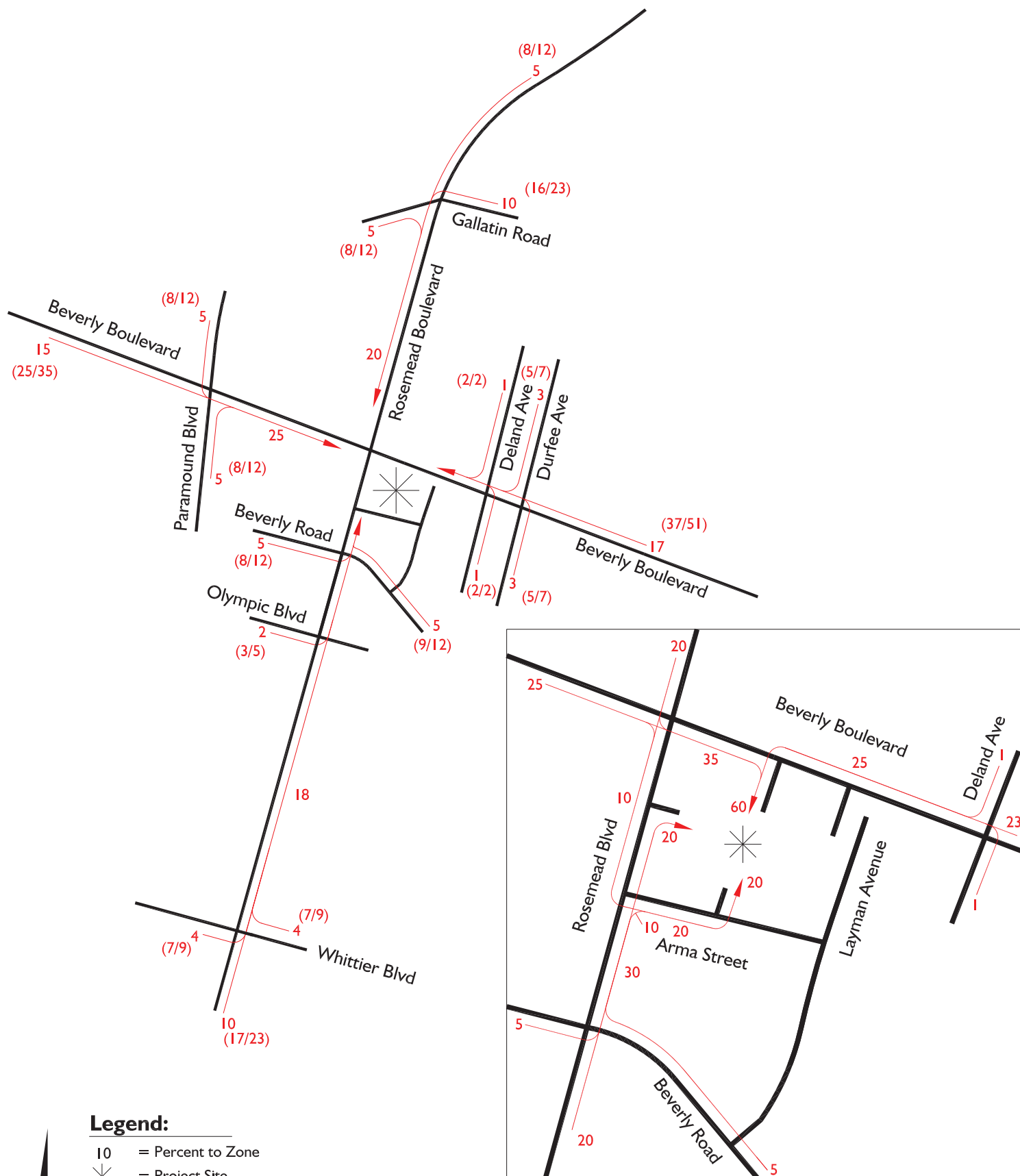
**Legend:**

10 = Percent to Zone

\* = Project Site

(XX/XX) = AM/PM Number of Project Trips

# Project Inbound Trip Distribution



**Legend:**

10 = Percent to Zone

\* = Project Site

(XX/XX) = AM/PM Number of Project Trips

TRANSPORTATION IMPACT ANALYSIS REPORT

THE MERCURY PROJECT

City of Pico Rivera, California  
June 18, 2021

*Prepared for:*

Optimus Properties, LLC  
1801 Century Park East, Suite 2100  
Los Angeles, California 90067

LLG Ref. 1-21-4418-1



*Prepared by:*

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Table 2-1  
PROJECT TRIP GENERATION [1]

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Apartment [3] - Less 15% Internal Capture/Captive Market [4]	242 DU	1,316 (197)	23 (3)	64 (10)	87 (13)	65 (10)	41 (6)	106 (16)
Affordable Housing [5] - Less 15% Internal Capture/Captive Market [4]	13 DU	54 (8)	3 0	4 (1)	7 (1)	3 0	2 0	5 0
Retail [6]	2,750 GLSF	104	2	1	3	5	5	10
Restaurant [7]	2,750 GSF	308	15	12	27	17	10	27
<b>TOTAL</b>		<b>1,577</b>	<b>40</b>	<b>70</b>	<b>110</b>	<b>80</b>	<b>52</b>	<b>132</b>

[1] Source: ITE "Trip Generation Manual", 10th Edition, 2017 and Transportation Assessment Guidelines (TAG), City of Los Angeles Department of Transportation (LADOT), July 2020.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 221 (Multi-Family [Mid-Rise]) trip generation average rates.

- Daily Trip Rate: 5.44 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.36 trips/dwelling units; 26% inbound/74% outbound
- PM Peak Hour Trip Rate: 0.44 trips/dwelling units; 61% inbound/39% outbound

[4] Source: ITE "Trip Generation Handbook", 3rd Edition, 2017 and the National Cooperative Highway Research Program (NCHRP) Report 684 - "Enhanced Internal Trip Capture Estimation for Mixed-Use Developments", 2011. Internal capture and Captive markets trips are trips made to and from other components of the project and other uses in the immediate vicinity of the site. A 15% internal capture/captive market reduction factor has been applied to reflect the internal trip making between the project land uses and other uses in the area.

[5] LADOT trip generation average rates for Family Affordable Housing.

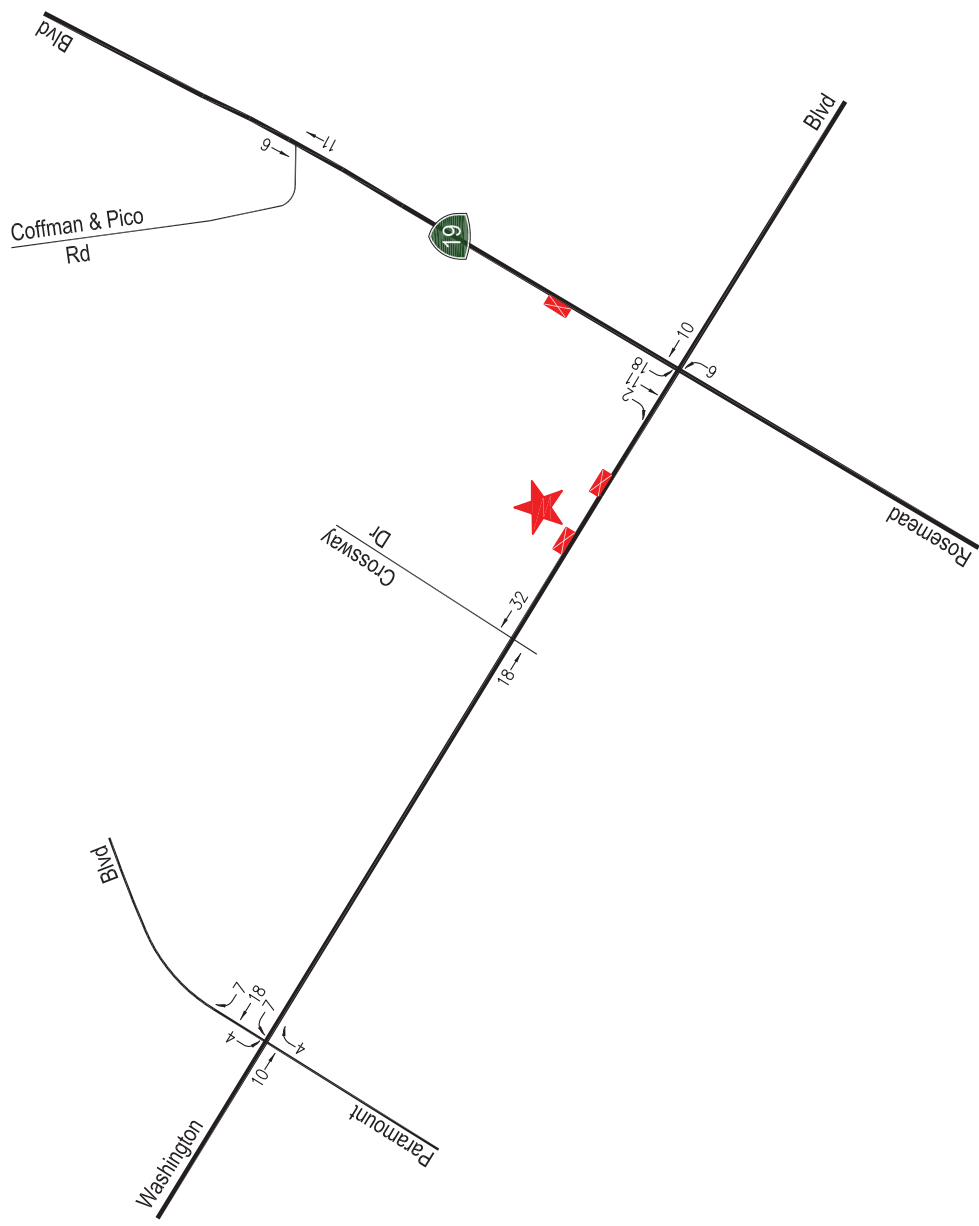
- Daily Trip Rate: 4.16 trips/dwelling unit; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.52 trips/dwelling unit; 38% inbound/62% outbound
- PM Peak Hour Trip Rate: 0.38 trips/dwelling unit; 55% inbound/45% outbound

[6] ITE Land Use Code 820 (Shopping Center) trip generation average rates.

- Daily Trip Rate: 37.75 trips/1,000 SF; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 0.94 trips/1,000 SF; 62% inbound/38% outbound
- PM Peak Hour Trip Rate: 3.81 trips/1,000 SF; 48% inbound/52% outbound

[7] ITE Land Use Code 932 (High-Turnover [Sit-Down] Restaurant) trip generation average rates.

- Daily Trip Rate: 112.18 trips/1,000 SF of floor area; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 9.94 trips/1,000 SF of floor area; 55% inbound/45% outbound
- PM Peak Hour Trip Rate: 9.77 trips/1,000 SF of floor area; 62% inbound/38% outbound



★ Project Site



**Figure 2-4**  
**Project Traffic Volumes**  
 Weekday AM Peak Hour  
 The Mercury Project



# Appendix E: ICU Analysis Worksheets – All Study Scenarios

INTERSECTION: Paramount Blvd / Washington Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	243	2	2880	<b>0.0844</b>	NB Left	243	2	2,880	<b>0.0844</b>	NB Left	245	2	2,880	<b>0.0851</b>	NB Left	245	2	2,880	<b>0.0851</b>
NB Thru	382	2	3200	0.1194	NB Thru	382	2	3,200	0.1194	NB Thru	385	2	3,200	0.1203	NB Thru	385	2	3,200	0.1203
NB Right	79	1	1600	0.0494	NB Right	79	1	1,600	0.0494	NB Right	80	1	1,600	0.0500	NB Right	80	1	1,600	0.0500
SB Left	116	2	2880	0.0403	SB Left	116	2	2,880	0.0403	SB Left	117	2	2,880	0.0406	SB Left	117	2	2,880	0.0406
SB Thru	820	2	3600	<b>0.2278</b>	SB Thru	823	2	3,600	<b>0.2286</b>	SB Thru	827	2	3,600	<b>0.2297</b>	SB Thru	830	2	3,600	<b>0.2306</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	92	1	1600	0.0575	EB Left	92	1	1,600	0.0575	EB Left	93	1	1,600	0.0581	EB Left	93	1	1,600	0.0581
EB Thru	991	3	4800	<b>0.2065</b>	EB Thru	998	3	4,800	<b>0.2079</b>	EB Thru	999	3	4,800	<b>0.2081</b>	EB Thru	1,006	3	4,800	<b>0.2096</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	120	1	1600	<b>0.0750</b>	WB Left	120	1	1,600	<b>0.0750</b>	WB Left	121	1	1,600	<b>0.0756</b>	WB Left	121	1	1,600	<b>0.0756</b>
WB Thru	1,033	3	4800	0.2152	WB Thru	1,034	3	4,800	0.2154	WB Thru	1,041	3	4,800	0.2169	WB Thru	1,042	3	4,800	0.2171
WB Right	63	0	0	0.0000	WB Right	63	0	0	0.0000	WB Right	64	0	0	0.0000	WB Right	64	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7437</b>	ICU				<b>0.7459</b>	ICU				<b>0.7485</b>	ICU				<b>0.7509</b>
LOS				C	LOS				C	LOS				C	LOS				C

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	246	2	2,880	<b>0.0854</b>	NB Left	246	2	2,880	<b>0.0854</b>	NB Left	263	2	2,880	<b>0.0913</b>	NB Left	263	2	2,880	<b>0.0913</b>
NB Thru	385	2	3,200	0.1203	NB Thru	385	2	3,200	0.1203	NB Thru	411	2	3,200	0.1284	NB Thru	411	2	3,200	0.1284
NB Right	86	1	1,600	0.0538	NB Right	86	1	1,600	0.0538	NB Right	92	1	1,600	0.0575	NB Right	92	1	1,600	0.0575
SB Left	123	2	2,880	0.0427	SB Left	123	2	2,880	0.0427	SB Left	131	2	2,880	0.0455	SB Left	131	2	2,880	0.0455
SB Thru	829	2	3,600	<b>0.2303</b>	SB Thru	832	2	3,600	<b>0.2311</b>	SB Thru	886	2	3,600	<b>0.2461</b>	SB Thru	889	2	3,600	<b>0.2469</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	95	1	1,600	0.0594	EB Left	95	1	1,600	0.0594	EB Left	101	1	1,600	0.0631	EB Left	101	1	1,600	0.0631
EB Thru	1,010	3	4,800	<b>0.2104</b>	EB Thru	1,017	3	4,800	<b>0.2119</b>	EB Thru	1,079	3	4,800	<b>0.2248</b>	EB Thru	1,086	3	4,800	<b>0.2263</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	128	1	1,600	<b>0.0800</b>	WB Left	128	1	1,600	<b>0.0800</b>	WB Left	137	1	1,600	<b>0.0856</b>	WB Left	137	1	1,600	<b>0.0856</b>
WB Thru	1,062	3	4,800	0.2213	WB Thru	1,063	3	4,800	0.2215	WB Thru	1,134	3	4,800	0.2363	WB Thru	1,135	3	4,800	0.2365
WB Right	73	0	0	0.0000	WB Right	73	0	0	0.0000	WB Right	78	0	0	0.0000	WB Right	78	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7561</b>	ICU				<b>0.7584</b>	ICU				<b>0.7978</b>	ICU				<b>0.8001</b>
LOS				C	LOS				C	LOS				C	LOS				D

**Notes:**  
Key conflicting movements as a part of ICU indicated in **bold**.  
Capacity expressed in vehicles per hour of green  
Maximum capacity per lane is 1,600  
Maximum Capacity for Dual Left-Turn Lanes is 2,880  
\*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Paramount Blvd / Washington Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	359	2	2880	<b>0.1247</b>	NB Left	359	2	2,880	<b>0.1247</b>	NB Left	362	2	2,880	<b>0.1257</b>	NB Left	362	2	2,880	<b>0.1257</b>
NB Thru	813	2	3200	0.2541	NB Thru	816	2	3,200	0.2550	NB Thru	820	2	3,200	0.2563	NB Thru	823	2	3,200	0.2572
NB Right	136	1	1600	0.0850	NB Right	136	1	1,600	0.0850	NB Right	137	1	1,600	0.0856	NB Right	137	1	1,600	0.0856
SB Left	168	2	2880	0.0583	SB Left	168	2	2,880	0.0583	SB Left	169	2	2,880	0.0587	SB Left	169	2	2,880	0.0587
SB Thru	791	2	3600	<b>0.2197</b>	SB Thru	792	2	3,600	<b>0.2200</b>	SB Thru	797	2	3,600	<b>0.2214</b>	SB Thru	798	2	3,600	<b>0.2217</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	208	1	1600	0.1300	EB Left	208	1	1,600	0.1300	EB Left	210	1	1,600	0.1313	EB Left	210	1	1,600	0.1313
EB Thru	1,610	3	4800	<b>0.3354</b>	EB Thru	1,611	3	4,800	<b>0.3356</b>	EB Thru	1,623	3	4,800	<b>0.3381</b>	EB Thru	1,624	3	4,800	<b>0.3383</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	104	1	1600	<b>0.0650</b>	WB Left	104	1	1,600	<b>0.0650</b>	WB Left	105	1	1,600	<b>0.0656</b>	WB Left	105	1	1,600	<b>0.0656</b>
WB Thru	785	3	4800	0.1635	WB Thru	791	3	4,800	0.1648	WB Thru	791	3	4,800	0.1648	WB Thru	797	3	4,800	0.1660
WB Right	119	0	0	0.0000	WB Right	119	0	0	0.0000	WB Right	120	0	0	0.0000	WB Right	120	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8948</b>	ICU				<b>0.8953</b>	ICU				<b>0.9008</b>	ICU				<b>0.9013</b>
LOS				D	LOS				D	LOS				E	LOS				E

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	365	2	2,880	<b>0.1267</b>	NB Left	365	2	2,880	<b>0.1267</b>	NB Left	390	2	2,880	<b>0.1354</b>	NB Left	390	2	2,880	<b>0.1354</b>
NB Thru	822	2	3,200	0.2569	NB Thru	825	2	3,200	0.2578	NB Thru	878	2	3,200	0.2744	NB Thru	881	2	3,200	0.2753
NB Right	147	1	1,600	0.0919	NB Right	147	1	1,600	0.0919	NB Right	157	1	1,600	0.0981	NB Right	157	1	1,600	0.0981
SB Left	177	2	2,880	0.0615	SB Left	177	2	2,880	0.0615	SB Left	189	2	2,880	0.0656	SB Left	189	2	2,880	0.0656
SB Thru	797	2	3,600	<b>0.2214</b>	SB Thru	798	2	3,600	<b>0.2217</b>	SB Thru	852	2	3,600	<b>0.2367</b>	SB Thru	853	2	3,600	<b>0.2369</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	210	1	1,600	0.1313	EB Left	210	1	1,600	0.1313	EB Left	224	1	1,600	0.1400	EB Left	224	1	1,600	0.1400
EB Thru	1,646	3	4,800	<b>0.3429</b>	EB Thru	1,647	3	4,800	<b>0.3431</b>	EB Thru	1,758	3	4,800	<b>0.3663</b>	EB Thru	1,759	3	4,800	<b>0.3665</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	110	1	1,600	<b>0.0688</b>	WB Left	110	1	1,600	<b>0.0688</b>	WB Left	117	1	1,600	<b>0.0731</b>	WB Left	117	1	1,600	<b>0.0731</b>
WB Thru	807	3	4,800	0.1681	WB Thru	813	3	4,800	0.1694	WB Thru	862	3	4,800	0.1796	WB Thru	868	3	4,800	0.1808
WB Right	125	0	0	0.0000	WB Right	125	0	0	0.0000	WB Right	134	0	0	0.0000	WB Right	134	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.9098</b>	ICU				<b>0.9103</b>	ICU				<b>0.9615</b>	ICU				<b>0.9619</b>
LOS				E	LOS				E	LOS				E	LOS				E

**Notes:**  
Key conflicting movements as a part of ICU indicated in **bold**.  
Capacity expressed in vehicles per hour of green  
Maximum capacity per lane is 1,600  
Maximum Capacity for Dual Left-Turn Lanes is 2,880  
\*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Rosemead Blvd / Washington Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	173	1	1600	<b>0.1081</b>	NB Left	174	1	1,600	<b>0.1088</b>	NB Left	174	1	1,600	<b>0.1088</b>	NB Left	175	1	1,600	<b>0.1094</b>
NB Thru	794	3	4800	0.1654	NB Thru	796	3	4,800	0.1658	NB Thru	801	3	4,800	0.1669	NB Thru	803	3	4,800	0.1673
NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000
SB Left	187	1	1600	0.1169	SB Left	187	1	1,600	0.1169	SB Left	188	1	1,600	0.1175	SB Left	188	1	1,600	0.1175
SB Thru	891	3	4800	<b>0.1856</b>	SB Thru	898	3	4,800	<b>0.1871</b>	SB Thru	898	3	4,800	<b>0.1871</b>	SB Thru	905	3	4,800	<b>0.1885</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	89	1	1600	<b>0.0556</b>	EB Left	89	1	1,600	<b>0.0556</b>	EB Left	90	1	1,600	<b>0.0563</b>	EB Left	90	1	1,600	<b>0.0563</b>
EB Thru	641	3	4800	0.1335	EB Thru	641	3	4,800	0.1335	EB Thru	646	3	4,800	0.1346	EB Thru	646	3	4,800	0.1346
EB Right	183	1	1600	0.1144	EB Right	190	1	1,600	0.1188	EB Right	184	1	1,600	0.1150	EB Right	191	1	1,600	0.1194
WB Left	243	1	1600	0.1519	WB Left	249	1	1,600	0.1556	WB Left	245	1	1,600	0.1531	WB Left	251	1	1,600	0.1569
WB Thru	1,260	3	4800	<b>0.2625</b>	WB Thru	1,260	3	4,800	<b>0.2625</b>	WB Thru	1,270	3	4,800	<b>0.2646</b>	WB Thru	1,270	3	4,800	<b>0.2646</b>
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7618</b>	ICU				<b>0.7640</b>	ICU				<b>0.7668</b>	ICU				<b>0.7688</b>
LOS				C	LOS				C	LOS				C	LOS				C

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	180	1	1,600	<b>0.1125</b>	NB Left	181	1	1,600	<b>0.1131</b>	NB Left	192	1	1,600	<b>0.1200</b>	NB Left	193	1	1,600	<b>0.1206</b>
NB Thru	803	3	4,800	0.1673	NB Thru	805	3	4,800	0.1677	NB Thru	858	3	4,800	0.1788	NB Thru	860	3	4,800	0.1792
NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000
SB Left	206	1	1,600	0.1288	SB Left	206	1	1,600	0.1288	SB Left	220	1	1,600	0.1375	SB Left	220	1	1,600	0.1375
SB Thru	912	3	4,800	<b>0.1900</b>	SB Thru	919	3	4,800	<b>0.1915</b>	SB Thru	974	3	4,800	<b>0.2029</b>	SB Thru	981	3	4,800	<b>0.2044</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	90	1	1,600	<b>0.0563</b>	EB Left	90	1	1,600	<b>0.0563</b>	EB Left	96	1	1,600	<b>0.0600</b>	EB Left	96	1	1,600	<b>0.0600</b>
EB Thru	647	3	4,800	0.1348	EB Thru	647	3	4,800	0.1348	EB Thru	691	3	4,800	0.1440	EB Thru	691	3	4,800	0.1440
EB Right	184	1	1,600	0.1150	EB Right	191	1	1,600	0.1194	EB Right	197	1	1,600	0.1231	EB Right	204	1	1,600	0.1275
WB Left	245	1	1,600	0.1531	WB Left	251	1	1,600	0.1569	WB Left	262	1	1,600	0.1638	WB Left	268	1	1,600	0.1675
WB Thru	1,285	3	4,800	<b>0.2677</b>	WB Thru	1,285	3	4,800	<b>0.2677</b>	WB Thru	1,372	3	4,800	<b>0.2858</b>	WB Thru	1,372	3	4,800	<b>0.2858</b>
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7765</b>	ICU				<b>0.7786</b>	ICU				<b>0.8187</b>	ICU				<b>0.8208</b>
LOS				C	LOS				C	LOS				D	LOS				D

**Notes:**  
Key conflicting movements as a part of ICU indicated in **bold**.  
Capacity expressed in vehicles per hour of green  
Maximum capacity per lane is 1,600  
Maximum Capacity for Dual Left-Turn Lanes is 2,880  
\*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Rosemead Blvd / Washington Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	194	1	1600	0.1213	NB Left	200	1	1,600	0.1250	NB Left	196	1	1,600	0.1225	NB Left	202	1	1,600	0.1263
NB Thru	1,034	3	4800	<b>0.2154</b>	NB Thru	1,046	3	4,800	<b>0.2179</b>	NB Thru	1,042	3	4,800	<b>0.2171</b>	NB Thru	1,054	3	4,800	<b>0.2196</b>
NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000
SB Left	211	1	1600	<b>0.1319</b>	SB Left	211	1	1,600	<b>0.1319</b>	SB Left	213	1	1,600	<b>0.1331</b>	SB Left	213	1	1,600	<b>0.1331</b>
SB Thru	983	3	4800	0.2048	SB Thru	984	3	4,800	0.2050	SB Thru	991	3	4,800	0.2065	SB Thru	992	3	4,800	0.2067
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	241	1	1600	0.1506	EB Left	241	1	1,600	0.1506	EB Left	243	1	1,600	0.1519	EB Left	243	1	1,600	0.1519
EB Thru	1,173	3	4800	<b>0.2444</b>	EB Thru	1,173	3	4,800	<b>0.2444</b>	EB Thru	1,182	3	4,800	<b>0.2463</b>	EB Thru	1,182	3	4,800	<b>0.2463</b>
EB Right	207	1	1600	0.1294	EB Right	208	1	1,600	0.1300	EB Right	209	1	1,600	0.1306	EB Right	210	1	1,600	0.1313
WB Left	190	1	1600	<b>0.1188</b>	WB Left	191	1	1,600	<b>0.1194</b>	WB Left	192	1	1,600	<b>0.1200</b>	WB Left	193	1	1,600	<b>0.1206</b>
WB Thru	932	3	4800	0.1942	WB Thru	932	3	4,800	0.1942	WB Thru	939	3	4,800	0.1956	WB Thru	939	3	4,800	0.1956
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8605</b>	ICU				<b>0.8636</b>	ICU				<b>0.8665</b>	ICU				<b>0.8696</b>
LOS				D	LOS				D	LOS				D	LOS				D

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	208	1	1,600	0.1300	NB Left	214	1	1,600	0.1338	NB Left	222	1	1,600	0.1388	NB Left	228	1	1,600	0.1425
NB Thru	1,044	3	4,800	<b>0.2175</b>	NB Thru	1,056	3	4,800	<b>0.2200</b>	NB Thru	1,115	3	4,800	<b>0.2323</b>	NB Thru	1,127	3	4,800	<b>0.2348</b>
NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000
SB Left	226	1	1,600	<b>0.1413</b>	SB Left	226	1	1,600	<b>0.1413</b>	SB Left	241	1	1,600	<b>0.1506</b>	SB Left	241	1	1,600	<b>0.1506</b>
SB Thru	1,006	3	4,800	0.2096	SB Thru	1,007	3	4,800	0.2098	SB Thru	1,074	3	4,800	0.2238	SB Thru	1,075	3	4,800	0.2240
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	243	1	1,600	0.1519	EB Left	243	1	1,600	0.1519	EB Left	260	1	1,600	0.1625	EB Left	260	1	1,600	0.1625
EB Thru	1,186	3	4,800	<b>0.2471</b>	EB Thru	1,186	3	4,800	<b>0.2471</b>	EB Thru	1,267	3	4,800	<b>0.2640</b>	EB Thru	1,267	3	4,800	<b>0.2640</b>
EB Right	209	1	1,600	0.1306	EB Right	210	1	1,600	0.1313	EB Right	223	1	1,600	0.1394	EB Right	224	1	1,600	0.1400
WB Left	192	1	1,600	<b>0.1200</b>	WB Left	193	1	1,600	<b>0.1206</b>	WB Left	205	1	1,600	<b>0.1281</b>	WB Left	206	1	1,600	<b>0.1288</b>
WB Thru	962	3	4,800	0.2004	WB Thru	962	3	4,800	0.2004	WB Thru	1,028	3	4,800	0.2142	WB Thru	1,028	3	4,800	0.2142
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8759</b>	ICU				<b>0.8790</b>	ICU				<b>0.9250</b>	ICU				<b>0.9282</b>
LOS				D	LOS				D	LOS				E	LOS				E

**Notes:**  
Key conflicting movements as a part of ICU indicated in **bold**.  
Capacity expressed in vehicles per hour of green  
Maximum capacity per lane is 1,600  
Maximum Capacity for Dual Left-Turn Lanes is 2,880  
\*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Slauson Ave / Telegraph Rd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	175	1	1600	<b>0.1094</b>	NB Left	175	1	1,600	<b>0.1094</b>	NB Left	176	1	1,600	<b>0.1100</b>	NB Left	176	1	1,600	<b>0.1100</b>
NB Thru	926	2	3200	0.2894	NB Thru	933	2	3,200	0.2916	NB Thru	933	2	3,200	0.2916	NB Thru	940	2	3,200	0.2938
NB Right	319	1	1600	0.1994	NB Right	319	1	1,600	0.1994	NB Right	322	1	1,600	0.2013	NB Right	322	1	1,600	0.2013
SB Left	5	1	1600	0.0031	SB Left	5	1	1,600	0.0031	SB Left	5	1	1,600	0.0031	SB Left	5	1	1,600	0.0031
SB Thru	899	2	3200	<b>0.2809</b>	SB Thru	900	2	3,200	<b>0.2813</b>	SB Thru	906	2	3,200	<b>0.2831</b>	SB Thru	907	2	3,200	<b>0.2834</b>
SB Right	438	1	1600	0.2738	SB Right	438	1	1,600	0.2738	SB Right	442	1	1,600	0.2738	SB Right	442	1	1,600	0.2763
EB Left	107	1	1600	0.0669	EB Left	107	1	1,600	<b>0.0669</b>	EB Left	108	1	1,600	0.0675	EB Left	108	1	1,600	<b>0.0675</b>
EB Thru	323	2	3200	<b>0.1009</b>	EB Thru	324	2	3,200	0.1013	EB Thru	326	2	3,200	<b>0.1019</b>	EB Thru	327	2	3,200	0.1022
EB Right	522	1	0*	0.0000	EB Right	522	1	0*	0.0000	EB Right	526	1	0*	0.0000	EB Right	526	1	0*	0.0000
WB Left	366	2	2880	<b>0.1271</b>	WB Left	366	2	2,880	0.1271	WB Left	369	2	2,880	<b>0.1281</b>	WB Left	369	2	2,880	0.1281
WB Thru	511	2	3200	0.1597	WB Thru	518	2	3,200	<b>0.1619</b>	WB Thru	515	2	3,200	0.1609	WB Thru	522	2	3,200	<b>0.1631</b>
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7683</b>	ICU				<b>0.7695</b>	ICU				<b>0.7731</b>	ICU				<b>0.7740</b>
LOS				C	LOS				C	LOS				C	LOS				C

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	176	1	1,600	<b>0.1100</b>	NB Left	176	1	1,600	<b>0.1100</b>	NB Left	177	1	1,600	<b>0.1106</b>	NB Left	177	1	1,600	<b>0.1106</b>
NB Thru	949	2	3,200	0.2966	NB Thru	956	2	3,200	0.2988	NB Thru	1,014	2	3,200	0.3169	NB Thru	1,021	2	3,200	0.3191
NB Right	322	1	1,600	0.2013	NB Right	322	1	1,600	0.2013	NB Right	344	1	1,600	0.2150	NB Right	344	1	1,600	0.2150
SB Left	5	1	1,600	0.0031	SB Left	5	1	1,600	0.0031	SB Left	5	1	1,600	0.0031	SB Left	5	1	1,600	0.0031
SB Thru	919	2	3,200	<b>0.2872</b>	SB Thru	920	2	3,200	<b>0.2875</b>	SB Thru	981	2	3,200	<b>0.3066</b>	SB Thru	982	2	3,200	<b>0.3069</b>
SB Right	442	1	1,600	0.2763	SB Right	442	1	1,600	0.2763	SB Right	472	1	1,600	0.2950	SB Right	472	1	1,600	0.2950
EB Left	108	1	1,600	0.0675	EB Left	108	1	1,600	<b>0.0675</b>	EB Left	115	1	1,600	0.0719	EB Left	115	1	1,600	<b>0.0719</b>
EB Thru	326	2	3,200	<b>0.1019</b>	EB Thru	327	2	3,200	0.1022	EB Thru	348	2	3,200	<b>0.1088</b>	EB Thru	349	2	3,200	0.1091
EB Right	526	1	0*	0.0000	EB Right	526	1	0*	0.0000	EB Right	562	1	0*	0.0000	EB Right	562	1	0*	0.0000
WB Left	369	2	2,880	<b>0.1281</b>	WB Left	369	2	2,880	0.1281	WB Left	394	2	2,880	<b>0.1368</b>	WB Left	394	2	2,880	0.1368
WB Thru	519	2	3,200	0.1622	WB Thru	526	2	3,200	<b>0.1644</b>	WB Thru	554	2	3,200	0.1731	WB Thru	561	2	3,200	<b>0.1753</b>
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7772</b>	ICU				<b>0.7794</b>	ICU				<b>0.8128</b>	ICU				<b>0.8147</b>
LOS				C	LOS				C	LOS				D	LOS				D

**Notes:**

- Key conflicting movements as a part of ICU indicated in **bold**.
- Capacity expressed in vehicles per hour of green
- Maximum capacity per lane is 1,600
- Maximum Capacity for Dual Left-Turn Lanes is 2,880
- \*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Slauson Ave / Telegraph Rd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	88	1	1600	0.0550	NB Left	88	1	1,600	0.0550	NB Left	89	1	1,600	0.0556	NB Left	89	1	1,600	0.0556
NB Thru	1,071	2	3200	<b>0.3347</b>	NB Thru	1,072	2	3,200	<b>0.3350</b>	NB Thru	1,080	2	3,200	<b>0.3375</b>	NB Thru	1,081	2	3,200	<b>0.3378</b>
NB Right	487	1	1600	0.3044	NB Right	487	1	1,600	0.3044	NB Right	491	1	1,600	0.3069	NB Right	491	1	1,600	0.3069
SB Left	37	1	1600	<b>0.0231</b>	SB Left	37	1	1,600	<b>0.0231</b>	SB Left	37	1	1,600	<b>0.0231</b>	SB Left	37	1	1,600	<b>0.0231</b>
SB Thru	758	2	3200	0.2369	SB Thru	766	2	3,200	0.2394	SB Thru	764	2	3,200	0.2388	SB Thru	772	2	3,200	0.2413
SB Right	179	1	1600	0.1119	SB Right	179	1	1,600	0.1119	SB Right	180	1	1,600	0.1125	SB Right	180	1	1,600	0.1125
EB Left	163	1	1600	0.1019	EB Left	163	1	1,600	0.1019	EB Left	164	1	1,600	0.1025	EB Left	164	1	1,600	0.1025
EB Thru	925	2	3200	<b>0.2891</b>	EB Thru	931	2	3,200	<b>0.2909</b>	EB Thru	932	2	3,200	<b>0.2913</b>	EB Thru	938	2	3,200	<b>0.2931</b>
EB Right	743	1	0*	0.0000	EB Right	743	1	0*	0.0000	EB Right	749	1	0*	0.0000	EB Right	749	1	0*	0.0000
WB Left	265	2	2880	<b>0.0920</b>	WB Left	265	2	2,880	<b>0.0920</b>	WB Left	267	2	2,880	<b>0.0927</b>	WB Left	267	2	2,880	<b>0.0927</b>
WB Thru	387	2	3200	0.1209	WB Thru	388	2	3,200	0.1213	WB Thru	390	2	3,200	0.1219	WB Thru	391	2	3,200	0.1222
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8889</b>	ICU				<b>0.8910</b>	ICU				<b>0.8946</b>	ICU				<b>0.8967</b>
LOS				D	LOS				D	LOS				D	LOS				D

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	89	1	1,600	0.0556	NB Left	89	1	1,600	0.0556	NB Left	95	1	1,600	0.0594	NB Left	95	1	1,600	0.0594
NB Thru	1,101	2	3,200	<b>0.3441</b>	NB Thru	1,102	2	3,200	<b>0.3444</b>	NB Thru	1,176	2	3,200	<b>0.3675</b>	NB Thru	1,177	2	3,200	<b>0.3678</b>
NB Right	491	1	1,600	0.3069	NB Right	491	1	1,600	0.3069	NB Right	524	1	1,600	0.3275	NB Right	524	1	1,600	0.3275
SB Left	37	1	1,600	<b>0.0231</b>	SB Left	37	1	1,600	<b>0.0231</b>	SB Left	40	1	1,600	<b>0.0250</b>	SB Left	40	1	1,600	<b>0.0250</b>
SB Thru	784	2	3,200	0.2450	SB Thru	792	2	3,200	0.2475	SB Thru	837	2	3,200	0.2616	SB Thru	845	2	3,200	0.2641
SB Right	180	1	1,600	0.1125	SB Right	180	1	1,600	0.1125	SB Right	192	1	1,600	0.1200	SB Right	192	1	1,600	0.1200
EB Left	164	1	1,600	0.1025	EB Left	164	1	1,600	0.1025	EB Left	175	1	1,600	0.1094	EB Left	175	1	1,600	0.1094
EB Thru	935	2	3,200	<b>0.2922</b>	EB Thru	941	2	3,200	<b>0.2941</b>	EB Thru	999	2	3,200	<b>0.3122</b>	EB Thru	1,005	2	3,200	<b>0.3141</b>
EB Right	749	1	0*	0.0000	EB Right	749	1	0*	0.0000	EB Right	800	1	0*	0.0000	EB Right	800	1	0*	0.0000
WB Left	267	2	2,880	<b>0.0927</b>	WB Left	267	2	2,880	<b>0.0927</b>	WB Left	285	2	2,880	<b>0.0990</b>	WB Left	285	2	2,880	<b>0.0990</b>
WB Thru	390	2	3,200	0.1219	WB Thru	391	2	3,200	0.1222	WB Thru	416	2	3,200	0.1300	WB Thru	417	2	3,200	0.1303
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.9021</b>	ICU				<b>0.9043</b>	ICU				<b>0.9537</b>	ICU				<b>0.9559</b>
LOS				E	LOS				E	LOS				E	LOS				E

**Notes:**

- Key conflicting movements as a part of ICU indicated in **bold**.
- Capacity expressed in vehicles per hour of green
- Maximum capacity per lane is 1,600
- Maximum Capacity for Dual Left-Turn Lanes is 2,880
- \*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F



INTERSECTION: Slauson Ave / Paramount Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	26	1	1600	<b>0.0163</b>	NB Left	26	1	1,600	<b>0.0163</b>	NB Left	26	1	1,600	<b>0.0163</b>	NB Left	26	1	1,600	<b>0.0163</b>
NB Thru	411	2	3200	0.1284	NB Thru	411	2	3,200	0.1284	NB Thru	414	2	3,200	0.1294	NB Thru	414	2	3,200	0.1294
NB Right	159	1	1600	0.0994	NB Right	162	1	1,600	0.1013	NB Right	160	1	1,600	0.1000	NB Right	163	1	1,600	0.1019
SB Left	89	1	1600	0.0556	SB Left	92	1	1,600	0.0575	SB Left	90	1	1,600	0.0563	SB Left	93	1	1,600	0.0581
SB Thru	588	2	3200	<b>0.1838</b>	SB Thru	588	2	3,200	<b>0.1838</b>	SB Thru	593	2	3,200	<b>0.1853</b>	SB Thru	593	2	3,200	<b>0.1853</b>
SB Right	257	1	1600	0.1606	SB Right	257	1	1,600	0.1606	SB Right	259	1	1,600	0.1619	SB Right	259	1	1,600	0.1619
EB Left	195	1	1600	<b>0.1219</b>	EB Left	195	1	1,600	<b>0.1219</b>	EB Left	197	1	1,600	<b>0.1231</b>	EB Left	197	1	1,600	<b>0.1231</b>
EB Thru	680	3	4800	0.1417	EB Thru	687	3	4,800	0.1431	EB Thru	685	3	4,800	0.1427	EB Thru	692	3	4,800	0.1442
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	186	1	1600	0.1163	WB Left	186	1	1,600	0.1163	WB Left	187	1	1,600	0.1169	WB Left	187	1	1,600	0.1169
WB Thru	1,135	3	4800	<b>0.2365</b>	WB Thru	1,136	3	4,800	<b>0.2367</b>	WB Thru	1,144	3	4,800	<b>0.2383</b>	WB Thru	1,145	3	4,800	<b>0.2385</b>
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7085</b>	ICU				<b>0.7087</b>	ICU				<b>0.7130</b>	ICU				<b>0.7132</b>
LOS				C	LOS				C	LOS				C	LOS				C

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	26	1	1,600	<b>0.0163</b>	NB Left	26	1	1,600	<b>0.0163</b>	NB Left	28	1	1,600	<b>0.0175</b>	NB Left	28	1	1,600	<b>0.0175</b>
NB Thru	426	2	3,200	0.1331	NB Thru	426	2	3,200	0.1331	NB Thru	455	2	3,200	0.1422	NB Thru	455	2	3,200	0.1422
NB Right	160	1	1,600	0.1000	NB Right	163	1	1,600	0.1019	NB Right	171	1	1,600	0.1069	NB Right	174	1	1,600	0.1088
SB Left	90	1	1,600	0.0563	SB Left	93	1	1,600	0.0581	SB Left	96	1	1,600	0.0600	SB Left	99	1	1,600	0.0619
SB Thru	601	2	3,200	<b>0.1878</b>	SB Thru	601	2	3,200	<b>0.1878</b>	SB Thru	642	2	3,200	<b>0.2006</b>	SB Thru	642	2	3,200	<b>0.2006</b>
SB Right	259	1	1,600	0.1619	SB Right	259	1	1,600	0.1619	SB Right	277	1	1,600	0.1731	SB Right	277	1	1,600	0.1731
EB Left	197	1	1,600	<b>0.1231</b>	EB Left	197	1	1,600	<b>0.1231</b>	EB Left	210	1	1,600	<b>0.1313</b>	EB Left	210	1	1,600	<b>0.1313</b>
EB Thru	690	3	4,800	0.1438	EB Thru	697	3	4,800	0.1452	EB Thru	736	3	4,800	0.1533	EB Thru	743	3	4,800	0.1548
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	191	1	1,600	0.1194	WB Left	191	1	1,600	0.1194	WB Left	204	1	1,600	0.1275	WB Left	204	1	1,600	0.1275
WB Thru	1,145	3	4,800	<b>0.2385</b>	WB Thru	1,146	3	4,800	<b>0.2388</b>	WB Thru	1,223	3	4,800	<b>0.2548</b>	WB Thru	1,224	3	4,800	<b>0.2550</b>
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7157</b>	ICU				<b>0.7160</b>	ICU				<b>0.7542</b>	ICU				<b>0.7544</b>
LOS				C	LOS				C	LOS				C	LOS				C

**Notes:**

- Key conflicting movements as a part of ICU indicated in **bold**.
- Capacity expressed in vehicles per hour of green
- Maximum capacity per lane is 1,600
- Maximum Capacity for Dual Left-Turn Lanes is 2,880
- \*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Slauson Ave / Paramount Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	30	1	1600	0.0188	NB Left	30	1	1,600	0.0188	NB Left	30	1	1,600	0.0188	NB Left	30	1	1,600	0.0188
NB Thru	696	2	3200	<b>0.2175</b>	NB Thru	696	2	3,200	<b>0.2175</b>	NB Thru	702	2	3,200	<b>0.2194</b>	NB Thru	702	2	3,200	<b>0.2194</b>
NB Right	155	1	1600	0.0969	NB Right	156	1	1,600	0.0975	NB Right	156	1	1,600	0.0975	NB Right	157	1	1,600	0.0981
SB Left	134	1	1600	<b>0.0838</b>	SB Left	135	1	1,600	<b>0.0844</b>	SB Left	135	1	1,600	<b>0.0844</b>	SB Left	136	1	1,600	<b>0.0850</b>
SB Thru	759	2	3200	0.2372	SB Thru	759	2	3,200	0.2372	SB Thru	765	2	3,200	0.2391	SB Thru	765	2	3,200	0.2391
SB Right	288	1	1600	0.1800	SB Right	288	1	1,600	0.1800	SB Right	290	1	1,600	0.1813	SB Right	290	1	1,600	0.1813
EB Left	203	1	1600	0.1269	EB Left	203	1	1,600	0.1269	EB Left	205	1	1,600	0.1281	EB Left	205	1	1,600	0.1281
EB Thru	1,162	3	4800	<b>0.2421</b>	EB Thru	1,163	3	4,800	<b>0.2423</b>	EB Thru	1,172	3	4,800	<b>0.2442</b>	EB Thru	1,173	3	4,800	<b>0.2444</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	156	1	1600	<b>0.0975</b>	WB Left	159	1	1,600	<b>0.0994</b>	WB Left	157	1	1,600	<b>0.0981</b>	WB Left	160	1	1,600	<b>0.1000</b>
WB Thru	779	3	4800	0.1623	WB Thru	790	3	4,800	0.1646	WB Thru	785	3	4,800	0.1635	WB Thru	796	3	4,800	0.1658
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7909</b>	ICU				<b>0.7936</b>	ICU				<b>0.7961</b>	ICU				<b>0.7988</b>
LOS				C	LOS				C	LOS				C	LOS				C

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	30	1	1,600	0.0188	NB Left	30	1	1,600	0.0188	NB Left	32	1	1,600	0.0200	NB Left	32	1	1,600	0.0200
NB Thru	712	2	3,200	<b>0.2225</b>	NB Thru	712	2	3,200	<b>0.2225</b>	NB Thru	760	2	3,200	<b>0.2375</b>	NB Thru	760	2	3,200	<b>0.2375</b>
NB Right	156	1	1,600	0.0975	NB Right	157	1	1,600	0.0981	NB Right	167	1	1,600	0.1044	NB Right	168	1	1,600	0.1050
SB Left	138	1	1,600	<b>0.0863</b>	SB Left	139	1	1,600	<b>0.0869</b>	SB Left	147	1	1,600	<b>0.0919</b>	SB Left	148	1	1,600	<b>0.0925</b>
SB Thru	776	2	3,200	0.2425	SB Thru	776	2	3,200	0.2425	SB Thru	829	2	3,200	0.2591	SB Thru	829	2	3,200	0.2591
SB Right	293	1	1,600	0.1831	SB Right	293	1	1,600	0.1831	SB Right	313	1	1,600	0.1956	SB Right	313	1	1,600	0.1956
EB Left	205	1	1,600	0.1281	EB Left	205	1	1,600	0.1281	EB Left	219	1	1,600	0.1369	EB Left	219	1	1,600	0.1369
EB Thru	1,173	3	4,800	<b>0.2444</b>	EB Thru	1,174	3	4,800	<b>0.2446</b>	EB Thru	1,252	3	4,800	<b>0.2608</b>	EB Thru	1,253	3	4,800	<b>0.2610</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	157	1	1,600	<b>0.0981</b>	WB Left	160	1	1,600	<b>0.1000</b>	WB Left	168	1	1,600	<b>0.1050</b>	WB Left	171	1	1,600	<b>0.1069</b>
WB Thru	786	3	4,800	0.1638	WB Thru	797	3	4,800	0.1660	WB Thru	839	3	4,800	0.1748	WB Thru	850	3	4,800	0.1771
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8013</b>	ICU				<b>0.8040</b>	ICU				<b>0.8452</b>	ICU				<b>0.8479</b>
LOS				D	LOS				D	LOS				D	LOS				D

**Notes:**  
Key conflicting movements as a part of ICU indicated in **bold**.  
Capacity expressed in vehicles per hour of green  
Maximum capacity per lane is 1,600  
Maximum Capacity for Dual Left-Turn Lanes is 2,880  
\*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Slauson Ave / Rosemead Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	91	1	1600	0.0569	NB Left	93	1	1,600	<b>0.0581</b>	NB Left	92	1	1,600	0.0575	NB Left	94	1	1,600	<b>0.0588</b>
NB Thru	748	3	4800	<b>0.1558</b>	NB Thru	754	3	4,800	0.1571	NB Thru	754	3	4,800	<b>0.1571</b>	NB Thru	760	3	4,800	0.1583
NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000
SB Left	96	1	1600	<b>0.0600</b>	SB Left	96	1	1,600	0.0600	SB Left	97	1	1,600	<b>0.0606</b>	SB Left	97	1	1,600	0.0606
SB Thru	758	3	4800	0.1579	SB Thru	778	3	4,800	<b>0.1621</b>	SB Thru	764	3	4,800	0.1592	SB Thru	784	3	4,800	<b>0.1633</b>
SB Right	96	1	1600	0.0600	SB Right	96	1	1,600	0.0600	SB Right	97	1	1,600	0.0606	SB Right	97	1	1,600	0.0606
EB Left	122	1	1600	<b>0.0763</b>	EB Left	122	1	1,600	<b>0.0763</b>	EB Left	123	1	1,600	<b>0.0769</b>	EB Left	123	1	1,600	<b>0.0769</b>
EB Thru	865	3	4800	0.1802	EB Thru	878	3	4,800	0.1829	EB Thru	872	3	4,800	0.1817	EB Thru	885	3	4,800	0.1844
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	252	2	2880	0.0875	WB Left	272	2	2,880	0.0944	WB Left	254	2	2,880	0.0882	WB Left	274	2	2,880	0.0951
WB Thru	1,284	3	4800	<b>0.2675</b>	WB Thru	1,284	3	4,800	<b>0.2675</b>	WB Thru	1,294	3	4,800	<b>0.2696</b>	WB Thru	1,294	3	4,800	<b>0.2696</b>
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7096</b>	ICU				<b>0.7140</b>	ICU				<b>0.7142</b>	ICU				<b>0.7186</b>
LOS				C	LOS				C	LOS				C	LOS				C

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	92	1	1,600	0.0575	NB Left	94	1	1,600	<b>0.0588</b>	NB Left	98	1	1,600	0.0613	NB Left	100	1	1,600	<b>0.0625</b>
NB Thru	774	3	4,800	<b>0.1613</b>	NB Thru	780	3	4,800	0.1625	NB Thru	827	3	4,800	<b>0.1723</b>	NB Thru	833	3	4,800	0.1735
NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000
SB Left	97	1	1,600	<b>0.0606</b>	SB Left	97	1	1,600	0.0606	SB Left	104	1	1,600	<b>0.0650</b>	SB Left	104	1	1,600	0.0650
SB Thru	784	3	4,800	0.1633	SB Thru	804	3	4,800	<b>0.1675</b>	SB Thru	837	3	4,800	0.1744	SB Thru	857	3	4,800	<b>0.1785</b>
SB Right	97	1	1,600	0.0606	SB Right	97	1	1,600	0.0606	SB Right	104	1	1,600	0.0650	SB Right	104	1	1,600	0.0650
EB Left	123	1	1,600	<b>0.0769</b>	EB Left	123	1	1,600	<b>0.0769</b>	EB Left	131	1	1,600	<b>0.0819</b>	EB Left	131	1	1,600	<b>0.0819</b>
EB Thru	877	3	4,800	0.1827	EB Thru	890	3	4,800	0.1854	EB Thru	937	3	4,800	0.1952	EB Thru	950	3	4,800	0.1979
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	254	2	2,880	0.0882	WB Left	274	2	2,880	0.0951	WB Left	271	2	2,880	0.0941	WB Left	291	2	2,880	0.1010
WB Thru	1,295	3	4,800	<b>0.2698</b>	WB Thru	1,295	3	4,800	<b>0.2698</b>	WB Thru	1,383	3	4,800	<b>0.2881</b>	WB Thru	1,383	3	4,800	<b>0.2881</b>
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7186</b>	ICU				<b>0.7230</b>	ICU				<b>0.7573</b>	ICU				<b>0.7610</b>
LOS				C	LOS				C	LOS				C	LOS				C

**Notes:**  
Key conflicting movements as a part of ICU indicated in **bold**.  
Capacity expressed in vehicles per hour of green  
Maximum capacity per lane is 1,600  
Maximum Capacity for Dual Left-Turn Lanes is 2,880  
\*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Slauson Ave / Rosemead Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	78	1	1600	0.0488	NB Left	91	1	1,600	0.0569	NB Left	79	1	1,600	0.0494	NB Left	92	1	1,600	0.0575
NB Thru	1,081	3	4800	<b>0.2252</b>	NB Thru	1,118	3	4,800	<b>0.2329</b>	NB Thru	1,089	3	4,800	<b>0.2269</b>	NB Thru	1,126	3	4,800	<b>0.2346</b>
NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000
SB Left	123	1	1600	<b>0.0769</b>	SB Left	123	1	1,600	<b>0.0769</b>	SB Left	124	1	1,600	<b>0.0775</b>	SB Left	124	1	1,600	<b>0.0775</b>
SB Thru	957	3	4800	0.1994	SB Thru	960	3	4,800	0.2000	SB Thru	965	3	4,800	0.2010	SB Thru	968	3	4,800	0.2017
SB Right	109	1	1600	0.0681	SB Right	109	1	1,600	0.0681	SB Right	110	1	1,600	0.0688	SB Right	110	1	1,600	0.0688
EB Left	201	1	1600	0.1256	EB Left	201	1	1,600	0.1256	EB Left	203	1	1,600	0.1269	EB Left	203	1	1,600	0.1269
EB Thru	1,161	3	4800	<b>0.2419</b>	EB Thru	1,164	3	4,800	<b>0.2425</b>	EB Thru	1,170	3	4,800	<b>0.2438</b>	EB Thru	1,173	3	4,800	<b>0.2444</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	230	2	2880	<b>0.0799</b>	WB Left	233	2	2,880	<b>0.0809</b>	WB Left	232	2	2,880	<b>0.0806</b>	WB Left	235	2	2,880	<b>0.0816</b>
WB Thru	874	3	4800	0.1821	WB Thru	874	3	4,800	0.1821	WB Thru	881	3	4,800	0.1835	WB Thru	881	3	4,800	0.1835
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7739</b>	ICU				<b>0.7832</b>	ICU				<b>0.7788</b>	ICU				<b>0.7881</b>
LOS				C	LOS				C	LOS				C	LOS				C

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	79	1	1,600	0.0494	NB Left	92	1	1,600	0.0575	NB Left	84	1	1,600	0.0525	NB Left	97	1	1,600	0.0606
NB Thru	1,119	3	4,800	<b>0.2331</b>	NB Thru	1,156	3	4,800	<b>0.2408</b>	NB Thru	1,195	3	4,800	<b>0.2490</b>	NB Thru	1,232	3	4,800	<b>0.2567</b>
NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000	NB Right	0	0	0	0.0000
SB Left	124	1	1,600	<b>0.0775</b>	SB Left	124	1	1,600	<b>0.0775</b>	SB Left	132	1	1,600	<b>0.0825</b>	SB Left	132	1	1,600	<b>0.0825</b>
SB Thru	991	3	4,800	0.2065	SB Thru	994	3	4,800	0.2071	SB Thru	1,058	3	4,800	0.2204	SB Thru	1,061	3	4,800	0.2210
SB Right	110	1	1,600	0.0688	SB Right	110	1	1,600	0.0688	SB Right	117	1	1,600	0.0731	SB Right	117	1	1,600	0.0731
EB Left	203	1	1,600	0.1269	EB Left	203	1	1,600	0.1269	EB Left	217	1	1,600	0.1356	EB Left	217	1	1,600	0.1356
EB Thru	1,171	3	4,800	<b>0.2440</b>	EB Thru	1,174	3	4,800	<b>0.2446</b>	EB Thru	1,250	3	4,800	<b>0.2604</b>	EB Thru	1,253	3	4,800	<b>0.2610</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	232	2	2,880	<b>0.0806</b>	WB Left	235	2	2,880	<b>0.0816</b>	WB Left	248	2	2,880	<b>0.0861</b>	WB Left	251	2	2,880	<b>0.0872</b>
WB Thru	885	3	4,800	0.1844	WB Thru	885	3	4,800	0.1844	WB Thru	946	3	4,800	0.1971	WB Thru	946	3	4,800	0.1971
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7852</b>	ICU				<b>0.7945</b>	ICU				<b>0.8280</b>	ICU				<b>0.8374</b>
LOS				C	LOS				C	LOS				D	LOS				D

**Notes:**  
Key conflicting movements as a part of ICU indicated in **bold**.  
Capacity expressed in vehicles per hour of green  
Maximum capacity per lane is 1,600  
Maximum Capacity for Dual Left-Turn Lanes is 2,880  
\*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Telegraph Rd / Paramount Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	142	1	1600	<b>0.0888</b>	NB Left	142	1	1,600	<b>0.0888</b>	NB Left	143	1	1,600	<b>0.0894</b>	NB Left	143	1	1,600	<b>0.0894</b>
NB Thru	410	2	3200	0.1281	NB Thru	413	2	3,200	0.1291	NB Thru	413	2	3,200	0.1291	NB Thru	416	2	3,200	0.1300
NB Right	105	1	1600	0.0656	NB Right	105	1	1,600	0.0656	NB Right	106	1	1,600	0.0663	NB Right	106	1	1,600	0.0663
SB Left	111	1	1600	0.0694	SB Left	111	1	1,600	0.0694	SB Left	112	1	1,600	0.0700	SB Left	112	1	1,600	0.0700
SB Thru	781	2	3200	<b>0.2441</b>	SB Thru	781	2	3,200	<b>0.2441</b>	SB Thru	787	2	3,200	<b>0.2459</b>	SB Thru	787	2	3,200	<b>0.2459</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	39	1	1600	0.0244	EB Left	39	1	1,600	0.0244	EB Left	39	1	1,600	0.0244	EB Left	39	1	1,600	0.0244
EB Thru	640	3	4800	<b>0.1333</b>	EB Thru	647	3	4,800	<b>0.1348</b>	EB Thru	645	3	4,800	<b>0.1344</b>	EB Thru	652	3	4,800	<b>0.1358</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	200	1	1600	<b>0.1250</b>	WB Left	200	1	1,600	<b>0.1250</b>	WB Left	202	1	1,600	<b>0.1263</b>	WB Left	202	1	1,600	<b>0.1263</b>
WB Thru	808	3	4800	0.1683	WB Thru	809	3	4,800	0.1685	WB Thru	815	3	4,800	0.1698	WB Thru	816	3	4,800	0.1700
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7412</b>	ICU				<b>0.7427</b>	ICU				<b>0.7460</b>	ICU				<b>0.7474</b>
LOS				C	LOS				C	LOS				C	LOS				C

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	143	1	1,600	<b>0.0894</b>	NB Left	143	1	1,600	<b>0.0894</b>	NB Left	153	1	1,600	<b>0.0956</b>	NB Left	153	1	1,600	<b>0.0956</b>
NB Thru	424	2	3,200	0.1325	NB Thru	427	2	3,200	0.1334	NB Thru	453	2	3,200	0.1416	NB Thru	456	2	3,200	0.1425
NB Right	106	1	1,600	0.0663	NB Right	106	1	1,600	0.0663	NB Right	113	1	1,600	0.0706	NB Right	113	1	1,600	0.0706
SB Left	112	1	1,600	0.0700	SB Left	112	1	1,600	0.0700	SB Left	120	1	1,600	0.0750	SB Left	120	1	1,600	0.0750
SB Thru	795	2	3,200	<b>0.2484</b>	SB Thru	795	2	3,200	<b>0.2484</b>	SB Thru	850	2	3,200	<b>0.2656</b>	SB Thru	850	2	3,200	<b>0.2656</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	39	1	1,600	0.0244	EB Left	39	1	1,600	0.0244	EB Left	42	1	1,600	0.0263	EB Left	42	1	1,600	0.0263
EB Thru	645	3	4,800	<b>0.1344</b>	EB Thru	652	3	4,800	<b>0.1358</b>	EB Thru	689	3	4,800	<b>0.1435</b>	EB Thru	696	3	4,800	<b>0.1450</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	202	1	1,600	<b>0.1263</b>	WB Left	202	1	1,600	<b>0.1263</b>	WB Left	216	1	1,600	<b>0.1350</b>	WB Left	216	1	1,600	<b>0.1350</b>
WB Thru	815	3	4,800	0.1698	WB Thru	816	3	4,800	0.1700	WB Thru	870	3	4,800	0.1813	WB Thru	871	3	4,800	0.1815
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.7485</b>	ICU				<b>0.7499</b>	ICU				<b>0.7897</b>	ICU				<b>0.7912</b>
LOS				C	LOS				C	LOS				C	LOS				C

**Notes:**  
Key conflicting movements as a part of ICU indicated in **bold**.  
Capacity expressed in vehicles per hour of green  
Maximum capacity per lane is 1,600  
Maximum Capacity for Dual Left-Turn Lanes is 2,880  
\*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Telegraph Rd / Paramount Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	156	1	1600	<b>0.0975</b>	NB Left	156	1	1,600	<b>0.0975</b>	NB Left	157	1	1,600	<b>0.0981</b>	NB Left	157	1	1,600	<b>0.0981</b>
NB Thru	738	2	3200	0.2306	NB Thru	738	2	3,200	0.2306	NB Thru	744	2	3,200	0.2325	NB Thru	744	2	3,200	0.2325
NB Right	153	1	1600	0.0956	NB Right	153	1	1,600	0.0956	NB Right	154	1	1,600	0.0963	NB Right	154	1	1,600	0.0963
SB Left	93	1	1600	0.0581	SB Left	93	1	1,600	0.0581	SB Left	94	1	1,600	0.0588	SB Left	94	1	1,600	0.0588
SB Thru	899	2	3200	<b>0.2809</b>	SB Thru	902	2	3,200	<b>0.2819</b>	SB Thru	906	2	3,200	<b>0.2831</b>	SB Thru	909	2	3,200	<b>0.2841</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	50	1	1600	0.0313	EB Left	50	1	1,600	0.0313	EB Left	50	1	1,600	0.0313	EB Left	50	1	1,600	0.0313
EB Thru	1,164	3	4800	<b>0.2425</b>	EB Thru	1,165	3	4,800	<b>0.2427</b>	EB Thru	1,173	3	4,800	<b>0.2444</b>	EB Thru	1,174	3	4,800	<b>0.2446</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	171	1	1600	<b>0.1069</b>	WB Left	171	1	1,600	<b>0.1069</b>	WB Left	172	1	1,600	<b>0.1075</b>	WB Left	172	1	1,600	<b>0.1075</b>
WB Thru	484	3	4800	0.1008	WB Thru	490	3	4,800	0.1021	WB Thru	487	3	4,800	0.1015	WB Thru	493	3	4,800	0.1027
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8778</b>	ICU				<b>0.8790</b>	ICU				<b>0.8831</b>	ICU				<b>0.8843</b>
LOS				D	LOS				D	LOS				D	LOS				D

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	157	1	1,600	<b>0.0981</b>	NB Left	157	1	1,600	<b>0.0981</b>	NB Left	168	1	1,600	<b>0.1050</b>	NB Left	168	1	1,600	<b>0.1050</b>
NB Thru	753	2	3,200	0.2353	NB Thru	753	2	3,200	0.2353	NB Thru	804	2	3,200	0.2513	NB Thru	804	2	3,200	0.2513
NB Right	154	1	1,600	0.0963	NB Right	154	1	1,600	0.0963	NB Right	164	1	1,600	0.1025	NB Right	164	1	1,600	0.1025
SB Left	94	1	1,600	0.0588	SB Left	94	1	1,600	0.0588	SB Left	100	1	1,600	0.0625	SB Left	100	1	1,600	0.0625
SB Thru	916	2	3,200	<b>0.2863</b>	SB Thru	919	2	3,200	<b>0.2872</b>	SB Thru	979	2	3,200	<b>0.3059</b>	SB Thru	982	2	3,200	<b>0.3069</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	50	1	1,600	0.0313	EB Left	50	1	1,600	0.0313	EB Left	53	1	1,600	0.0331	EB Left	53	1	1,600	0.0331
EB Thru	1,173	3	4,800	<b>0.2444</b>	EB Thru	1,174	3	4,800	<b>0.2446</b>	EB Thru	1,253	3	4,800	<b>0.2610</b>	EB Thru	1,254	3	4,800	<b>0.2613</b>
EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000	EB Right	0	0	0	0.0000
WB Left	172	1	1,600	<b>0.1075</b>	WB Left	172	1	1,600	<b>0.1075</b>	WB Left	184	1	1,600	<b>0.1150</b>	WB Left	184	1	1,600	<b>0.1150</b>
WB Thru	487	3	4,800	0.1015	WB Thru	493	3	4,800	0.1027	WB Thru	520	3	4,800	0.1083	WB Thru	526	3	4,800	0.1096
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8863</b>	ICU				<b>0.8874</b>	ICU				<b>0.9369</b>	ICU				<b>0.9382</b>
LOS				D	LOS				D	LOS				E	LOS				E

**Notes:**  
Key conflicting movements as a part of ICU indicated in **bold**.  
Capacity expressed in vehicles per hour of green  
Maximum capacity per lane is 1,600  
Maximum Capacity for Dual Left-Turn Lanes is 2,880  
\*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

INTERSECTION: Telegraph Rd / Rosemead Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	225	2	2880	<b>0.0781</b>	NB Left	225	2	2,880	<b>0.0781</b>	NB Left	227	2	2,880	<b>0.0788</b>	NB Left	227	2	2,880	<b>0.0788</b>
NB Thru	624	2	3200	0.1950	NB Thru	684	2	3,200	0.2138	NB Thru	629	2	3,200	0.1966	NB Thru	689	2	3,200	0.2153
NB Right	416	1	1600	0.2600	NB Right	416	1	1,600	0.2600	NB Right	419	1	1,600	0.2619	NB Right	419	1	1,600	0.2619
SB Left	41	2	2880	0.0142	SB Left	43	2	2,880	0.0149	SB Left	41	2	2,880	0.0142	SB Left	43	2	2,880	0.0149
SB Thru	928	2	3200	<b>0.2900</b>	SB Thru	936	2	3,200	<b>0.2925</b>	SB Thru	935	2	3,200	<b>0.2922</b>	SB Thru	943	2	3,200	<b>0.2947</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	60	2	2880	0.0208	EB Left	67	2	2,880	0.0233	EB Left	60	2	2,880	0.0208	EB Left	67	2	2,880	0.0233
EB Thru	520	3	4800	<b>0.1083</b>	EB Thru	520	3	4,800	<b>0.1083</b>	EB Thru	524	3	4,800	<b>0.1092</b>	EB Thru	524	3	4,800	<b>0.1092</b>
EB Right	259	1	1600	0.1619	EB Right	259	1	1,600	0.1619	EB Right	261	1	1,600	0.1631	EB Right	261	1	1,600	0.1631
WB Left	522	2	2880	<b>0.1813</b>	WB Left	522	2	2,880	<b>0.1813</b>	WB Left	526	2	2,880	<b>0.1826</b>	WB Left	526	2	2,880	<b>0.1826</b>
WB Thru	742	3	4800	0.1546	WB Thru	755	3	4,800	0.1573	WB Thru	747	3	4,800	0.1556	WB Thru	760	3	4,800	0.1583
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8077</b>	ICU				<b>0.8102</b>	ICU				<b>0.8128</b>	ICU				<b>0.8153</b>
LOS				D	LOS				D	LOS				D	LOS				D

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	227	2	2,880	<b>0.0788</b>	NB Left	227	2	2,880	<b>0.0788</b>	NB Left	242	2	2,880	<b>0.0840</b>	NB Left	242	2	2,880	<b>0.0840</b>
NB Thru	647	2	3,200	0.2022	NB Thru	707	2	3,200	0.2209	NB Thru	691	2	3,200	0.2159	NB Thru	751	2	3,200	0.2347
NB Right	419	1	1,600	0.2619	NB Right	419	1	1,600	0.2619	NB Right	447	1	1,600	0.2794	NB Right	447	1	1,600	0.2794
SB Left	41	2	2,880	0.0142	SB Left	43	2	2,880	0.0149	SB Left	44	2	2,880	0.0153	SB Left	46	2	2,880	0.0160
SB Thru	953	2	3,200	<b>0.2978</b>	SB Thru	961	2	3,200	<b>0.3003</b>	SB Thru	1,017	2	3,200	<b>0.3178</b>	SB Thru	1,025	2	3,200	<b>0.3203</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	60	2	2,880	0.0208	EB Left	67	2	2,880	0.0233	EB Left	64	2	2,880	0.0222	EB Left	71	2	2,880	0.0247
EB Thru	524	3	4,800	<b>0.1092</b>	EB Thru	524	3	4,800	<b>0.1092</b>	EB Thru	560	3	4,800	<b>0.1167</b>	EB Thru	560	3	4,800	<b>0.1167</b>
EB Right	261	1	1,600	0.1631	EB Right	261	1	1,600	0.1631	EB Right	279	1	1,600	0.1744	EB Right	279	1	1,600	0.1744
WB Left	526	2	2,880	<b>0.1826</b>	WB Left	526	2	2,880	<b>0.1826</b>	WB Left	562	2	2,880	<b>0.1951</b>	WB Left	562	2	2,880	<b>0.1951</b>
WB Thru	747	3	4,800	0.1556	WB Thru	760	3	4,800	0.1583	WB Thru	798	3	4,800	0.1663	WB Thru	811	3	4,800	0.1690
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8184</b>	ICU				<b>0.8209</b>	ICU				<b>0.8636</b>	ICU				<b>0.8661</b>
LOS				D	LOS				D	LOS				D	LOS				D

**Notes:**

- Key conflicting movements as a part of ICU indicated in **bold**.
- Capacity expressed in vehicles per hour of green
- Maximum capacity per lane is 1,600
- Maximum Capacity for Dual Left-Turn Lanes is 2,880
- \*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F



INTERSECTION: Telegraph Rd / Rosemead Blvd

EXISTING YEAR 2021 CONDITIONS					EXISTING YEAR 2021 WITH PROJECT CONDITIONS					OPENING YEAR 2023					OPENING YEAR 2023 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	170	2	2880	<b>0.0590</b>	NB Left	170	2	2,880	<b>0.0590</b>	NB Left	171	2	2,880	<b>0.0594</b>	NB Left	171	2	2,880	<b>0.0594</b>
NB Thru	996	2	3200	0.3113	NB Thru	1,006	2	3,200	0.3144	NB Thru	1,004	2	3,200	0.3138	NB Thru	1,014	2	3,200	0.3169
NB Right	534	1	1600	0.3338	NB Right	534	1	1,600	0.3338	NB Right	538	1	1,600	0.3363	NB Right	538	1	1,600	0.3363
SB Left	88	2	2880	0.0306	SB Left	101	2	2,880	0.0351	SB Left	89	2	2,880	0.0309	SB Left	102	2	2,880	0.0354
SB Thru	928	2	3200	<b>0.2900</b>	SB Thru	991	2	3,200	<b>0.3097</b>	SB Thru	935	2	3,200	<b>0.2922</b>	SB Thru	998	2	3,200	<b>0.3119</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	88	2	2880	0.0306	EB Left	89	2	2,880	0.0309	EB Left	89	2	2,880	0.0309	EB Left	90	2	2,880	0.0313
EB Thru	677	3	4800	<b>0.1410</b>	EB Thru	677	3	4,800	<b>0.1410</b>	EB Thru	682	3	4,800	<b>0.1421</b>	EB Thru	682	3	4,800	<b>0.1421</b>
EB Right	399	1	1600	0.2494	EB Right	399	1	1,600	0.2494	EB Right	402	1	1,600	0.2513	EB Right	402	1	1,600	0.2513
WB Left	463	2	2880	<b>0.1608</b>	WB Left	463	2	2,880	<b>0.1608</b>	WB Left	467	2	2,880	<b>0.1622</b>	WB Left	467	2	2,880	<b>0.1622</b>
WB Thru	626	3	4800	0.1304	WB Thru	628	3	4,800	0.1308	WB Thru	631	3	4,800	0.1315	WB Thru	633	3	4,800	0.1319
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8008</b>	ICU				<b>0.8205</b>	ICU				<b>0.8059</b>	ICU				<b>0.8256</b>
LOS				D	LOS				D	LOS				D	LOS				D

FORECAST CUMULATIVE					FORECAST CUMULATIVE WITH PROJECT					BUILD-OUT YEAR 2040					BUILD-OUT YEAR 2040 WITH PROJECT				
Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio	Movement	Volume	Lanes	Capacity	V/C Ratio
NB Left	171	2	2,880	<b>0.0594</b>	NB Left	171	2	2,880	<b>0.0594</b>	NB Left	183	2	2,880	<b>0.0635</b>	NB Left	183	2	2,880	<b>0.0635</b>
NB Thru	1,032	2	3,200	0.3225	NB Thru	1,042	2	3,200	0.3256	NB Thru	1,102	2	3,200	0.3444	NB Thru	1,112	2	3,200	0.3475
NB Right	538	1	1,600	0.3363	NB Right	538	1	1,600	0.3363	NB Right	575	1	1,600	0.3594	NB Right	575	1	1,600	0.3594
SB Left	89	2	2,880	0.0309	SB Left	102	2	2,880	0.0354	SB Left	95	2	2,880	0.0330	SB Left	108	2	2,880	0.0375
SB Thru	958	2	3,200	<b>0.2994</b>	SB Thru	1,021	2	3,200	<b>0.3191</b>	SB Thru	1,023	2	3,200	<b>0.3197</b>	SB Thru	1,086	2	3,200	<b>0.3394</b>
SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000	SB Right	0	0	0	0.0000
EB Left	89	2	2,880	0.0309	EB Left	90	2	2,880	0.0313	EB Left	95	2	2,880	0.0330	EB Left	96	2	2,880	0.0333
EB Thru	682	3	4,800	<b>0.1421</b>	EB Thru	682	3	4,800	<b>0.1421</b>	EB Thru	728	3	4,800	<b>0.1517</b>	EB Thru	728	3	4,800	<b>0.1517</b>
EB Right	402	1	1,600	0.2513	EB Right	402	1	1,600	0.2513	EB Right	429	1	1,600	0.2681	EB Right	429	1	1,600	0.2681
WB Left	467	2	2,880	<b>0.1622</b>	WB Left	467	2	2,880	<b>0.1622</b>	WB Left	499	2	2,880	<b>0.1733</b>	WB Left	499	2	2,880	<b>0.1733</b>
WB Thru	631	3	4,800	0.1315	WB Thru	633	3	4,800	0.1319	WB Thru	674	3	4,800	0.1404	WB Thru	676	3	4,800	0.1408
WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000	WB Right	0	0	0	0.0000
Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500	Yellow Clearance				0.1500
ICU				<b>0.8131</b>	ICU				<b>0.8328</b>	ICU				<b>0.8582</b>	ICU				<b>0.8779</b>
LOS				D	LOS				D	LOS				D	LOS				D

**Notes:**

- Key conflicting movements as a part of ICU indicated in **bold**.
- Capacity expressed in vehicles per hour of green
- Maximum capacity per lane is 1,600
- Maximum Capacity for Dual Left-Turn Lanes is 2,880
- \*Channelized Lane not under signal control

V/C Ratio	LOS
≤.60	A
.61 to .7	B
.71 to .8	C
.81 to .9	D
.91 to 1.0	E
>1.0	F

# **Appendix F: Synchro Worksheets – Existing & Existing Plus Project Conditions**

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↕		↵	↕↶		↵	↕↶	
Traffic Vol, veh/h	2	0	8	13	1	41	11	884	14	62	846	8
Future Vol, veh/h	2	0	8	13	1	41	11	884	14	62	846	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	9	14	1	44	12	951	15	67	910	9

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1549	-	460	1572	2036	483	919	0	0	966	0	0
Stage 1	1049	-	-	983	983	-	-	-	-	-	-	-
Stage 2	500	-	-	589	1053	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	77	0	548	74	56	530	738	-	-	709	-	-
Stage 1	243	0	-	267	325	-	-	-	-	-	-	-
Stage 2	521	0	-	461	301	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	64	-	548	67	50	530	738	-	-	709	-	-
Mov Cap-2 Maneuver	64	-	-	67	50	-	-	-	-	-	-	-
Stage 1	239	-	-	263	320	-	-	-	-	-	-	-
Stage 2	468	-	-	411	273	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	22	32.5	0.1	0.7
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	738	-	-	64	548	189	709	-	-
HCM Lane V/C Ratio	0.016	-	-	0.034	0.016	0.313	0.094	-	-
HCM Control Delay (s)	10	-	-	63.2	11.7	32.5	10.6	-	-
HCM Lane LOS	A	-	-	F	B	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	1.3	0.3	-	-

Intersection												
Int Delay, s/veh	4.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↕		↵	↕		↵	↕	
Traffic Vol, veh/h	0	0	1	10	0	34	0	1215	35	134	1203	0
Future Vol, veh/h	0	0	1	10	0	34	0	1215	35	134	1203	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	11	0	38	0	1365	39	151	1352	0





















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2337	-	676	2363	3039	702	1352	0	0	1404	0	0
Stage 1	1654	-	-	1385	1385	-	-	-	-	-	-	-
Stage 2	683	-	-	978	1654	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	19	0	396	19	13	381	505	-	-	482	-	-
Stage 1	102	0	-	151	209	-	-	-	-	-	-	-
Stage 2	405	0	-	269	154	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	13	-	396	14	9	381	505	-	-	482	-	-
Mov Cap-2 Maneuver	13	-	-	14	9	-	-	-	-	-	-	-
Stage 1	102	-	-	151	209	-	-	-	-	-	-	-
Stage 2	364	-	-	184	106	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.1		212		0		1.6	
HCM LOS	B		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	505	-	-	-	396	55	482	-	-
HCM Lane V/C Ratio	-	-	-	-	0.003	0.899	0.312	-	-
HCM Control Delay (s)	0	-	-	0	14.1	212	15.8	-	-
HCM Lane LOS	A	-	-	A	B	F	C	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	4	1.3	-	-






















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Existing AM  
12/01/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	2	0	8	13	1	41	11	884	14	62	846	8	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	2	0	8	0	55	0	11	898	0	62	854	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.88	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1520	0	1360	0	1404	0	1520	3039	0	1520	3042	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00			
Protected Option Allowed	No			No			Yes			Yes			
Reference Time (s)	0.7			0.0			0.9	35.5	0.0	4.9	33.7	0.0	
Adj Reference Time (s)	8.0			0.0			8.0	39.5	0.0	8.9	37.7	0.0	
Permitted Option													
Adj Saturation A (vph)	461	0	0	304	101	1520	101	1521	0	0	0	0	
Reference Time A (s)	0.5	0.0	0.0	21.7	13.0	35.5	73.4	33.7	0	0	0	0	
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA	0	0	0	0	
Reference Time B (s)	8.2	0.0	9.0	12.7	NA	NA	NA	NA	0	0	0	0	
Reference Time (s)	0.5			12.7			35.5			73.4			
Adj Reference Time (s)	8.0			16.7			39.5			77.4			
Split Option													
Ref Time Combined (s)	0.2	0.0	0.0	4.7	0.9	35.5	4.9	33.7	0.2	0.0	0.0	0.0	
Ref Time Seperate (s)	0.2	0.0	1.0	0.1	0.9	34.9	4.9	33.4	0.2	0.2	4.7	4.7	
Reference Time (s)	0.2	0.2	4.7	4.7	35.5	35.5	33.7	33.7	0.2	0.2	4.7	4.7	
Adj Reference Time (s)	8.0	8.0	8.7	8.7	39.5	39.5	37.7	37.7	8.0	8.0	8.7	8.7	
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	NA		48.4										
Permitted Option (s)	16.7		77.4										
Split Option (s)	16.7		77.1										
Minimum (s)	16.7		48.4		65.1								
Right Turns													
	EBR												
Adj Reference Time (s)	8.0												
Cross Thru Ref Time (s)	37.7												
Oncoming Left Ref Time (s)	8.7												
Combined (s)	54.4												
Intersection Summary													
Intersection Capacity Utilization	54.2%			ICU Level of Service				A					
Reference Times and Phasing Options do not represent an optimized timing plan.													





















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Existing PM  
12/01/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	0	0	1	10	0	34	0	1215	35	134	1203	0	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	0	0	1	0	44	0	0	1250	0	134	1203	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.87	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1520	0	1360	0	1398	0	1520	3034	0	1520	3046	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00			
Protected Option Allowed	No			No			Yes			Yes			
Reference Time (s)	0.1			0.0			0.0	0.0	49.4	0.0	10.6	47.4	0.0
Adj Reference Time (s)	8.0			0.0			8.0	8.0	53.4	0.0	14.6	51.4	0.0
Permitted Option													
Adj Saturation A (vph)	447	0		0	313		101	1517		101	1523		
Reference Time A (s)	0.0	0.0		0.0	16.9		0.0	49.4		158.7	47.4		
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA		
Reference Time B (s)	8.0	0.0		8.8	11.8		NA	NA		NA	NA		
Reference Time (s)	0.0			11.8			49.4			158.7			
Adj Reference Time (s)	8.0			15.8			53.4			162.7			
Split Option													
Ref Time Combined (s)	0.0	0.0		0.0	3.8		0.0	49.4		10.6	47.4		
Ref Time Separate (s)	0.0	0.0		0.8	0.0		0.0	48.1		10.6	47.4		
Reference Time (s)	0.0	0.0		3.8	3.8		49.4	49.4		47.4	47.4		
Adj Reference Time (s)	0.0	0.0		8.0	8.0		53.4	53.4		51.4	51.4		
Summary	EB WB		NB SB		Combined								
Protected Option (s)	NA		68.0										
Permitted Option (s)	15.8		162.7										
Split Option (s)	8.0		104.8										
Minimum (s)	8.0		68.0		76.0								
Right Turns	EBR												
Adj Reference Time (s)	8.0												
Cross Thru Ref Time (s)	51.4												
Oncoming Left Ref Time (s)	8.0												
Combined (s)	67.4												
Intersection Summary													
Intersection Capacity Utilization	63.4%				ICU Level of Service				B				
Reference Times and Phasing Options do not represent an optimized timing plan.													

HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Existing AM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	85	0	46	0	0	0	0	745	693	129	1159	0
Future Volume (veh/h)	85	0	46	0	0	0	0	745	693	129	1159	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	89	0	48				0	784	0	136	1220	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	299	0	266				0	1307		298	2228	0
Arrive On Green	0.17	0.00	0.17				0.00	0.37	0.00	0.17	0.63	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	89	0	48				0	784	0	136	1220	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	2.2	0.0	1.3				0.0	9.1	0.0	3.5	10.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	1.3				0.0	9.1	0.0	3.5	10.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	299	0	266				0	1307		298	2228	0
V/C Ratio(X)	0.30	0.00	0.18				0.00	0.60		0.46	0.55	0.00
Avail Cap(c_a), veh/h	728	0	648				0	2544		603	4073	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.6	0.0	18.3				0.0	13.1	0.0	19.2	5.4	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.3				0.0	0.6	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5				0.0	2.9	0.0	1.3	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	18.6				0.0	13.7	0.0	20.0	5.7	0.0
LnGrp LOS	B	A	B				A	B		C	A	A
Approach Vol, veh/h		137						784	A		1356	
Approach Delay, s/veh		19.0						13.7			7.1	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.3	24.2				37.5		13.7				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 17	36.6				58.6		20.9				
Max Q Clear Time (g_c+I1), s	5.5	11.1				12.0		4.2				
Green Ext Time (p_c), s	0.2	7.7				16.9		0.3				

Intersection Summary

HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B





















Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.



HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Existing PM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	501	0	169	0	0	0	0	1016	287	59	1407	0
Future Volume (veh/h)	501	0	169	0	0	0	0	1016	287	59	1407	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	527	0	178				0	1069	0	62	1481	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	588	0	523				0	1340		170	1896	0
Arrive On Green	0.33	0.00	0.33				0.00	0.38	0.00	0.10	0.53	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	527	0	178				0	1069	0	62	1481	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	21.7	0.0	6.5				0.0	20.6	0.0	2.5	25.6	0.0
Cycle Q Clear(g_c), s	21.7	0.0	6.5				0.0	20.6	0.0	2.5	25.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	588	0	523				0	1340		170	1896	0
V/C Ratio(X)	0.90	0.00	0.34				0.00	0.80		0.36	0.78	0.00
Avail Cap(c_a), veh/h	745	0	663				0	1506		232	2185	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.5	0.0	19.5				0.0	21.4	0.0	32.6	14.3	0.0
Incr Delay (d2), s/veh	11.5	0.0	0.4				0.0	3.1	0.0	1.0	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	0.0	0.1				0.0	8.2	0.0	1.1	8.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.0	0.0	19.8				0.0	24.4	0.0	33.6	16.2	0.0
LnGrp LOS	D	A	B				A	C		C	B	A
Approach Vol, veh/h		705						1069	A		1543	
Approach Delay, s/veh		32.0						24.4			16.9	
Approach LOS		C						C			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.0	34.4				46.5		30.5				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 10	32.6				47.3		32.2				
Max Q Clear Time (g_c+I1), s	4.5	22.6				27.6		23.7				
Green Ext Time (p_c), s	0.0	6.1				13.4		1.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			22.5									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												

Intersection										
Int Delay, s/veh	3.2									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	182	0	1455	510	156	1092	0
Future Vol, veh/h	0	0	0	182	0	1455	510	156	1092	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	192	0	1532	537	164	1149	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2243	-	0
Stage 1	1477	-	-
Stage 2	766	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	36	0	0
Stage 1	176	0	0
Stage 2	419	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	22	-	430
Mov Cap-2 Maneuver	22	-	-
Stage 1	176	-	-
Stage 2	259	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 359.1	0	2.3
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	22	-	430	-
HCM Lane V/C Ratio	-	0.766	-	0.382	-
HCM Control Delay (s)	-\$	359.1	0	18.5	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	2.2	-	1.8	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection										
Int Delay, s/veh	4.2									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕↕	↗	↘	↕↕	
Traffic Vol, veh/h	0	0	0	186	0	1292	481	263	1684	0
Future Vol, veh/h	0	0	0	186	0	1292	481	263	1684	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	192	0	1332	496	271	1736	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2944	-	-
Stage 1	2278	-	-
Stage 2	666	-	-
Critical Hdwy	6.84	-	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	-
Pot Cap-1 Maneuver	12	0	0
Stage 1	63	0	0
Stage 2	472	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 6	-	-
Mov Cap-2 Maneuver	~ 6	-	-
Stage 1	63	-	-
Stage 2	223	-	-





















Approach	SB	NE	SW
HCM Control Delay, s	\$ 1222.3	0	2.6
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	6	-	514	-
HCM Lane V/C Ratio	-	1.203	-	0.527	-
HCM Control Delay (s)	\$ 1222.3	0	19.6	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	1.7	-	3	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Existing AM  
 11/28/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	145	175	17	86	60	1191	0	0	1656	7
Future Volume (vph)	8	0	145	175	17	86	60	1191	0	0	1656	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.904						0.999	
Flt Protected	0.950			0.950	0.989		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1582	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.989		0.067					
Satd. Flow (perm)	1770	0	1583	1681	1582	0	125	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84		78							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	0	153	184	18	91	63	1254	0	0	1743	7
Shared Lane Traffic (%)				18%								
Lane Group Flow (vph)	8	0	153	151	142	0	63	1254	0	0	1750	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

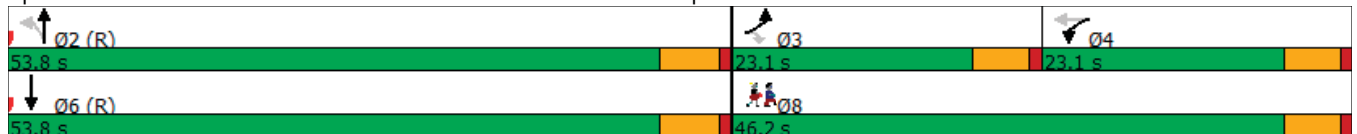
Existing AM  
 11/28/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		53.8	53.8			53.8	
Total Split (%)	23.1%		23.1%	23.1%	23.1%		53.8%	53.8%			53.8%	
Maximum Green (s)	18.0		18.0	18.0	18.0		48.4	48.4			48.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	11.4		11.4	13.7	13.7		59.3	59.3			59.3	
Actuated g/C Ratio	0.11		0.11	0.14	0.14		0.59	0.59			0.59	
v/c Ratio	0.04		0.60	0.65	0.50		0.85	0.60			0.83	
Control Delay	38.4		30.3	53.9	24.7		98.2	15.3			22.3	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	38.4		30.3	53.9	24.7		98.2	15.3			22.3	
LOS	D		C	D	C		F	B			C	
Approach Delay		30.7			39.8			19.3			22.3	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 23.0      Intersection LOS: C  
 Intersection Capacity Utilization 76.3%      ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp























Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	46%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	



Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Existing PM  
 11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	175	214	31	322	66	1474	0	0	1768	12
Future Volume (vph)	12	0	175	214	31	322	66	1474	0	0	1768	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.871							0.999
Flt Protected	0.950			0.950	0.997		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1537	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.997		0.056					
Satd. Flow (perm)	1770	0	1583	1681	1537	0	104	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		216							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	0	186	228	33	343	70	1568	0	0	1881	13
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	13	0	186	205	399	0	70	1568	0	0	1894	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

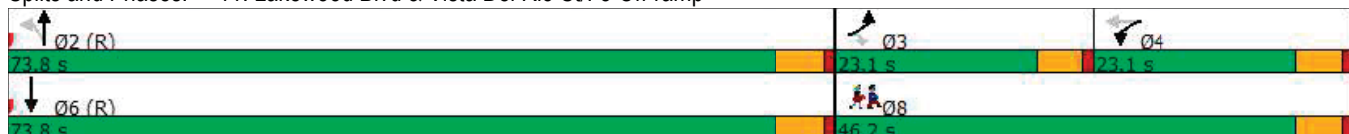
Existing PM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		73.8	73.8			73.8	
Total Split (%)	19.3%		19.3%	19.3%	19.3%		61.5%	61.5%			61.5%	
Maximum Green (s)	18.0		18.0	18.0	18.0		68.4	68.4			68.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	13.8		13.8	19.6	19.6		71.0	71.0			71.0	
Actuated g/C Ratio	0.12		0.12	0.16	0.16		0.59	0.59			0.59	
v/c Ratio	0.06		0.77	0.75	0.93		1.15	0.75			0.90	
Control Delay	45.8		52.9	65.6	51.3		190.5	21.4			29.8	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.8			1.1	
Total Delay	45.8		52.9	65.6	51.3		190.5	22.2			30.9	
LOS	D		D	E	D		F	C			C	
Approach Delay		52.4			56.2			29.4			30.9	
Approach LOS		D			E			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 34.9  
 Intersection Capacity Utilization 89.7%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service E























Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	39%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	



















HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Existing AM  
 11/28/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	234	78	217	0	0	0	0	1836	223	0	1077	0
Future Volume (veh/h)	234	78	217	0	0	0	0	1836	223	0	1077	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	162	195	0				0	1912	0	0	1122	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	259	272					0	3767		0	3767	0
Arrive On Green	0.15	0.15	0.00				0.00	0.74	0.00	0.00	0.74	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	162	195	0				0	1912	0	0	1122	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	7.7	8.9	0.0				0.0	14.1	0.0	0.0	6.6	0.0
Cycle Q Clear(g_c), s	7.7	8.9	0.0				0.0	14.1	0.0	0.0	6.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	259	272					0	3767		0	3767	0
V/C Ratio(X)	0.62	0.72					0.00	0.51		0.00	0.30	0.00
Avail Cap(c_a), veh/h	732	769					0	3767		0	3767	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	36.1	36.7	0.0				0.0	4.9	0.0	0.0	4.0	0.0
Incr Delay (d2), s/veh	0.9	1.3	0.0				0.0	0.5	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.1	0.0				0.0	3.5	0.0	0.0	1.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	38.0	0.0				0.0	5.4	0.0	0.0	4.2	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		357	A					1912	A		1122	
Approach Delay, s/veh		37.6						5.4			4.2	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		71.8		18.2				71.8				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		42.5		37.0				42.5				
Max Q Clear Time (g_c+I1), s		16.1		10.9				8.6				
Green Ext Time (p_c), s		22.6		0.9				16.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Existing PM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	72	198	0	0	0	0	1605	229	0	1333	0
Future Volume (veh/h)	289	72	198	0	0	0	0	1605	229	0	1333	0
Initial Q (Qb), veh	0	0	0					0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00					1.00	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00					1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	194	241	0				0	1726	0	0	1433	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	303	318					0	3641		0	3641	0
Arrive On Green	0.17	0.17	0.00				0.00	0.71	0.00	0.00	0.71	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	194	241	0				0	1726	0	0	1433	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	9.1	11.0	0.0				0.0	13.2	0.0	0.0	10.1	0.0
Cycle Q Clear(g_c), s	9.1	11.0	0.0				0.0	13.2	0.0	0.0	10.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	303	318					0	3641		0	3641	0
V/C Ratio(X)	0.64	0.76					0.00	0.47		0.00	0.39	0.00
Avail Cap(c_a), veh/h	750	788					0	3641		0	3641	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.8	35.6	0.0				0.0	5.6	0.0	0.0	5.1	0.0
Incr Delay (d2), s/veh	0.8	1.4	0.0				0.0	0.4	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.1	0.0				0.0	3.5	0.0	0.0	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	37.0	0.0				0.0	6.0	0.0	0.0	5.5	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		435	A					1726	A		1433	
Approach Delay, s/veh		36.4						6.0			5.5	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		69.6		20.4				69.6				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		41.6		37.9				41.6				
Max Q Clear Time (g_c+I1), s		15.2		13.0				12.1				
Green Ext Time (p_c), s		21.3		1.1				19.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												





Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↕		↵	↕↶		↵	↕↶	
Traffic Vol, veh/h	9	0	18	13	0	41	91	884	14	62	846	61
Future Vol, veh/h	9	0	18	13	0	41	91	884	14	62	846	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	19	14	0	44	98	951	15	67	910	66

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1749	-	488	1744	2265	483	976	0	0	966	0	0
Stage 1	1077	-	-	1155	1155	-	-	-	-	-	-	-
Stage 2	672	-	-	589	1110	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	55	0	526	55	40	530	703	-	-	709	-	-
Stage 1	234	0	-	209	269	-	-	-	-	-	-	-
Stage 2	412	0	-	461	283	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	42	-	526	44	31	530	703	-	-	709	-	-
Mov Cap-2 Maneuver	42	-	-	44	31	-	-	-	-	-	-	-
Stage 1	201	-	-	180	232	-	-	-	-	-	-	-
Stage 2	325	-	-	402	256	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	46.3		45.5		1			0.7		
HCM LOS	E		E							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	703	-	-	42	526	145	709	-	-
HCM Lane V/C Ratio	0.139	-	-	0.23	0.037	0.4	0.094	-	-
HCM Control Delay (s)	10.9	-	-	114.7	12.1	45.5	10.6	-	-
HCM Lane LOS	B	-	-	F	B	E	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	0.8	0.1	1.7	0.3	-	-

Intersection												
Int Delay, s/veh	48.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖		↗		↔		↖	↕		↖	↕	
Traffic Vol, veh/h	50	0	77	10	0	34	13	1215	35	134	1203	9
Future Vol, veh/h	50	0	77	10	0	34	13	1215	35	134	1203	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	0	87	11	0	38	15	1365	39	151	1352	10

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2372	-	681	2393	3079	702	1362	0	0	1404	0	0
Stage 1	1659	-	-	1415	1415	-	-	-	-	-	-	-
Stage 2	713	-	-	978	1664	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 18	0	393	18	12	381	501	-	-	482	-	-
Stage 1	102	0	-	144	202	-	-	-	-	-	-	-
Stage 2	389	0	-	269	152	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 12	-	393	~ 10	8	381	501	-	-	482	-	-
Mov Cap-2 Maneuver	~ 12	-	-	~ 10	8	-	-	-	-	-	-	-
Stage 1	99	-	-	140	196	-	-	-	-	-	-	-
Stage 2	340	-	-	144	104	-	-	-	-	-	-	-






















Approach	EB		WB		NB		SB	
HCM Control Delay, s	\$ 908.4		\$ 378		0.1		1.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	501	-	-	12	393	40	482	-	-
HCM Lane V/C Ratio	0.029	-	-	4.682	0.22	1.236	0.312	-	-
HCM Control Delay (s)	12.4	-	-	\$ 2281.5	16.7	\$ 378	15.8	-	-
HCM Lane LOS	B	-	-	F	C	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	8.1	0.8	4.9	1.3	-	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon





















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Existing Plus Project AM  
12/01/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	0	18	13	0	41	91	884	14	62	846	61
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	9	0	18	0	54	0	91	898	0	62	907	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.88	0.85	0.95	1.00	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1520	0	1360	0	1401	0	1520	3039	0	1520	3016	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	1.6			0.0			7.2	35.5	0.0	4.9	36.1	0.0
Adj Reference Time (s)	8.0			0.0			11.2	39.5	0.0	8.9	40.1	0.0
Permitted Option												
Adj Saturation A (vph)	467	0	0	299	101	1520	101	1508	101	1508	101	1508
Reference Time A (s)	2.3	0.0	0.0	21.7	107.8	35.5	73.4	36.1	73.4	36.1	73.4	36.1
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA
Reference Time B (s)	8.7	0.0	9.0	12.6	NA	NA	NA	NA	NA	NA	NA	NA
Reference Time (s)	2.3			12.6			107.8			73.4		
Adj Reference Time (s)	8.0			16.6			111.8			77.4		
Split Option												
Ref Time Combined (s)	0.7	0.0	0.0	4.6	7.2	35.5	4.9	36.1	4.9	36.1	4.9	36.1
Ref Time Seperate (s)	0.7	0.0	1.0	0.0	7.2	34.9	4.9	33.7	4.9	33.7	4.9	33.7
Reference Time (s)	0.7	0.7	4.6	4.6	35.5	35.5	36.1	36.1	36.1	36.1	36.1	36.1
Adj Reference Time (s)	8.0	8.0	8.6	8.6	39.5	39.5	40.1	40.1	40.1	40.1	40.1	40.1
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		51.3									
Permitted Option (s)	16.6		111.8									
Split Option (s)	16.6		79.5									
Minimum (s)	16.6		51.3		67.9							
Right Turns												
	EBR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	40.1											
Oncoming Left Ref Time (s)	8.6											
Combined (s)	56.7											
Intersection Summary												
Intersection Capacity Utilization	56.6%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												





















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Existing Plus Project PM  
12/01/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	50	0	77	10	0	34	13	1215	35	134	1203	9	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	50	0	77	0	44	0	13	1250	0	134	1212	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.87	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1520	0	1360	0	1398	0	1520	3034	0	1520	3043	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00			
Protected Option Allowed	No			No			Yes			Yes			
Reference Time (s)	6.8			0.0			1.0	49.4	0.0	10.6	47.8	0.0	
Adj Reference Time (s)	10.8			0.0			8.0	53.4	0.0	14.6	51.8	0.0	
Permitted Option													
Adj Saturation A (vph)	447	0	0	313	0	101	1517	0	101	1522	0	0	
Reference Time A (s)	13.4	0.0	0.0	16.9	0.0	15.4	49.4	0.0	158.7	47.8	0.0	0.0	
Adj Saturation B (vph)	0	0	0	0	0	NA	NA	0	NA	NA	0	0	
Reference Time B (s)	11.9	0.0	8.8	11.8	0.0	NA	NA	0.0	NA	NA	0.0	0.0	
Reference Time (s)	11.9			11.8			49.4			158.7			
Adj Reference Time (s)	15.9			15.8			53.4			162.7			
Split Option													
Ref Time Combined (s)	3.9	0.0	0.0	3.8	0.0	1.0	49.4	0.0	10.6	47.8	0.0	0.0	
Ref Time Seperate (s)	3.9	0.0	0.8	0.0	0.0	1.0	48.1	0.0	10.6	47.4	0.0	0.0	
Reference Time (s)	3.9	3.9	3.8	3.8	0.0	49.4	49.4	0.0	47.8	47.8	0.0	0.0	
Adj Reference Time (s)	8.0	8.0	8.0	8.0	0.0	53.4	53.4	0.0	51.8	51.8	0.0	0.0	
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	NA		68.0										
Permitted Option (s)	15.9		162.7										
Split Option (s)	16.0		105.2										
Minimum (s)	15.9		68.0		84.0								
Right Turns													
	EBR												
Adj Reference Time (s)	10.8												
Cross Thru Ref Time (s)	51.8												
Oncoming Left Ref Time (s)	8.0												
Combined (s)	70.6												
Intersection Summary													
Intersection Capacity Utilization	70.0%			ICU Level of Service				C					
Reference Times and Phasing Options do not represent an optimized timing plan.													

HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Existing Plus Project AM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	85	0	46	0	0	0	0	748	693	129	1159	0
Future Volume (veh/h)	85	0	46	0	0	0	0	748	693	129	1159	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	89	0	48				0	787	0	136	1220	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	298	0	265				0	1310		298	2230	0
Arrive On Green	0.17	0.00	0.17				0.00	0.37	0.00	0.17	0.63	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	89	0	48				0	787	0	136	1220	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	2.2	0.0	1.3				0.0	9.2	0.0	3.5	10.0	0.0
Cycle Q Clear(g_c), s	2.2	0.0	1.3				0.0	9.2	0.0	3.5	10.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	298	0	265				0	1310		298	2230	0
V/C Ratio(X)	0.30	0.00	0.18				0.00	0.60		0.46	0.55	0.00
Avail Cap(c_a), veh/h	727	0	647				0	2539		602	4066	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.7	0.0	18.3				0.0	13.1	0.0	19.2	5.4	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.3				0.0	0.6	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5				0.0	3.0	0.0	1.3	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.2	0.0	18.6				0.0	13.7	0.0	20.1	5.7	0.0
LnGrp LOS	B	A	B				A	B		C	A	A
Approach Vol, veh/h		137						787	A		1356	
Approach Delay, s/veh		19.0						13.7			7.1	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.3	24.3				37.5		13.7				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 17	36.6				58.6		20.9				
Max Q Clear Time (g_c+I1), s	5.5	11.2				12.0		4.2				
Green Ext Time (p_c), s	0.2	7.7				16.9		0.3				

Intersection Summary





















HCM 6th Ctrl Delay	10.1
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Existing Plus Project PM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	501	0	169	0	0	0	0	1016	287	59	1410	0
Future Volume (veh/h)	501	0	169	0	0	0	0	1016	287	59	1410	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	527	0	178				0	1069	0	62	1484	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	588	0	523				0	1342		170	1897	0
Arrive On Green	0.33	0.00	0.33				0.00	0.38	0.00	0.10	0.53	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	527	0	178				0	1069	0	62	1484	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	21.7	0.0	6.5				0.0	20.6	0.0	2.5	25.8	0.0
Cycle Q Clear(g_c), s	21.7	0.0	6.5				0.0	20.6	0.0	2.5	25.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	588	0	523				0	1342		170	1897	0
V/C Ratio(X)	0.90	0.00	0.34				0.00	0.80		0.37	0.78	0.00
Avail Cap(c_a), veh/h	744	0	662				0	1504		231	2182	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.6	0.0	19.5				0.0	21.4	0.0	32.7	14.4	0.0
Incr Delay (d2), s/veh	11.6	0.0	0.4				0.0	3.1	0.0	1.0	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.5	0.0	0.1				0.0	8.2	0.0	1.1	9.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	0.0	19.9				0.0	24.4	0.0	33.6	16.2	0.0
LnGrp LOS	D	A	B				A	C		C	B	A
Approach Vol, veh/h		705						1069	A		1546	
Approach Delay, s/veh		32.0						24.4			16.9	
Approach LOS		C						C			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.0	34.5				46.5		30.5				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 10	32.6				47.3		32.2				
Max Q Clear Time (g_c+I1), s	4.5	22.6				27.8		23.7				
Green Ext Time (p_c), s	0.0	6.1				13.4		1.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			22.5									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												

Intersection										
Int Delay, s/veh	3.2									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	182	0	1458	510	156	1092	0
Future Vol, veh/h	0	0	0	182	0	1458	510	156	1092	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	192	0	1535	537	164	1149	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2245	-	0
Stage 1	1477	-	-
Stage 2	768	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	35	0	0
Stage 1	176	0	0
Stage 2	418	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	22	-	429
Mov Cap-2 Maneuver	22	-	-
Stage 1	176	-	-
Stage 2	258	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 359.1	0	2.3
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	22	-	429	-
HCM Lane V/C Ratio	-	0.766	-	0.383	-
HCM Control Delay (s)	-\$	359.1	0	18.5	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	2.2	-	1.8	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon



Intersection										
Int Delay, s/veh	4.2									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕↕	↗	↘	↕↕	
Traffic Vol, veh/h	0	0	0	186	0	1292	481	263	1687	0
Future Vol, veh/h	0	0	0	186	0	1292	481	263	1687	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	192	0	1332	496	271	1739	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2947	-	-
Stage 1	2281	-	-
Stage 2	666	-	-
Critical Hdwy	6.84	-	-
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	-
Pot Cap-1 Maneuver	12	0	0
Stage 1	63	0	0
Stage 2	472	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 6	-	-
Mov Cap-2 Maneuver	~ 6	-	-
Stage 1	63	-	-
Stage 2	223	-	-





















Approach	SB	NE	SW
HCM Control Delay, s	\$ 1222.3	0	2.6
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	6	-	514	-
HCM Lane V/C Ratio	-	1.203	-	0.527	-
HCM Control Delay (s)	\$ 1222.3	0	19.6	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	1.7	-	3	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Lanes, Volumes, Timings  
11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Existing Plus Project AM  
11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	145	175	17	106	60	1231	0	0	1661	9
Future Volume (vph)	8	0	145	175	17	106	60	1231	0	0	1661	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.888						0.999	
Flt Protected	0.950			0.950	0.993		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1560	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.993		0.068					
Satd. Flow (perm)	1770	0	1583	1681	1560	0	127	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			84		112							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	0	153	184	18	112	63	1296	0	0	1748	9
Shared Lane Traffic (%)				11%								
Lane Group Flow (vph)	8	0	153	164	150	0	63	1296	0	0	1757	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

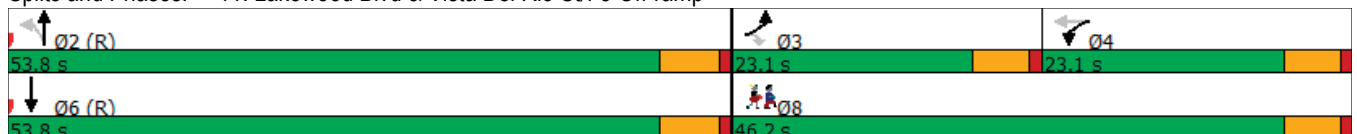
Existing Plus Project AM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		53.8	53.8			53.8	
Total Split (%)	23.1%		23.1%	23.1%	23.1%		53.8%	53.8%			53.8%	
Maximum Green (s)	18.0		18.0	18.0	18.0		48.4	48.4			48.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	11.4		11.4	14.4	14.4		58.7	58.7			58.7	
Actuated g/C Ratio	0.11		0.11	0.14	0.14		0.59	0.59			0.59	
v/c Ratio	0.04		0.60	0.68	0.47		0.85	0.62			0.85	
Control Delay	38.4		30.3	54.4	16.8		98.5	16.2			23.4	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	38.4		30.3	54.4	16.8		98.5	16.2			23.4	
LOS	D		C	D	B		F	B			C	
Approach Delay		30.7			36.4			20.0			23.4	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 23.6  
 Intersection Capacity Utilization 76.7%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D

Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	46%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Existing Plus Project PM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	175	214	31	325	66	1481	0	0	1806	31
Future Volume (vph)	12	0	175	214	31	325	66	1481	0	0	1806	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.871							0.997
Flt Protected	0.950			0.950	0.997		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1537	0	1770	3539	0	0	3529	0
Flt Permitted	0.950			0.950	0.997		0.056					
Satd. Flow (perm)	1770	0	1583	1681	1537	0	104	3539	0	0	3529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		218							2
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	0	186	228	33	346	70	1576	0	0	1921	33
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	13	0	186	205	402	0	70	1576	0	0	1954	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

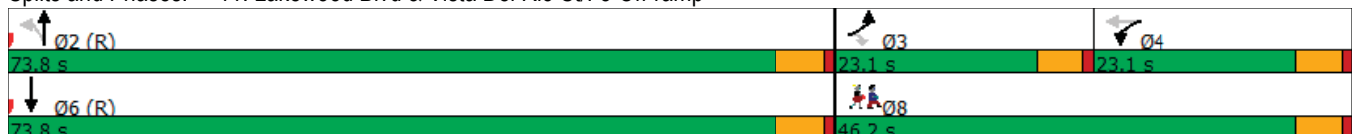
Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		73.8	73.8			73.8	
Total Split (%)	19.3%		19.3%	19.3%	19.3%		61.5%	61.5%			61.5%	
Maximum Green (s)	18.0		18.0	18.0	18.0		68.4	68.4			68.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	13.8		13.8	19.8	19.8		70.8	70.8			70.8	
Actuated g/C Ratio	0.12		0.12	0.16	0.16		0.59	0.59			0.59	
v/c Ratio	0.06		0.77	0.74	0.92		1.15	0.75			0.94	
Control Delay	45.8		52.9	64.6	50.7		191.9	21.7			33.5	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.9			2.2	
Total Delay	45.8		52.9	64.6	50.7		191.9	22.6			35.7	
LOS	D		D	E	D		F	C			D	
Approach Delay		52.4			55.4			29.8			35.7	
Approach LOS		D			E			C			D	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 37.0  
 Intersection Capacity Utilization 91.5%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service F

Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



























Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	39%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	



















HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Existing Plus Project AM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	254	78	217	0	0	0	0	1856	223	0	1080	0
Future Volume (veh/h)	254	78	217	0	0	0	0	1856	223	0	1080	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	173	210	0				0	1933	0	0	1125	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	274	287					0	3726		0	3726	0
Arrive On Green	0.15	0.15	0.00				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	173	210	0				0	1933	0	0	1125	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	8.2	9.6	0.0				0.0	14.8	0.0	0.0	6.9	0.0
Cycle Q Clear(g_c), s	8.2	9.6	0.0				0.0	14.8	0.0	0.0	6.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	274	287					0	3726		0	3726	0
V/C Ratio(X)	0.63	0.73					0.00	0.52		0.00	0.30	0.00
Avail Cap(c_a), veh/h	732	769					0	3726		0	3726	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	35.7	36.3	0.0				0.0	5.3	0.0	0.0	4.2	0.0
Incr Delay (d2), s/veh	0.9	1.3	0.0				0.0	0.5	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.4	0.0				0.0	3.7	0.0	0.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	37.7	0.0				0.0	5.8	0.0	0.0	4.4	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		383	A					1933	A		1125	
Approach Delay, s/veh		37.2						5.8			4.4	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		71.1		18.9				71.1				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		42.5		37.0				42.5				
Max Q Clear Time (g_c+I1), s		16.8		11.6				8.9				
Green Ext Time (p_c), s		22.3		1.0				16.8				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.8									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Existing Plus Project PM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	292	72	198	0	0	0	0	1608	229	0	1352	0
Future Volume (veh/h)	292	72	198	0	0	0	0	1608	229	0	1352	0
Initial Q (Qb), veh	0	0	0					0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00					1.00	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00					1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	196	243	0				0	1729	0	0	1454	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	305	320					0	3636		0	3636	0
Arrive On Green	0.17	0.17	0.00				0.00	0.71	0.00	0.00	0.71	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	196	243	0				0	1729	0	0	1454	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	9.2	11.1	0.0				0.0	13.3	0.0	0.0	10.3	0.0
Cycle Q Clear(g_c), s	9.2	11.1	0.0				0.0	13.3	0.0	0.0	10.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	305	320					0	3636		0	3636	0
V/C Ratio(X)	0.64	0.76					0.00	0.48		0.00	0.40	0.00
Avail Cap(c_a), veh/h	750	788					0	3636		0	3636	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.7	35.5	0.0				0.0	5.6	0.0	0.0	5.2	0.0
Incr Delay (d2), s/veh	0.8	1.4	0.0				0.0	0.4	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.1	0.0				0.0	3.5	0.0	0.0	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	36.9	0.0				0.0	6.1	0.0	0.0	5.5	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		439	A					1729	A		1454	
Approach Delay, s/veh		36.3						6.1			5.5	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		69.5		20.5				69.5				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		41.6		37.9				41.6				
Max Q Clear Time (g_c+I1), s		15.3		13.1				12.3				
Green Ext Time (p_c), s		21.2		1.1				20.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

# **Appendix G: Synchro Worksheets – Opening Year 2023 & Opening Year 2023 Plus Project Conditions**

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↕		↵	↕↶		↵	↕↶	
Traffic Vol, veh/h	2	0	8	13	1	41	11	891	14	62	853	8
Future Vol, veh/h	2	0	8	13	1	41	11	891	14	62	853	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	9	14	1	44	12	958	15	67	917	9

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1560	-	463	1583	2050	487	926	0	0	973	0	0
Stage 1	1056	-	-	990	990	-	-	-	-	-	-	-
Stage 2	504	-	-	593	1060	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	76	0	546	73	55	526	734	-	-	704	-	-
Stage 1	241	0	-	264	323	-	-	-	-	-	-	-
Stage 2	518	0	-	459	299	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	63	-	546	66	49	526	734	-	-	704	-	-
Mov Cap-2 Maneuver	63	-	-	66	49	-	-	-	-	-	-	-
Stage 1	237	-	-	260	318	-	-	-	-	-	-	-
Stage 2	465	-	-	409	271	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	22.2		33.1		0.1		0.7	
HCM LOS	C		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	734	-	-	63	546	186	704	-	-
HCM Lane V/C Ratio	0.016	-	-	0.034	0.016	0.318	0.095	-	-
HCM Control Delay (s)	10	-	-	64.2	11.7	33.1	10.6	-	-
HCM Lane LOS	A	-	-	F	B	D	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	1.3	0.3	-	-

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↷		↵	↶↷		↵	↶↷	
Traffic Vol, veh/h	0	0	1	10	0	34	0	1225	35	135	1213	0
Future Vol, veh/h	0	0	1	10	0	34	0	1225	35	135	1213	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	11	0	38	0	1376	39	152	1363	0





















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2355	-	682	2382	3063	708	1363	0	0	1415	0	0
Stage 1	1667	-	-	1396	1396	-	-	-	-	-	-	-
Stage 2	688	-	-	986	1667	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	19	0	392	18	12	377	500	-	-	478	-	-
Stage 1	100	0	-	148	206	-	-	-	-	-	-	-
Stage 2	403	0	-	266	152	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	13	-	392	14	8	377	500	-	-	478	-	-
Mov Cap-2 Maneuver	13	-	-	14	8	-	-	-	-	-	-	-
Stage 1	100	-	-	148	206	-	-	-	-	-	-	-
Stage 2	362	-	-	181	104	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.2		212		0		1.6	
HCM LOS	B		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	500	-	-	-	392	55	478	-	-
HCM Lane V/C Ratio	-	-	-	-	0.003	0.899	0.317	-	-
HCM Control Delay (s)	0	-	-	0	14.2	212	16	-	-
HCM Lane LOS	A	-	-	A	B	F	C	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	4	1.4	-	-





















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Opening Year 2023 AM  
12/01/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	8	13	1	41	11	891	14	62	853	8
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	2	0	8	0	55	0	11	905	0	62	861	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.88	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	1360	0	1404	0	1520	3039	0	1520	3042	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	0.7			0.0			0.9	35.7	0.0	4.9	34.0	0.0
Adj Reference Time (s)	8.0			0.0			8.0	39.7	0.0	8.9	38.0	0.0
Permitted Option												
Adj Saturation A (vph)	461	0	0	304	101	1520	101	1521	0	0	0	0
Reference Time A (s)	0.5	0.0	0.0	21.7	13.0	35.7	73.4	34.0	0.0	0.0	0.0	0.0
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA	0	0	0	0
Reference Time B (s)	8.2	0.0	9.0	12.7	NA	NA	NA	NA	0.0	0.0	0.0	0.0
Reference Time (s)	0.5			12.7			35.7			73.4		
Adj Reference Time (s)	8.0			16.7			39.7			77.4		
Split Option												
Ref Time Combined (s)	0.2	0.0	0.0	4.7	0.9	35.7	4.9	34.0	0.0	0.0	0.0	0.0
Ref Time Seperate (s)	0.2	0.0	1.0	0.1	0.9	35.2	4.9	33.6	0.0	0.0	0.0	0.0
Reference Time (s)	0.2	0.2	4.7	4.7	35.7	35.7	34.0	34.0	0.0	0.0	0.0	0.0
Adj Reference Time (s)	8.0	8.0	8.7	8.7	39.7	39.7	38.0	38.0	0.0	0.0	0.0	0.0
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		48.6									
Permitted Option (s)	16.7		77.4									
Split Option (s)	16.7		77.7									
Minimum (s)	16.7		48.6		65.3							
Right Turns												
	EBR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	38.0											
Oncoming Left Ref Time (s)	8.7											
Combined (s)	54.7											
Intersection Summary												
Intersection Capacity Utilization	54.4%		ICU Level of Service						A			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway





















Opening Year 2023 PM  
12/01/2021

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	0	0	1	10	0	34	0	1225	35	135	1213	0	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	0	0	1	0	44	0	0	1260	0	135	1213	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.87	0.85	0.95	1.00	0.85	0.95	1.00	0.85	
Saturated Flow (vph)	1520	0	1360	0	1398	0	1520	3034	0	1520	3046	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00			
Protected Option Allowed	No			No			Yes			Yes			
Reference Time (s)	0.1			0.0			0.0	0.0	49.8	0.0	10.7	47.8	0.0
Adj Reference Time (s)	8.0			0.0			8.0	8.0	53.8	0.0	14.7	51.8	0.0
Permitted Option													
Adj Saturation A (vph)	447	0		0	313		101	1517		101	1523		
Reference Time A (s)	0.0	0.0		0.0	16.9		0.0	49.8		159.9	47.8		
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA		
Reference Time B (s)	8.0	0.0		8.8	11.8		NA	NA		NA	NA		
Reference Time (s)	0.0			11.8			49.8			159.9			
Adj Reference Time (s)	8.0			15.8			53.8			163.9			
Split Option													
Ref Time Combined (s)	0.0	0.0		0.0	3.8		0.0	49.8		10.7	47.8		
Ref Time Seperate (s)	0.0	0.0		0.8	0.0		0.0	48.5		10.7	47.8		
Reference Time (s)	0.0	0.0		3.8	3.8		49.8	49.8		47.8	47.8		
Adj Reference Time (s)	0.0	0.0		8.0	8.0		53.8	53.8		51.8	51.8		
Summary	EB WB		NB SB		Combined								
Protected Option (s)	NA		68.5										
Permitted Option (s)	15.8		163.9										
Split Option (s)	8.0		105.6										
Minimum (s)	8.0		68.5		76.5								
Right Turns	EBR												
Adj Reference Time (s)	8.0												
Cross Thru Ref Time (s)	51.8												
Oncoming Left Ref Time (s)	8.0												
Combined (s)	67.8												
Intersection Summary													
Intersection Capacity Utilization	63.7%				ICU Level of Service				B				
Reference Times and Phasing Options do not represent an optimized timing plan.													























HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Opening Year 2023 AM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	86	0	46	0	0	0	0	751	699	130	1168	0
Future Volume (veh/h)	86	0	46	0	0	0	0	751	699	130	1168	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	91	0	48				0	791	0	137	1229	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	299	0	266				0	1314		297	2232	0
Arrive On Green	0.17	0.00	0.17				0.00	0.37	0.00	0.17	0.63	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	91	0	48				0	791	0	137	1229	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	2.3	0.0	1.3				0.0	9.3	0.0	3.6	10.1	0.0
Cycle Q Clear(g_c), s	2.3	0.0	1.3				0.0	9.3	0.0	3.6	10.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	299	0	266				0	1314		297	2232	0
V/C Ratio(X)	0.30	0.00	0.18				0.00	0.60		0.46	0.55	0.00
Avail Cap(c_a), veh/h	724	0	644				0	2529		599	4050	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.8	0.0	18.4				0.0	13.1	0.0	19.3	5.4	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.3				0.0	0.6	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5				0.0	3.0	0.0	1.3	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	0.0	18.7				0.0	13.8	0.0	20.2	5.7	0.0
LnGrp LOS	B	A	B				A	B		C	A	A
Approach Vol, veh/h		139						791	A		1366	
Approach Delay, s/veh		19.1						13.8			7.2	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.3	24.4				37.7		13.7				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 17	36.6				58.6		20.9				
Max Q Clear Time (g_c+I1), s	5.6	11.3				12.1		4.3				
Green Ext Time (p_c), s	0.2	7.7				17.1		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.2									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Opening Year 2023 PM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	505	0	170	0	0	0	0	1024	289	59	1418	0
Future Volume (veh/h)	505	0	170	0	0	0	0	1024	289	59	1418	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	532	0	179				0	1078	0	62	1493	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	591	0	526				0	1343		169	1895	0
Arrive On Green	0.33	0.00	0.33				0.00	0.38	0.00	0.09	0.53	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	532	0	179				0	1078	0	62	1493	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	22.1	0.0	6.6				0.0	21.1	0.0	2.5	26.3	0.0
Cycle Q Clear(g_c), s	22.1	0.0	6.6				0.0	21.1	0.0	2.5	26.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	591	0	526				0	1343		169	1895	0
V/C Ratio(X)	0.90	0.00	0.34				0.00	0.80		0.37	0.79	0.00
Avail Cap(c_a), veh/h	737	0	656				0	1489		229	2160	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	19.6				0.0	21.6	0.0	33.0	14.6	0.0
Incr Delay (d2), s/veh	12.1	0.0	0.4				0.0	3.3	0.0	1.0	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	0.0	0.1				0.0	8.4	0.0	1.1	9.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.0	20.0				0.0	24.9	0.0	34.0	16.6	0.0
LnGrp LOS	D	A	B				A	C		C	B	A
Approach Vol, veh/h		711						1078	A		1555	
Approach Delay, s/veh		32.6						24.9			17.3	
Approach LOS		C						C			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.1	34.8				46.9		30.9				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 10	32.6				47.3		32.2				
Max Q Clear Time (g_c+I1), s	4.5	23.1				28.3		24.1				
Green Ext Time (p_c), s	0.0	5.9				13.2		1.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			23.0									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												

Intersection										
Int Delay, s/veh	3.3									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	183	0	1467	514	157	1101	0
Future Vol, veh/h	0	0	0	183	0	1467	514	157	1101	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	193	0	1544	541	165	1159	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2261	-	0
Stage 1	1489	-	-
Stage 2	772	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	35	0	0
Stage 1	173	0	0
Stage 2	416	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	21	-	426
Mov Cap-2 Maneuver	21	-	-
Stage 1	173	-	-
Stage 2	255	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 384.6	0	2.3
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	21	-	426	-
HCM Lane V/C Ratio	-	0.802	-	0.388	-
HCM Control Delay (s)	-	\$ 384.6	0	18.7	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	2.3	-	1.8	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection										
Int Delay, s/veh	4.9									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	187	0	1302	485	265	1697	0
Future Vol, veh/h	0	0	0	187	0	1302	485	265	1697	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	193	0	1342	500	273	1749	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2966	-	0
Stage 1	2295	-	-
Stage 2	671	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	11	0	0
Stage 1	62	0	0
Stage 2	470	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 5	-	509
Mov Cap-2 Maneuver	~ 5	-	-
Stage 1	62	-	-
Stage 2	218	-	-





















Approach	SB	NE	SW
HCM Control Delay, s	\$ 1515.8	0	2.7
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	5	-	509	-
HCM Lane V/C Ratio	-	1.443	-	0.537	-
HCM Control Delay (s)	\$ 1515.8	0	20	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	1.8	-	3.1	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Opening Year 2023 AM  
 11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	146	176	17	87	60	1201	0	0	1669	7
Future Volume (vph)	8	0	146	176	17	87	60	1201	0	0	1669	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.903						0.999	
Flt Protected	0.950			0.950	0.989		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1580	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.989		0.068					
Satd. Flow (perm)	1770	0	1583	1681	1580	0	127	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			83		79							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	0	154	185	18	92	63	1264	0	0	1757	7
Shared Lane Traffic (%)				18%								
Lane Group Flow (vph)	8	0	154	152	143	0	63	1264	0	0	1764	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

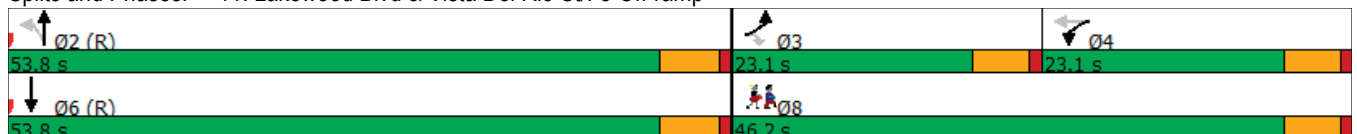
Opening Year 2023 AM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		53.8	53.8			53.8	
Total Split (%)	23.1%		23.1%	23.1%	23.1%		53.8%	53.8%			53.8%	
Maximum Green (s)	18.0		18.0	18.0	18.0		48.4	48.4			48.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	11.4		11.4	13.8	13.8		59.2	59.2			59.2	
Actuated g/C Ratio	0.11		0.11	0.14	0.14		0.59	0.59			0.59	
v/c Ratio	0.04		0.61	0.66	0.50		0.84	0.60			0.84	
Control Delay	38.4		30.7	54.0	24.6		95.6	15.4			22.8	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	38.4		30.7	54.0	24.6		95.6	15.4			22.8	
LOS	D		C	D	C		F	B			C	
Approach Delay		31.1			39.7			19.2			22.8	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 23.2      Intersection LOS: C  
 Intersection Capacity Utilization 76.7%      ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp























Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	46%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	



Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Opening Year 2023 PM  
 11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	176	216	31	325	67	1486	0	0	1782	12
Future Volume (vph)	12	0	176	216	31	325	67	1486	0	0	1782	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.871						0.999	
Flt Protected	0.950			0.950	0.997		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1537	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.997		0.057					
Satd. Flow (perm)	1770	0	1583	1681	1537	0	106	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		218							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	0	187	230	33	346	71	1581	0	0	1896	13
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	13	0	187	207	402	0	71	1581	0	0	1909	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

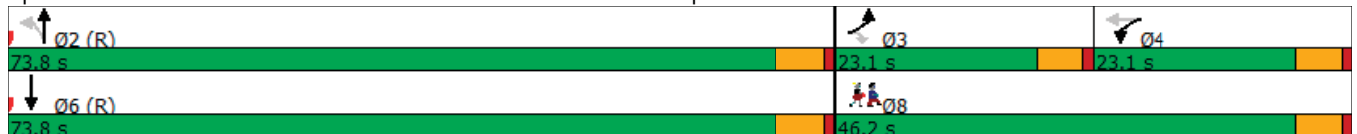
Opening Year 2023 PM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		73.8	73.8			73.8	
Total Split (%)	19.3%		19.3%	19.3%	19.3%		61.5%	61.5%			61.5%	
Maximum Green (s)	18.0		18.0	18.0	18.0		68.4	68.4			68.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	13.9		13.9	19.8	19.8		70.8	70.8			70.8	
Actuated g/C Ratio	0.12		0.12	0.16	0.16		0.59	0.59			0.59	
v/c Ratio	0.06		0.77	0.75	0.92		1.15	0.76			0.92	
Control Delay	45.8		52.9	65.4	50.8		190.0	21.8			30.9	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.9			1.4	
Total Delay	45.8		52.9	65.4	50.8		190.0	22.7			32.3	
LOS	D		D	E	D		F	C			C	
Approach Delay		52.5			55.8			29.9			32.3	
Approach LOS		D			E			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 35.6  
 Intersection Capacity Utilization 90.3%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service E























Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	39%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	























HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Opening Year 2023 AM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	236	79	219	0	0	0	0	1851	225	0	1086	0
Future Volume (veh/h)	236	79	219	0	0	0	0	1851	225	0	1086	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	164	197	0				0	1928	0	0	1131	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	261	274					0	3761		0	3761	0
Arrive On Green	0.15	0.15	0.00				0.00	0.74	0.00	0.00	0.74	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	164	197	0				0	1928	0	0	1131	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	7.8	9.0	0.0				0.0	14.4	0.0	0.0	6.7	0.0
Cycle Q Clear(g_c), s	7.8	9.0	0.0				0.0	14.4	0.0	0.0	6.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	261	274					0	3761		0	3761	0
V/C Ratio(X)	0.63	0.72					0.00	0.51		0.00	0.30	0.00
Avail Cap(c_a), veh/h	732	769					0	3761		0	3761	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	36.1	36.6	0.0				0.0	5.0	0.0	0.0	4.0	0.0
Incr Delay (d2), s/veh	0.9	1.3	0.0				0.0	0.5	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.2	0.0				0.0	3.5	0.0	0.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	37.9	0.0				0.0	5.5	0.0	0.0	4.2	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		361	A					1928	A		1131	
Approach Delay, s/veh		37.5						5.5			4.2	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		71.7		18.3				71.7				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		42.5		37.0				42.5				
Max Q Clear Time (g_c+I1), s		16.4		11.0				8.7				
Green Ext Time (p_c), s		22.6		0.9				16.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.5									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Opening Year 2023 PM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	291	73	200	0	0	0	0	1618	231	0	1344	0
Future Volume (veh/h)	291	73	200	0	0	0	0	1618	231	0	1344	0
Initial Q (Qb), veh	0	0	0					0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00					1.00	1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00					1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	196	242	0				0	1740	0	0	1445	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	304	319					0	3639		0	3639	0
Arrive On Green	0.17	0.17	0.00				0.00	0.71	0.00	0.00	0.71	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	196	242	0				0	1740	0	0	1445	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	9.2	11.1	0.0				0.0	13.4	0.0	0.0	10.2	0.0
Cycle Q Clear(g_c), s	9.2	11.1	0.0				0.0	13.4	0.0	0.0	10.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	304	319					0	3639		0	3639	0
V/C Ratio(X)	0.64	0.76					0.00	0.48		0.00	0.40	0.00
Avail Cap(c_a), veh/h	750	788					0	3639		0	3639	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.8	35.5	0.0				0.0	5.6	0.0	0.0	5.2	0.0
Incr Delay (d2), s/veh	0.9	1.4	0.0				0.0	0.5	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.1	0.0				0.0	3.5	0.0	0.0	2.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	36.9	0.0				0.0	6.1	0.0	0.0	5.5	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		438	A					1740	A		1445	
Approach Delay, s/veh		36.4						6.1			5.5	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		69.5		20.5				69.5				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		41.6		37.9				41.6				
Max Q Clear Time (g_c+I1), s		15.4		13.1				12.2				
Green Ext Time (p_c), s		21.3		1.1				20.0				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												



Intersection												
Int Delay, s/veh	2.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↕		↵	↕↶		↵	↕↶	
Traffic Vol, veh/h	9	0	18	13	1	41	91	891	14	62	853	61
Future Vol, veh/h	9	0	18	13	1	41	91	891	14	62	853	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	19	14	1	44	98	958	15	67	917	66

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1760	-	492	1755	2279	487	983	0	0	973	0	0
Stage 1	1084	-	-	1162	1162	-	-	-	-	-	-	-
Stage 2	676	-	-	593	1117	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	54	0	522	54	39	526	698	-	-	704	-	-
Stage 1	231	0	-	207	267	-	-	-	-	-	-	-
Stage 2	409	0	-	459	281	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	40	-	522	43	30	526	698	-	-	704	-	-
Mov Cap-2 Maneuver	40	-	-	43	30	-	-	-	-	-	-	-
Stage 1	199	-	-	178	230	-	-	-	-	-	-	-
Stage 2	321	-	-	400	254	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	48.7		52.1		1		0.7	
HCM LOS	E		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	698	-	-	40	522	133	704	-	-
HCM Lane V/C Ratio	0.14	-	-	0.242	0.037	0.445	0.095	-	-
HCM Control Delay (s)	11	-	-	121.6	12.2	52.1	10.6	-	-
HCM Lane LOS	B	-	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	0.8	0.1	2	0.3	-	-



Intersection												
Int Delay, s/veh	48											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↷		↵	↶↷		↵	↶↷	
Traffic Vol, veh/h	50	0	77	10	0	34	13	1225	35	135	1213	9
Future Vol, veh/h	50	0	77	10	0	34	13	1225	35	135	1213	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	0	87	11	0	38	15	1376	39	152	1363	10

Major/Minor	Minor2	Minor1		Major1			Major2					
Conflicting Flow All	2390	-	687	2412	3103	708	1373	0	0	1415	0	0
Stage 1	1672	-	-	1426	1426	-	-	-	-	-	-	-
Stage 2	718	-	-	986	1677	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 18	0	389	17	11	377	496	-	-	478	-	-
Stage 1	100	0	-	142	199	-	-	-	-	-	-	-
Stage 2	386	0	-	266	150	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 12	-	389	~ 10	7	377	496	-	-	478	-	-
Mov Cap-2 Maneuver	~ 12	-	-	~ 10	7	-	-	-	-	-	-	-
Stage 1	97	-	-	138	193	-	-	-	-	-	-	-
Stage 2	336	-	-	141	102	-	-	-	-	-	-	-





















Approach	EB	WB	NB	SB
HCM Control Delay, s/\$	908.5	\$ 378	0.1	1.6
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	496	-	-	12	389	40	478	-	-
HCM Lane V/C Ratio	0.029	-	-	4.682	0.222	1.236	0.317	-	-
HCM Control Delay (s)	12.5	-	-	\$ 2281.5	16.9	\$ 378	16	-	-
HCM Lane LOS	B	-	-	F	C	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	8.1	0.8	4.9	1.4	-	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon





















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Opening Year 2023 + Project AM  
12/01/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	0	18	13	1	41	91	891	14	62	853	61
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	9	0	18	0	55	0	91	905	0	62	914	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.88	0.85	0.95	1.00	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1520	0	1360	0	1404	0	1520	3039	0	1520	3016	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	1.6			0.0			7.2	35.7	0.0	4.9	36.4	0.0
Adj Reference Time (s)	8.0			0.0			11.2	39.7	0.0	8.9	40.4	0.0
Permitted Option												
Adj Saturation A (vph)	461	0	0	304	101	1520	101	1508	101	1508	101	1508
Reference Time A (s)	2.3	0.0	0.0	21.7	107.8	35.7	73.4	36.4	73.4	36.4	73.4	36.4
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA
Reference Time B (s)	8.7	0.0	9.0	12.7	NA	NA	NA	NA	NA	NA	NA	NA
Reference Time (s)	2.3			12.7			107.8			73.4		
Adj Reference Time (s)	8.0			16.7			111.8			77.4		
Split Option												
Ref Time Combined (s)	0.7	0.0	0.0	4.7	7.2	35.7	4.9	36.4	4.9	36.4	4.9	36.4
Ref Time Seperate (s)	0.7	0.0	1.0	0.1	7.2	35.2	4.9	33.9	4.9	33.9	4.9	33.9
Reference Time (s)	0.7	0.7	4.7	4.7	35.7	35.7	36.4	36.4	36.4	36.4	36.4	36.4
Adj Reference Time (s)	8.0	8.0	8.7	8.7	39.7	39.7	40.4	40.4	40.4	40.4	40.4	40.4
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		51.6									
Permitted Option (s)	16.7		111.8									
Split Option (s)	16.7		80.1									
Minimum (s)	16.7		51.6		68.3							
Right Turns												
	EBR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	40.4											
Oncoming Left Ref Time (s)	8.7											
Combined (s)	57.1											
Intersection Summary												
Intersection Capacity Utilization	56.9%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												

Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Opening Year 2023 Plus Project PM  
12/01/2021





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	0	77	10	0	34	13	1225	35	135	1213	9
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	50	0	77	0	44	0	13	1260	0	135	1222	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.87	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	1360	0	1398	0	1520	3034	0	1520	3043	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	6.8			0.0			1.0	49.8	0.0	10.7	48.2	0.0
Adj Reference Time (s)	10.8			0.0			8.0	53.8	0.0	14.7	52.2	0.0
Permitted Option												
Adj Saturation A (vph)	447	0	0	313	101	1517	101	1522	101	1522	101	1522
Reference Time A (s)	13.4	0.0	0.0	16.9	15.4	49.8	159.9	48.2	159.9	48.2	159.9	48.2
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA	NA	NA	NA	NA
Reference Time B (s)	11.9	0.0	8.8	11.8	NA	NA	NA	NA	NA	NA	NA	NA
Reference Time (s)	11.9			11.8			49.8			159.9		
Adj Reference Time (s)	15.9			15.8			53.8			163.9		
Split Option												
Ref Time Combined (s)	3.9	0.0	0.0	3.8	1.0	49.8	10.7	48.2	10.7	48.2	10.7	48.2
Ref Time Seperate (s)	3.9	0.0	0.8	0.0	1.0	48.5	10.7	47.8	10.7	47.8	10.7	47.8
Reference Time (s)	3.9	3.9	3.8	3.8	49.8	49.8	48.2	48.2	48.2	48.2	48.2	48.2
Adj Reference Time (s)	8.0	8.0	8.0	8.0	53.8	53.8	52.2	52.2	52.2	52.2	52.2	52.2
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		68.5									
Permitted Option (s)	15.9		163.9									
Split Option (s)	16.0		106.0									
Minimum (s)	15.9		68.5		84.4							
Right Turns												
	EBR											
Adj Reference Time (s)	10.8											
Cross Thru Ref Time (s)	52.2											
Oncoming Left Ref Time (s)	8.0											
Combined (s)	71.0											
Intersection Summary												
Intersection Capacity Utilization	70.4%		ICU Level of Service						C			
Reference Times and Phasing Options do not represent an optimized timing plan.												

HCM 6th Signalized Intersection Summary

Opening Year 2023 + Project AM

9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

11/29/2021





















												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	86	0	46	0	0	0	0	754	699	130	1168	0
Future Volume (veh/h)	86	0	46	0	0	0	0	754	699	130	1168	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	91	0	48				0	794	0	137	1229	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	298	0	266				0	1317		297	2234	0
Arrive On Green	0.17	0.00	0.17				0.00	0.37	0.00	0.17	0.63	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	91	0	48				0	794	0	137	1229	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	2.3	0.0	1.3				0.0	9.3	0.0	3.6	10.1	0.0
Cycle Q Clear(g_c), s	2.3	0.0	1.3				0.0	9.3	0.0	3.6	10.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	298	0	266				0	1317		297	2234	0
V/C Ratio(X)	0.30	0.00	0.18				0.00	0.60		0.46	0.55	0.00
Avail Cap(c_a), veh/h	723	0	643				0	2525		598	4043	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.8	0.0	18.4				0.0	13.1	0.0	19.4	5.4	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.3				0.0	0.6	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5				0.0	3.0	0.0	1.3	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	0.0	18.7				0.0	13.8	0.0	20.2	5.7	0.0
LnGrp LOS	B	A	B				A	B		C	A	A
Approach Vol, veh/h		139						794	A		1366	
Approach Delay, s/veh		19.2						13.8			7.2	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.3	24.5				37.8		13.7				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 17	36.6				58.6		20.9				
Max Q Clear Time (g_c+I1), s	5.6	11.3				12.1		4.3				
Green Ext Time (p_c), s	0.2	7.8				17.1		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.2									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

Opening Year 2023 Plus Project PM

9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	505	0	170	0	0	0	0	1024	289	59	1421	0
Future Volume (veh/h)	505	0	170	0	0	0	0	1024	289	59	1421	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	532	0	179				0	1078	0	62	1496	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	591	0	526				0	1344		169	1895	0
Arrive On Green	0.33	0.00	0.33				0.00	0.38	0.00	0.09	0.53	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	532	0	179				0	1078	0	62	1496	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	22.2	0.0	6.6				0.0	21.1	0.0	2.5	26.4	0.0
Cycle Q Clear(g_c), s	22.2	0.0	6.6				0.0	21.1	0.0	2.5	26.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	591	0	526				0	1344		169	1895	0
V/C Ratio(X)	0.90	0.00	0.34				0.00	0.80		0.37	0.79	0.00
Avail Cap(c_a), veh/h	736	0	655				0	1487		229	2157	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.8	0.0	19.6				0.0	21.6	0.0	33.1	14.6	0.0
Incr Delay (d2), s/veh	12.2	0.0	0.4				0.0	3.2	0.0	1.0	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	0.0	2.4				0.0	8.4	0.0	1.1	9.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	0.0	20.0				0.0	24.9	0.0	34.1	16.7	0.0
LnGrp LOS	D	A	B				A	C		C	B	A
Approach Vol, veh/h		711						1078	A		1558	
Approach Delay, s/veh		32.7						24.9			17.3	
Approach LOS		C						C			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.1	34.9				47.0		31.0				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 10	32.6				47.3		32.2				
Max Q Clear Time (g_c+I1), s	4.5	23.1				28.4		24.2				
Green Ext Time (p_c), s	0.0	5.9				13.1		1.7				

Intersection Summary

HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.

**Intersection**

Int Delay, s/veh 3.3

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	183	0	1470	514	157	1101	0
Future Vol, veh/h	0	0	0	183	0	1470	514	157	1101	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	193	0	1547	541	165	1159	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2263	-	0
Stage 1	1489	-	-
Stage 2	774	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	34	0	0
Stage 1	173	0	0
Stage 2	415	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	21	-	425
Mov Cap-2 Maneuver	21	-	-
Stage 1	173	-	-
Stage 2	254	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 384.6	0	2.3
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	21	-	425	-
HCM Lane V/C Ratio	-	0.802	-	0.389	-
HCM Control Delay (s)	-\$ 384.6	0	18.8	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	2.3	-	1.8	-

**Notes**  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

**Intersection**

Int Delay, s/veh 4.9

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	187	0	1302	485	265	1700	0
Future Vol, veh/h	0	0	0	187	0	1302	485	265	1700	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	193	0	1342	500	273	1753	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2970	-	0
Stage 1	2299	-	-
Stage 2	671	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	11	0	0
Stage 1	62	0	0
Stage 2	470	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 5	-	509
Mov Cap-2 Maneuver	~ 5	-	-
Stage 1	62	-	-
Stage 2	218	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 1515.8	0	2.7
HCM LOS	F		





















Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	5	-	509	-
HCM Lane V/C Ratio	-	1.443	-	0.537	-
HCM Control Delay (s)	\$ 1515.8	0	20	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	1.8	-	3.1	-

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Opening Year 2023 + Project AM  
 11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	146	176	17	107	60	1241	0	0	1674	9
Future Volume (vph)	8	0	146	176	17	107	60	1241	0	0	1674	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.888							0.999
Flt Protected	0.950			0.950	0.993		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1560	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.993		0.068					
Satd. Flow (perm)	1770	0	1583	1681	1560	0	127	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			83		113							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	0	154	185	18	113	63	1306	0	0	1762	9
Shared Lane Traffic (%)				11%								
Lane Group Flow (vph)	8	0	154	165	151	0	63	1306	0	0	1771	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					



Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

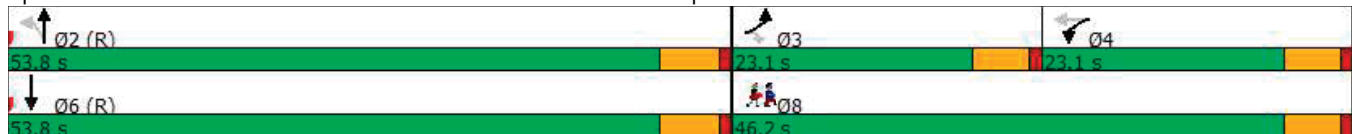
Opening Year 2023 + Project AM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		53.8	53.8			53.8	
Total Split (%)	23.1%		23.1%	23.1%	23.1%		53.8%	53.8%			53.8%	
Maximum Green (s)	18.0		18.0	18.0	18.0		48.4	48.4			48.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	11.4		11.4	14.4	14.4		58.6	58.6			58.6	
Actuated g/C Ratio	0.11		0.11	0.14	0.14		0.59	0.59			0.59	
v/c Ratio	0.04		0.61	0.68	0.47		0.85	0.63			0.86	
Control Delay	38.4		30.7	54.5	16.8		98.5	16.4			23.9	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	38.4		30.7	54.5	16.8		98.5	16.4			23.9	
LOS	D		C	D	B		F	B			C	
Approach Delay		31.1			36.5			20.2			23.9	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 23.9  
 Intersection Capacity Utilization 77.2%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D





















Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	46%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Opening Year 2023 Plus Project PM  
 11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	176	216	31	328	67	1493	0	0	1820	31
Future Volume (vph)	12	0	176	216	31	328	67	1493	0	0	1820	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.871							0.997
Flt Protected	0.950			0.950	0.997		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1537	0	1770	3539	0	0	3529	0
Flt Permitted	0.950			0.950	0.997		0.057					
Satd. Flow (perm)	1770	0	1583	1681	1537	0	106	3539	0	0	3529	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		220							2
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	0	187	230	33	349	71	1588	0	0	1936	33
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	13	0	187	207	405	0	71	1588	0	0	1969	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Opening Year 2023 Plus Project PM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		73.8	73.8			73.8	
Total Split (%)	19.3%		19.3%	19.3%	19.3%		61.5%	61.5%			61.5%	
Maximum Green (s)	18.0		18.0	18.0	18.0		68.4	68.4			68.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	13.9		13.9	19.9	19.9		70.6	70.6			70.6	
Actuated g/C Ratio	0.12		0.12	0.17	0.17		0.59	0.59			0.59	
v/c Ratio	0.06		0.77	0.74	0.92		1.15	0.76			0.95	
Control Delay	45.8		52.9	64.9	50.7		190.1	22.0			34.8	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.9			2.8	
Total Delay	45.8		52.9	64.9	50.7		190.1	23.0			37.6	
LOS	D		D	E	D		F	C			D	
Approach Delay		52.5			55.5			30.1			37.6	
Approach LOS		D			E			C			D	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 38.0  
 Intersection Capacity Utilization 92.1%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service F























Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	39%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	

HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp























Opening Year 2023 + Project AM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	256	79	219	0	0	0	0	1871	225	0	1089	0
Future Volume (veh/h)	256	79	219	0	0	0	0	1871	225	0	1089	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	174	211	0				0	1949	0	0	1134	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	275	288					0	3723		0	3723	0
Arrive On Green	0.15	0.15	0.00				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	174	211	0				0	1949	0	0	1134	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	8.2	9.7	0.0				0.0	15.0	0.0	0.0	7.0	0.0
Cycle Q Clear(g_c), s	8.2	9.7	0.0				0.0	15.0	0.0	0.0	7.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	275	288					0	3723		0	3723	0
V/C Ratio(X)	0.63	0.73					0.00	0.52		0.00	0.30	0.00
Avail Cap(c_a), veh/h	732	769					0	3723		0	3723	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	35.7	36.3	0.0				0.0	5.3	0.0	0.0	4.2	0.0
Incr Delay (d2), s/veh	0.9	1.4	0.0				0.0	0.5	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.5	0.0				0.0	3.8	0.0	0.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	37.6	0.0				0.0	5.9	0.0	0.0	4.5	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		385	A					1949	A		1134	
Approach Delay, s/veh		37.2						5.9			4.5	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		71.0		19.0				71.0				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		42.5		37.0				42.5				
Max Q Clear Time (g_c+I1), s		17.0		11.7				9.0				
Green Ext Time (p_c), s		22.2		1.0				16.9				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.9									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												



HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Opening Year 2023 Plus Project PM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	294	73	200	0	0	0	0	1621	231	0	1363	0
Future Volume (veh/h)	294	73	200	0	0	0	0	1621	231	0	1363	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	197	245	0				0	1743	0	0	1466	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	307	322					0	3631		0	3631	0
Arrive On Green	0.17	0.17	0.00				0.00	0.71	0.00	0.00	0.71	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	197	245	0				0	1743	0	0	1466	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	9.3	11.2	0.0				0.0	13.5	0.0	0.0	10.5	0.0
Cycle Q Clear(g_c), s	9.3	11.2	0.0				0.0	13.5	0.0	0.0	10.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	307	322					0	3631		0	3631	0
V/C Ratio(X)	0.64	0.76					0.00	0.48		0.00	0.40	0.00
Avail Cap(c_a), veh/h	750	788					0	3631		0	3631	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.7	35.5	0.0				0.0	5.7	0.0	0.0	5.3	0.0
Incr Delay (d2), s/veh	0.8	1.4	0.0				0.0	0.5	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.1	0.0				0.0	3.6	0.0	0.0	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	36.9	0.0				0.0	6.2	0.0	0.0	5.6	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		442	A					1743	A		1466	
Approach Delay, s/veh		36.3						6.2			5.6	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		69.4		20.6				69.4				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		41.6		37.9				41.6				
Max Q Clear Time (g_c+I1), s		15.5		13.2				12.5				
Green Ext Time (p_c), s		21.2		1.2				20.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.6									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

# **Appendix H: Synchro Worksheets – Forecast Cumulative 2023 & Forecast Cumulative 2023 Plus Project Conditions**

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↷		↵	↶↷		↵	↶↷	
Traffic Vol, veh/h	2	0	8	13	1	41	11	911	14	62	873	8
Future Vol, veh/h	2	0	8	13	1	41	11	911	14	62	873	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	9	14	1	44	12	980	15	67	939	9

Major/Minor	Minor2	Minor1		Major1			Major2					
Conflicting Flow All	1593	-	474	1616	2094	498	948	0	0	995	0	0
Stage 1	1078	-	-	1012	1012	-	-	-	-	-	-	-
Stage 2	515	-	-	604	1082	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	72	0	537	69	52	518	720	-	-	691	-	-
Stage 1	233	0	-	256	315	-	-	-	-	-	-	-
Stage 2	511	0	-	452	292	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	59	-	537	62	46	518	720	-	-	691	-	-
Mov Cap-2 Maneuver	59	-	-	62	46	-	-	-	-	-	-	-
Stage 1	229	-	-	252	310	-	-	-	-	-	-	-
Stage 2	458	-	-	402	264	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.1	35.2	0.1	0.7
HCM LOS	C	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	720	-	-	59	537	177	691	-	-
HCM Lane V/C Ratio	0.016	-	-	0.036	0.016	0.334	0.096	-	-
HCM Control Delay (s)	10.1	-	-	68.3	11.8	35.2	10.8	-	-
HCM Lane LOS	B	-	-	F	B	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0	1.4	0.3	-	-

Intersection												
Int Delay, s/veh	4.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↕		↵	↕↶		↵	↕↶	
Traffic Vol, veh/h	0	0	1	10	0	34	0	1255	35	135	1239	0
Future Vol, veh/h	0	0	1	10	0	34	0	1255	35	135	1239	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	11	0	38	0	1410	39	152	1392	0




















Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2401	-	696	2430	3126	725	1392	0	0	1449	0	0
Stage 1	1696	-	-	1430	1430	-	-	-	-	-	-	-
Stage 2	705	-	-	1000	1696	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	17	0	384	17	11	368	487	-	-	463	-	-
Stage 1	96	0	-	141	199	-	-	-	-	-	-	-
Stage 2	393	0	-	261	147	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	11	-	384	13	7	368	487	-	-	463	-	-
Mov Cap-2 Maneuver	11	-	-	13	7	-	-	-	-	-	-	-
Stage 1	96	-	-	141	199	-	-	-	-	-	-	-
Stage 2	352	-	-	175	99	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.4		244.3		0		1.6	
HCM LOS	B		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	487	-	-	-	384	51	463	-	-
HCM Lane V/C Ratio	-	-	-	-	0.003	0.969	0.328	-	-
HCM Control Delay (s)	0	-	-	0	14.4	244.3	16.5	-	-
HCM Lane LOS	A	-	-	A	B	F	C	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	4.2	1.4	-	-





















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Forecast Cumulative AM  
12/01/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	8	13	1	41	11	911	14	62	873	8
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	2	0	8	0	55	0	11	925	0	62	881	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.88	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	1360	0	1404	0	1520	3039	0	1520	3042	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	0.7			0.0			0.9	36.5	0.0	4.9	34.8	0.0
Adj Reference Time (s)	8.0			0.0			8.0	40.5	0.0	8.9	38.8	0.0
Permitted Option												
Adj Saturation A (vph)	461	0		0	304		101	1520		101	1521	
Reference Time A (s)	0.5	0.0		0.0	21.7		13.0	36.5		73.4	34.8	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.2	0.0		9.0	12.7		NA	NA		NA	NA	
Reference Time (s)	0.5			12.7			36.5			73.4		
Adj Reference Time (s)	8.0			16.7			40.5			77.4		
Split Option												
Ref Time Combined (s)	0.2	0.0		0.0	4.7		0.9	36.5		4.9	34.8	
Ref Time Seperate (s)	0.2	0.0		1.0	0.1		0.9	36.0		4.9	34.4	
Reference Time (s)	0.2	0.2		4.7	4.7		36.5	36.5		34.8	34.8	
Adj Reference Time (s)	8.0	8.0		8.7	8.7		40.5	40.5		38.8	38.8	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		49.4									
Permitted Option (s)	16.7		77.4									
Split Option (s)	16.7		79.3									
Minimum (s)	16.7		49.4		66.1							
Right Turns												
	EBR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	38.8											
Oncoming Left Ref Time (s)	8.7											
Combined (s)	55.5											
Intersection Summary												
Intersection Capacity Utilization	55.1%		ICU Level of Service						B			
Reference Times and Phasing Options do not represent an optimized timing plan.												





















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Forecast Cumulative PM  
12/01/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	10	0	34	0	1255	35	135	1239	0
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	1	0	44	0	0	1290	0	135	1239	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.87	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	1360	0	1398	0	1520	3034	0	1520	3046	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	0.1			0.0			0.0	51.0	0.0	10.7	48.8	0.0
Adj Reference Time (s)	8.0			0.0			8.0	55.0	0.0	14.7	52.8	0.0
Permitted Option												
Adj Saturation A (vph)	447	0		0	313		101	1517		101	1523	
Reference Time A (s)	0.0	0.0		0.0	16.9		0.0	51.0		159.9	48.8	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.0	0.0		8.8	11.8		NA	NA		NA	NA	
Reference Time (s)	0.0			11.8			51.0			159.9		
Adj Reference Time (s)	8.0			15.8			55.0			163.9		
Split Option												
Ref Time Combined (s)	0.0	0.0		0.0	3.8		0.0	51.0		10.7	48.8	
Ref Time Seperate (s)	0.0	0.0		0.8	0.0		0.0	49.6		10.7	48.8	
Reference Time (s)	0.0	0.0		3.8	3.8		51.0	51.0		48.8	48.8	
Adj Reference Time (s)	0.0	0.0		8.0	8.0		55.0	55.0		52.8	52.8	
Summary	EB WB		NB SB		Combined							
Protected Option (s)	NA		69.7									
Permitted Option (s)	15.8		163.9									
Split Option (s)	8.0		107.8									
Minimum (s)	8.0		69.7		77.7							
Right Turns	EBR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	52.8											
Oncoming Left Ref Time (s)	8.0											
Combined (s)	68.8											
Intersection Summary												
Intersection Capacity Utilization	64.7%		ICU Level of Service					C				
Reference Times and Phasing Options do not represent an optimized timing plan.												

HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Forecast Cumulative AM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	86	0	46	0	0	0	0	762	699	130	1176	0
Future Volume (veh/h)	86	0	46	0	0	0	0	762	699	130	1176	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	91	0	48				0	802	0	137	1238	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	298	0	265				0	1325		296	2239	0
Arrive On Green	0.17	0.00	0.17				0.00	0.37	0.00	0.17	0.63	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	91	0	48				0	802	0	137	1238	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	2.3	0.0	1.3				0.0	9.5	0.0	3.6	10.2	0.0
Cycle Q Clear(g_c), s	2.3	0.0	1.3				0.0	9.5	0.0	3.6	10.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	298	0	265				0	1325		296	2239	0
V/C Ratio(X)	0.31	0.00	0.18				0.00	0.61		0.46	0.55	0.00
Avail Cap(c_a), veh/h	720	0	640				0	2514		596	4025	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.9	0.0	18.5				0.0	13.1	0.0	19.5	5.4	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.3				0.0	0.6	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5				0.0	3.0	0.0	1.3	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	0.0	18.8				0.0	13.8	0.0	20.3	5.7	0.0
LnGrp LOS	B	A	B				A	B		C	A	A
Approach Vol, veh/h		139						802	A		1375	
Approach Delay, s/veh		19.3						13.8			7.2	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.3	24.7				38.0		13.7				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 17	36.6				58.6		20.9				
Max Q Clear Time (g_c+I1), s	5.6	11.5				12.2		4.3				
Green Ext Time (p_c), s	0.2	7.8				17.3		0.3				

Intersection Summary





















HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Forecast Cumulative PM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	505	0	170	0	0	0	0	1033	289	59	1428	0
Future Volume (veh/h)	505	0	170	0	0	0	0	1033	289	59	1428	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	532	0	179				0	1087	0	62	1503	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	591	0	526				0	1348		169	1898	0
Arrive On Green	0.33	0.00	0.33				0.00	0.38	0.00	0.09	0.53	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	532	0	179				0	1087	0	62	1503	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	22.2	0.0	6.7				0.0	21.4	0.0	2.6	26.7	0.0
Cycle Q Clear(g_c), s	22.2	0.0	6.7				0.0	21.4	0.0	2.6	26.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	591	0	526				0	1348		169	1898	0
V/C Ratio(X)	0.90	0.00	0.34				0.00	0.81		0.37	0.79	0.00
Avail Cap(c_a), veh/h	734	0	653				0	1482		228	2151	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.9	0.0	19.7				0.0	21.7	0.0	33.2	14.7	0.0
Incr Delay (d2), s/veh	12.3	0.0	0.4				0.0	3.4	0.0	1.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.8	0.0	2.4				0.0	8.6	0.0	1.1	9.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.2	0.0	20.1				0.0	25.1	0.0	34.2	16.8	0.0
LnGrp LOS	D	A	C				A	C		C	B	A
Approach Vol, veh/h		711						1087	A		1565	
Approach Delay, s/veh		32.9						25.1			17.5	
Approach LOS		C						C			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.1	35.0				47.1		31.0				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 10	32.6				47.3		32.2				
Max Q Clear Time (g_c+I1), s	4.6	23.4				28.7		24.2				
Green Ext Time (p_c), s	0.0	5.8				13.0		1.7				

Intersection Summary

HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.



Intersection										
Int Delay, s/veh	3.3									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕↕	↗	↘	↕↕	
Traffic Vol, veh/h	0	0	0	183	0	1478	514	157	1109	0
Future Vol, veh/h	0	0	0	183	0	1478	514	157	1109	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	193	0	1556	541	165	1167	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2275	-	0
Stage 1	1497	-	-
Stage 2	778	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	34	0	0
Stage 1	172	0	0
Stage 2	413	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	21	-	421
Mov Cap-2 Maneuver	21	-	-
Stage 1	172	-	-
Stage 2	251	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 384.6	0	2.4
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	21	-	421	-
HCM Lane V/C Ratio	-	0.802	-	0.393	-
HCM Control Delay (s)	-\$ 384.6	0	19	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	2.3	-	1.8	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection										
Int Delay, s/veh	4.8									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	187	0	1311	485	265	1707	0
Future Vol, veh/h	0	0	0	187	0	1311	485	265	1707	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	193	0	1352	500	273	1760	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2982	-	0
Stage 1	2306	-	-
Stage 2	676	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	11	0	0
Stage 1	61	0	0
Stage 2	467	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 5	-	505
Mov Cap-2 Maneuver	~ 5	-	-
Stage 1	61	-	-
Stage 2	214	-	-





















Approach	SB	NE	SW
HCM Control Delay, s	\$ 1515.8	0	2.7
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	5	-	505	-
HCM Lane V/C Ratio	-	1.443	-	0.541	-
HCM Control Delay (s)	\$ 1515.8	0	20.2	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	1.8	-	3.2	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Forecast Cumulative AM  
 11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	146	176	17	87	60	1219	0	0	1687	7
Future Volume (vph)	8	0	146	176	17	87	60	1219	0	0	1687	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.903						0.999	
Flt Protected	0.950			0.950	0.989		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1580	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.989		0.068					
Satd. Flow (perm)	1770	0	1583	1681	1580	0	127	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			83		79							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	0	154	185	18	92	63	1283	0	0	1776	7
Shared Lane Traffic (%)				18%								
Lane Group Flow (vph)	8	0	154	152	143	0	63	1283	0	0	1783	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

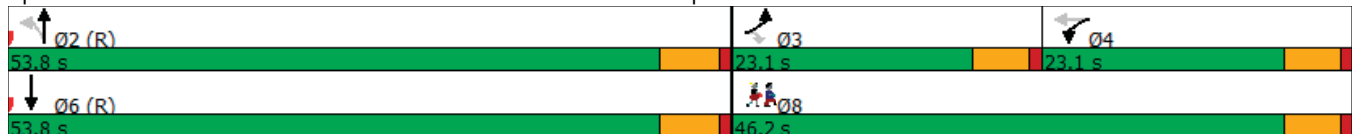
Forecast Cumulative AM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		53.8	53.8			53.8	
Total Split (%)	23.1%		23.1%	23.1%	23.1%		53.8%	53.8%			53.8%	
Maximum Green (s)	18.0		18.0	18.0	18.0		48.4	48.4			48.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	11.4		11.4	13.8	13.8		59.2	59.2			59.2	
Actuated g/C Ratio	0.11		0.11	0.14	0.14		0.59	0.59			0.59	
v/c Ratio	0.04		0.61	0.66	0.50		0.84	0.61			0.85	
Control Delay	38.4		30.7	54.0	24.6		95.6	15.6			23.2	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	38.4		30.7	54.0	24.6		95.6	15.6			23.2	
LOS	D		C	D	C		F	B			C	
Approach Delay		31.1			39.7			19.4			23.2	
Approach LOS		C			D			B			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 23.5 Intersection LOS: C  
 Intersection Capacity Utilization 77.2% ICU Level of Service D  
 Analysis Period (min) 15





















Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	46%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Forecast Cumulative PM  
 11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	176	216	31	325	67	1514	0	0	1805	12
Future Volume (vph)	12	0	176	216	31	325	67	1514	0	0	1805	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.871						0.999	
Flt Protected	0.950			0.950	0.997		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1537	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.997		0.057					
Satd. Flow (perm)	1770	0	1583	1681	1537	0	106	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		218							1
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		387			343			275			863	
Travel Time (s)		10.6			7.8			4.7			14.7	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	0	187	230	33	346	71	1611	0	0	1920	13
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	13	0	187	207	402	0	71	1611	0	0	1933	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	



Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

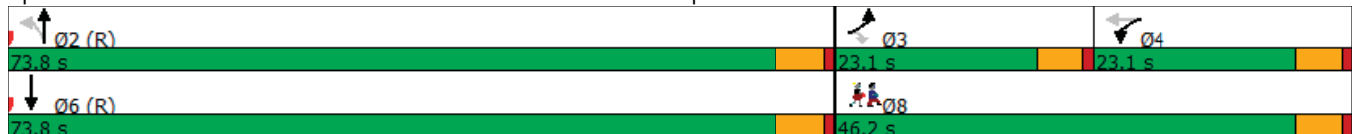
Forecast Cumulative PM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		73.8	73.8			73.8	
Total Split (%)	19.3%		19.3%	19.3%	19.3%		61.5%	61.5%			61.5%	
Maximum Green (s)	18.0		18.0	18.0	18.0		68.4	68.4			68.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	13.9		13.9	19.8	19.8		70.8	70.8			70.8	
Actuated g/C Ratio	0.12		0.12	0.16	0.16		0.59	0.59			0.59	
v/c Ratio	0.06		0.77	0.75	0.92		1.15	0.77			0.93	
Control Delay	45.8		52.9	65.4	50.8		190.0	22.4			32.1	
Queue Delay	0.0		0.0	0.0	0.0		0.0	1.0			1.8	
Total Delay	45.8		52.9	65.4	50.8		190.0	23.4			33.9	
LOS	D		D	E	D		F	C			C	
Approach Delay		52.5			55.8			30.4			33.9	
Approach LOS		D			E			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 36.4  
 Intersection Capacity Utilization 90.9%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service E























Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	39%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	



















HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Forecast Cumulative AM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	236	79	219	0	0	0	0	1869	225	0	1104	0
Future Volume (veh/h)	236	79	219	0	0	0	0	1869	225	0	1104	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	164	197	0				0	1947	0	0	1150	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	261	274					0	3761		0	3761	0
Arrive On Green	0.15	0.15	0.00				0.00	0.74	0.00	0.00	0.74	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	164	197	0				0	1947	0	0	1150	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	7.8	9.0	0.0				0.0	14.6	0.0	0.0	6.9	0.0
Cycle Q Clear(g_c), s	7.8	9.0	0.0				0.0	14.6	0.0	0.0	6.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	261	274					0	3761		0	3761	0
V/C Ratio(X)	0.63	0.72					0.00	0.52		0.00	0.31	0.00
Avail Cap(c_a), veh/h	732	769					0	3761		0	3761	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	36.1	36.6	0.0				0.0	5.0	0.0	0.0	4.0	0.0
Incr Delay (d2), s/veh	0.9	1.3	0.0				0.0	0.5	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.2	0.0				0.0	3.6	0.0	0.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.0	37.9	0.0				0.0	5.6	0.0	0.0	4.2	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		361	A					1947	A		1150	
Approach Delay, s/veh		37.5						5.6			4.2	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		71.7		18.3				71.7				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		42.5		37.0				42.5				
Max Q Clear Time (g_c+I1), s		16.6		11.0				8.9				
Green Ext Time (p_c), s		22.5		0.9				17.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.5									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Forecast Cumulative PM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	291	73	200	0	0	0	0	1646	231	0	1367	0
Future Volume (veh/h)	291	73	200	0	0	0	0	1646	231	0	1367	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	196	242	0				0	1770	0	0	1470	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	304	319					0	3639		0	3639	0
Arrive On Green	0.17	0.17	0.00				0.00	0.71	0.00	0.00	0.71	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	196	242	0				0	1770	0	0	1470	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	9.2	11.1	0.0				0.0	13.7	0.0	0.0	10.5	0.0
Cycle Q Clear(g_c), s	9.2	11.1	0.0				0.0	13.7	0.0	0.0	10.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	304	319					0	3639		0	3639	0
V/C Ratio(X)	0.64	0.76					0.00	0.49		0.00	0.40	0.00
Avail Cap(c_a), veh/h	750	788					0	3639		0	3639	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.8	35.5	0.0				0.0	5.7	0.0	0.0	5.2	0.0
Incr Delay (d2), s/veh	0.9	1.4	0.0				0.0	0.5	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.1	0.0				0.0	3.6	0.0	0.0	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	36.9	0.0				0.0	6.2	0.0	0.0	5.6	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		438	A					1770	A		1470	
Approach Delay, s/veh		36.4						6.2			5.6	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		69.5		20.5				69.5				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		41.6		37.9				41.6				
Max Q Clear Time (g_c+I1), s		15.7		13.1				12.5				
Green Ext Time (p_c), s		21.3		1.1				20.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.5									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												



Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↕		↵	↕↶		↵	↕↶	
Traffic Vol, veh/h	9	0	18	13	1	41	91	911	14	62	873	61
Future Vol, veh/h	9	0	18	13	1	41	91	911	14	62	873	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	19	14	1	44	98	980	15	67	939	66

Major/Minor	Minor2	Minor1		Major1			Major2					
Conflicting Flow All	1793	-	503	1788	2323	498	1005	0	0	995	0	0
Stage 1	1106	-	-	1184	1184	-	-	-	-	-	-	-
Stage 2	687	-	-	604	1139	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	51	0	514	51	37	518	685	-	-	691	-	-
Stage 1	224	0	-	201	261	-	-	-	-	-	-	-
Stage 2	403	0	-	452	274	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	37	-	514	41	29	518	685	-	-	691	-	-
Mov Cap-2 Maneuver	37	-	-	41	29	-	-	-	-	-	-	-
Stage 1	192	-	-	172	224	-	-	-	-	-	-	-
Stage 2	314	-	-	393	247	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	52.8	55.3	1	0.7
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	685	-	-	37	514	128	691	-	-
HCM Lane V/C Ratio	0.143	-	-	0.262	0.038	0.462	0.096	-	-
HCM Control Delay (s)	11.1	-	-	133.8	12.3	55.3	10.8	-	-
HCM Lane LOS	B	-	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-	0.9	0.1	2.1	0.3	-	-

Intersection												
Int Delay, s/veh	57.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↷		↵	↶↷		↵	↶↷	
Traffic Vol, veh/h	50	0	77	10	0	34	13	1255	35	135	1239	9
Future Vol, veh/h	50	0	77	10	0	34	13	1255	35	135	1239	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	0	87	11	0	38	15	1410	39	152	1392	10

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2436	-	701	2460	3166	725	1402	0	0	1449	0	0
Stage 1	1701	-	-	1460	1460	-	-	-	-	-	-	-
Stage 2	735	-	-	1000	1706	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 16	0	381	16	10	368	483	-	-	463	-	-
Stage 1	95	0	-	135	192	-	-	-	-	-	-	-
Stage 2	377	0	-	261	145	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 10	-	381	~ 9	7	368	483	-	-	463	-	-
Mov Cap-2 Maneuver	~ 10	-	-	~ 9	7	-	-	-	-	-	-	-
Stage 1	92	-	-	131	186	-	-	-	-	-	-	-
Stage 2	327	-	-	136	97	-	-	-	-	-	-	-




















Approach	EB		WB		NB		SB	
HCM Control Delay, \$	1118.5		431.4		0.1		1.6	
HCM LOS	F		F					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	483	-	-	10	381	37	463	-	-
HCM Lane V/C Ratio	0.03	-	-	5.618	0.227	1.336	0.328	-	-
HCM Control Delay (s)	12.7	-	-	\$ 2814.6	17.2	\$ 431.4	16.5	-	-
HCM Lane LOS	B	-	-	F	C	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	8.3	0.9	5.2	1.4	-	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway




















Forecast Cumulative + Project AM  
12/01/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	0	18	13	1	41	91	911	14	62	873	61
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	9	0	18	0	55	0	91	925	0	62	934	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.88	0.85	0.95	1.00	0.85	0.95	0.99	0.85
Saturated Flow (vph)	1520	0	1360	0	1404	0	1520	3039	0	1520	3017	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00		0.00		0.00		0.00		0.00		0.00	
Protected Option Allowed	No		No		Yes		Yes					
Reference Time (s)			1.6		0.0		7.2		36.5		0.0	
Adj Reference Time (s)			8.0		0.0		11.2		40.5		0.0	
Permitted Option												
Adj Saturation A (vph)	461	0		0	304		101	1520		101	1508	
Reference Time A (s)	2.3	0.0		0.0	21.7		107.8	36.5		73.4	37.2	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.7	0.0		9.0	12.7		NA	NA		NA	NA	
Reference Time (s)	2.3				12.7				107.8		73.4	
Adj Reference Time (s)	8.0				16.7				111.8		77.4	
Split Option												
Ref Time Combined (s)	0.7	0.0		0.0	4.7		7.2	36.5		4.9	37.2	
Ref Time Seperate (s)	0.7	0.0		1.0	0.1		7.2	36.0		4.9	34.7	
Reference Time (s)	0.7	0.7		4.7	4.7		36.5	36.5		37.2	37.2	
Adj Reference Time (s)	8.0	8.0		8.7	8.7		40.5	40.5		41.2	41.2	
Summary	EB WB		NB SB		Combined							
Protected Option (s)	NA		52.3									
Permitted Option (s)	16.7		111.8									
Split Option (s)	16.7		81.7									
Minimum (s)	16.7		52.3		69.0							
Right Turns	EBR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	41.2											
Oncoming Left Ref Time (s)	8.7											
Combined (s)	57.9											
Intersection Summary												
Intersection Capacity Utilization			57.5%		ICU Level of Service		B					
Reference Times and Phasing Options do not represent an optimized timing plan.												



Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Forecast Cumulative + Project PM  
12/01/2021





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	0	77	10	0	34	13	1255	35	135	1239	9
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	50	0	77	0	44	0	13	1290	0	135	1248	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.87	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	1360	0	1398	0	1520	3034	0	1520	3043	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			6.8			0.0	1.0	51.0	0.0	10.7	49.2	0.0
Adj Reference Time (s)			10.8			0.0	8.0	55.0	0.0	14.7	53.2	0.0
Permitted Option												
Adj Saturation A (vph)	447	0		0	313		101	1517		101	1522	
Reference Time A (s)	13.4	0.0		0.0	16.9		15.4	51.0		159.9	49.2	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	11.9	0.0		8.8	11.8		NA	NA		NA	NA	
Reference Time (s)		11.9			11.8			51.0			159.9	
Adj Reference Time (s)		15.9			15.8			55.0			163.9	
Split Option												
Ref Time Combined (s)	3.9	0.0		0.0	3.8		1.0	51.0		10.7	49.2	
Ref Time Seperate (s)	3.9	0.0		0.8	0.0		1.0	49.6		10.7	48.9	
Reference Time (s)	3.9	3.9		3.8	3.8		51.0	51.0		49.2	49.2	
Adj Reference Time (s)	8.0	8.0		8.0	8.0		55.0	55.0		53.2	53.2	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		69.7									
Permitted Option (s)	15.9		163.9									
Split Option (s)	16.0		108.2									
Minimum (s)	15.9		69.7		85.6							
Right Turns												
	EBR											
Adj Reference Time (s)	10.8											
Cross Thru Ref Time (s)	53.2											
Oncoming Left Ref Time (s)	8.0											
Combined (s)	72.0											
Intersection Summary												
Intersection Capacity Utilization			71.4%		ICU Level of Service		C					
Reference Times and Phasing Options do not represent an optimized timing plan.												

HCM 6th Signalized Intersection Summary

Forecast Cumulative + Project AM

9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	86	0	46	0	0	0	0	765	699	130	1176	0
Future Volume (veh/h)	86	0	46	0	0	0	0	765	699	130	1176	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	91	0	48				0	805	0	137	1238	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	297	0	264				0	1328		296	2241	0
Arrive On Green	0.17	0.00	0.17				0.00	0.37	0.00	0.17	0.63	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	91	0	48				0	805	0	137	1238	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	2.3	0.0	1.3				0.0	9.5	0.0	3.6	10.2	0.0
Cycle Q Clear(g_c), s	2.3	0.0	1.3				0.0	9.5	0.0	3.6	10.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	297	0	264				0	1328		296	2241	0
V/C Ratio(X)	0.31	0.00	0.18				0.00	0.61		0.46	0.55	0.00
Avail Cap(c_a), veh/h	718	0	639				0	2510		595	4018	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.0	0.0	18.5				0.0	13.1	0.0	19.5	5.4	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.3				0.0	0.6	0.0	0.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.5				0.0	3.1	0.0	1.4	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	0.0	18.9				0.0	13.8	0.0	20.4	5.7	0.0
LnGrp LOS	B	A	B				A	B		C	A	A
Approach Vol, veh/h		139						805	A		1375	
Approach Delay, s/veh		19.3						13.8			7.2	
Approach LOS		B						B			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.3	24.8				38.1		13.7				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 17	36.6				58.6		20.9				
Max Q Clear Time (g_c+I1), s	5.6	11.5				12.2		4.3				
Green Ext Time (p_c), s	0.2	7.9				17.3		0.3				

Intersection Summary

HCM 6th Ctrl Delay	10.2
HCM 6th LOS	B

Notes





















\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.  
 Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

Forecast Cumulative + Project PM

9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	505	0	170	0	0	0	0	1033	289	59	1431	0
Future Volume (veh/h)	505	0	170	0	0	0	0	1033	289	59	1431	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	532	0	179				0	1087	0	62	1506	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	591	0	526				0	1349		168	1899	0
Arrive On Green	0.33	0.00	0.33				0.00	0.38	0.00	0.09	0.53	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	532	0	179				0	1087	0	62	1506	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	22.3	0.0	6.7				0.0	21.4	0.0	2.6	26.8	0.0
Cycle Q Clear(g_c), s	22.3	0.0	6.7				0.0	21.4	0.0	2.6	26.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	591	0	526				0	1349		168	1899	0
V/C Ratio(X)	0.90	0.00	0.34				0.00	0.81		0.37	0.79	0.00
Avail Cap(c_a), veh/h	733	0	652				0	1480		228	2148	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.9	0.0	19.7				0.0	21.7	0.0	33.2	14.7	0.0
Incr Delay (d2), s/veh	12.3	0.0	0.4				0.0	3.4	0.0	1.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	0.0	2.4				0.0	8.6	0.0	1.1	9.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.3	0.0	20.1				0.0	25.1	0.0	34.2	16.8	0.0
LnGrp LOS	D	A	C				A	C		C	B	A
Approach Vol, veh/h		711						1087	A		1568	
Approach Delay, s/veh		33.0						25.1			17.5	
Approach LOS		C						C			B	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.1	35.1				47.2		31.1				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 10	32.6				47.3		32.2				
Max Q Clear Time (g_c+I1), s	4.6	23.4				28.8		24.3				
Green Ext Time (p_c), s	0.0	5.8				13.0		1.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			23.2									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												

**Intersection**

Int Delay, s/veh 3.3

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	183	0	1481	514	157	1109	0
Future Vol, veh/h	0	0	0	183	0	1481	514	157	1109	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	193	0	1559	541	165	1167	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2277	-	0
Stage 1	1497	-	-
Stage 2	780	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	34	0	0
Stage 1	172	0	0
Stage 2	412	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	21	-	420
Mov Cap-2 Maneuver	21	-	-
Stage 1	172	-	-
Stage 2	250	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 384.6	0	2.4
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	21	-	420	-
HCM Lane V/C Ratio	-	0.802	-	0.393	-
HCM Control Delay (s)	-\$ 384.6	0	19	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	2.3	-	1.8	-

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

**Intersection**

Int Delay, s/veh 4.8

Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	187	0	1311	485	265	1710	0
Future Vol, veh/h	0	0	0	187	0	1311	485	265	1710	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	193	0	1352	500	273	1763	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2985	-	0
Stage 1	2309	-	-
Stage 2	676	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	11	0	0
Stage 1	61	0	0
Stage 2	467	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 5	-	505
Mov Cap-2 Maneuver	~ 5	-	-
Stage 1	61	-	-
Stage 2	214	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 1515.8	0	2.7
HCM LOS	F		





















Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	5	-	505	-
HCM Lane V/C Ratio	-	1.443	-	0.541	-
HCM Control Delay (s)	\$ 1515.8	0	20.2	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	1.8	-	3.2	-

**Notes**

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Lanes, Volumes, Timings  
11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Forecast Cumulative + Project AM  
11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	0	146	176	17	107	60	1259	0	0	1692	9
Future Volume (vph)	8	0	146	176	17	107	60	1259	0	0	1692	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.888						0.999	
Flt Protected	0.950			0.950	0.993		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1560	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.993		0.068					
Satd. Flow (perm)	1770	0	1583	1681	1560	0	127	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			83		113							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	0	154	185	18	113	63	1325	0	0	1781	9
Shared Lane Traffic (%)				11%								
Lane Group Flow (vph)	8	0	154	165	151	0	63	1325	0	0	1790	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

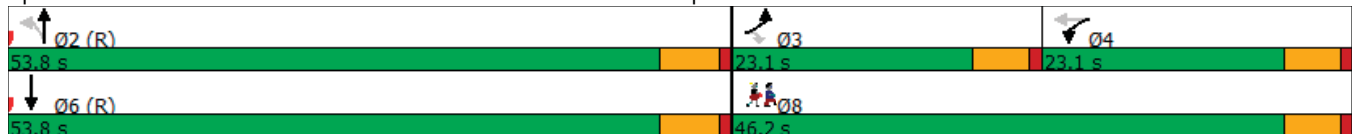
Forecast Cumulative + Project AM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		53.8	53.8			53.8	
Total Split (%)	23.1%		23.1%	23.1%	23.1%		53.8%	53.8%			53.8%	
Maximum Green (s)	18.0		18.0	18.0	18.0		48.4	48.4			48.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	11.4		11.4	14.4	14.4		58.6	58.6			58.6	
Actuated g/C Ratio	0.11		0.11	0.14	0.14		0.59	0.59			0.59	
v/c Ratio	0.04		0.61	0.68	0.47		0.85	0.64			0.86	
Control Delay	38.4		30.7	54.5	16.8		98.5	16.6			24.4	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	38.4		30.7	54.5	16.8		98.5	16.6			24.4	
LOS	D		C	D	B		F	B			C	
Approach Delay		31.1			36.5			20.3			24.4	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green  
 Natural Cycle: 100  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 24.2      Intersection LOS: C  
 Intersection Capacity Utilization 77.7%      ICU Level of Service D  
 Analysis Period (min) 15

Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

























Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	46%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	

Lanes, Volumes, Timings  
11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Forecast Cumulative + Project PM  
11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	0	176	216	31	328	67	1521	0	0	1843	31
Future Volume (vph)	12	0	176	216	31	328	67	1521	0	0	1843	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.871							0.998
Flt Protected	0.950			0.950	0.997		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1537	0	1770	3539	0	0	3532	0
Flt Permitted	0.950			0.950	0.997		0.057					
Satd. Flow (perm)	1770	0	1583	1681	1537	0	106	3539	0	0	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		220							2
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	13	0	187	230	33	349	71	1618	0	0	1961	33
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	13	0	187	207	405	0	71	1618	0	0	1994	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

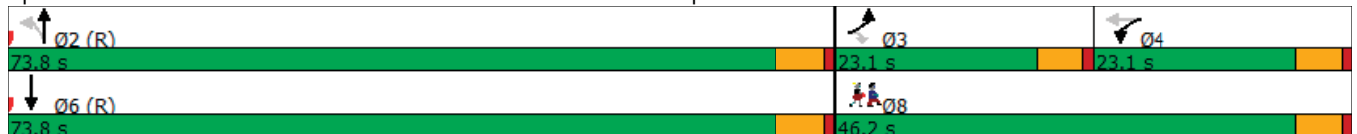
Forecast Cumulative + Project PM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		73.8	73.8			73.8	
Total Split (%)	19.3%		19.3%	19.3%	19.3%		61.5%	61.5%			61.5%	
Maximum Green (s)	18.0		18.0	18.0	18.0		68.4	68.4			68.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	13.9		13.9	19.9	19.9		70.6	70.6			70.6	
Actuated g/C Ratio	0.12		0.12	0.17	0.17		0.59	0.59			0.59	
v/c Ratio	0.06		0.77	0.74	0.92		1.15	0.78			0.96	
Control Delay	45.8		52.9	64.9	50.7		190.1	22.6			36.5	
Queue Delay	0.0		0.0	0.0	0.0		0.0	1.1			3.7	
Total Delay	45.8		52.9	64.9	50.7		190.1	23.7			40.2	
LOS	D		D	E	D		F	C			D	
Approach Delay		52.5			55.5			30.7			40.2	
Approach LOS		D			E			C			D	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 130  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.15  
 Intersection Signal Delay: 39.3  
 Intersection Capacity Utilization 92.7%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service F























Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	39%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	























HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Forecast Cumulative + Project AM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	256	79	219	0	0	0	0	1889	225	0	1107	0
Future Volume (veh/h)	256	79	219	0	0	0	0	1889	225	0	1107	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	174	211	0				0	1968	0	0	1153	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	275	288					0	3723		0	3723	0
Arrive On Green	0.15	0.15	0.00				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	174	211	0				0	1968	0	0	1153	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	8.2	9.7	0.0				0.0	15.3	0.0	0.0	7.1	0.0
Cycle Q Clear(g_c), s	8.2	9.7	0.0				0.0	15.3	0.0	0.0	7.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	275	288					0	3723		0	3723	0
V/C Ratio(X)	0.63	0.73					0.00	0.53		0.00	0.31	0.00
Avail Cap(c_a), veh/h	732	769					0	3723		0	3723	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	35.7	36.3	0.0				0.0	5.4	0.0	0.0	4.3	0.0
Incr Delay (d2), s/veh	0.9	1.4	0.0				0.0	0.5	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.5	0.0				0.0	3.8	0.0	0.0	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.6	37.6	0.0				0.0	5.9	0.0	0.0	4.5	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		385	A					1968	A		1153	
Approach Delay, s/veh		37.2						5.9			4.5	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		71.0		19.0				71.0				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		42.5		37.0				42.5				
Max Q Clear Time (g_c+I1), s		17.3		11.7				9.1				
Green Ext Time (p_c), s		22.1		1.0				17.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.9									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Forecast Cumulative + Project PM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	294	73	200	0	0	0	0	1649	231	0	1386	0
Future Volume (veh/h)	294	73	200	0	0	0	0	1649	231	0	1386	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	197	245	0				0	1773	0	0	1490	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	307	322					0	3631		0	3631	0
Arrive On Green	0.17	0.17	0.00				0.00	0.71	0.00	0.00	0.71	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	197	245	0				0	1773	0	0	1490	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	9.3	11.2	0.0				0.0	13.8	0.0	0.0	10.7	0.0
Cycle Q Clear(g_c), s	9.3	11.2	0.0				0.0	13.8	0.0	0.0	10.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	307	322					0	3631		0	3631	0
V/C Ratio(X)	0.64	0.76					0.00	0.49		0.00	0.41	0.00
Avail Cap(c_a), veh/h	750	788					0	3631		0	3631	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.7	35.5	0.0				0.0	5.8	0.0	0.0	5.3	0.0
Incr Delay (d2), s/veh	0.8	1.4	0.0				0.0	0.5	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	5.1	0.0				0.0	3.7	0.0	0.0	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	36.9	0.0				0.0	6.2	0.0	0.0	5.7	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		442	A					1773	A		1490	
Approach Delay, s/veh		36.3						6.2			5.7	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		69.4		20.6				69.4				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		41.6		37.9				41.6				
Max Q Clear Time (g_c+I1), s		15.8		13.2				12.7				
Green Ext Time (p_c), s		21.2		1.2				20.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.6									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

# **Appendix I: Synchro Worksheets – Build-Out Year 2040 & Build- Out Year 2040 Plus Project Conditions**



Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↷		↵	↶↷		↵	↶↷	
Traffic Vol, veh/h	2	0	9	14	1	44	12	973	15	66	932	9
Future Vol, veh/h	2	0	9	14	1	44	12	973	15	66	932	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	0	10	15	1	48	13	1058	16	72	1013	10

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1718	-	512	1743	2259	537	1023	0	0	1074	0	0
Stage 1	1162	-	-	1092	1092	-	-	-	-	-	-	-
Stage 2	556	-	-	651	1167	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	58	0	507	55	41	488	674	-	-	645	-	-
Stage 1	207	0	-	229	289	-	-	-	-	-	-	-
Stage 2	483	0	-	424	266	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	46	-	507	49	36	488	674	-	-	645	-	-
Mov Cap-2 Maneuver	46	-	-	49	36	-	-	-	-	-	-	-
Stage 1	203	-	-	225	284	-	-	-	-	-	-	-
Stage 2	426	-	-	369	236	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	25.8		47.7		0.1		0.7	
HCM LOS	D		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	674	-	-	46	507	146	645	-	-
HCM Lane V/C Ratio	0.019	-	-	0.047	0.019	0.439	0.111	-	-
HCM Control Delay (s)	10.4	-	-	87.1	12.2	47.7	11.3	-	-
HCM Lane LOS	B	-	-	F	B	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	2	0.4	-	-

Intersection												
Int Delay, s/veh	7.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↷		↵	↶↷		↵	↶↷	
Traffic Vol, veh/h	0	0	1	11	0	36	0	1340	37	144	1323	0
Future Vol, veh/h	0	0	1	11	0	36	0	1340	37	144	1323	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	1	12	0	39	0	1457	40	157	1438	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2481	-	719	2510	3229	749	1438	0	0	1497	0	0
Stage 1	1752	-	-	1477	1477	-	-	-	-	-	-	-
Stage 2	729	-	-	1033	1752	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	15	0	371	14	9	354	468	-	-	444	-	-
Stage 1	89	0	-	132	188	-	-	-	-	-	-	-
Stage 2	380	0	-	249	138	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	10	-	371	~ 10	6	354	468	-	-	444	-	-
Mov Cap-2 Maneuver	10	-	-	~ 10	6	-	-	-	-	-	-	-
Stage 1	89	-	-	132	188	-	-	-	-	-	-	-
Stage 2	338	-	-	160	89	-	-	-	-	-	-	-





















Approach	EB	WB	NB	SB
HCM Control Delay, s	14.7	\$ 410.5	0	1.7
HCM LOS	B	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	468	-	-	-	371	39	444	-	-
HCM Lane V/C Ratio	-	-	-	-	0.003	1.31	0.353	-	-
HCM Control Delay (s)	0	-	-	0	14.7	\$ 410.5	17.5	-	-
HCM Lane LOS	A	-	-	A	B	F	C	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0	5.2	1.6	-	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon





















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Buildout 2040 AM  
12/01/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	2	0	9	14	1	44	12	973	15	66	932	9
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	2	0	9	0	59	0	12	988	0	66	941	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.88	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	1360	0	1404	0	1520	3039	0	1520	3042	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	0.8			0.0			0.9	39.0	0.0	5.2	37.1	0.0
Adj Reference Time (s)	8.0			0.0			8.0	43.0	0.0	9.2	41.1	0.0
Permitted Option												
Adj Saturation A (vph)	462	0		0	303		101	1520		101	1521	
Reference Time A (s)	0.5	0.0		0.0	23.4		14.2	39.0		78.2	37.1	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.2	0.0		9.1	13.0		NA	NA		NA	NA	
Reference Time (s)	0.5			13.0			39.0			78.2		
Adj Reference Time (s)	8.0			17.0			43.0			82.2		
Split Option												
Ref Time Combined (s)	0.2	0.0		0.0	5.0		0.9	39.0		5.2	37.1	
Ref Time Separate (s)	0.2	0.0		1.1	0.1		0.9	38.4		5.2	36.8	
Reference Time (s)	0.2	0.2		5.0	5.0		39.0	39.0		37.1	37.1	
Adj Reference Time (s)	8.0	8.0		9.0	9.0		43.0	43.0		41.1	41.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		52.2									
Permitted Option (s)	17.0		82.2									
Split Option (s)	17.0		84.1									
Minimum (s)	17.0		52.2		69.3							
Right Turns												
	EBR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	41.1											
Oncoming Left Ref Time (s)	9.0											
Combined (s)	58.2											
Intersection Summary												
Intersection Capacity Utilization			57.7%		ICU Level of Service				B			
Reference Times and Phasing Options do not represent an optimized timing plan.												





















Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

Buildout 2040 PM  
12/01/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	1	11	0	36	0	1340	37	144	1323	0
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right	No			No			No			No		
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	0	1	0	47	0	0	1377	0	144	1323	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.87	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	1360	0	1400	0	1520	3034	0	1520	3046	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00		
Protected Option Allowed	No			No			Yes			Yes		
Reference Time (s)	0.1			0.0			0.0	54.5	0.0	11.4	52.1	0.0
Adj Reference Time (s)	8.0			0.0			8.0	58.5	0.0	15.4	56.1	0.0
Permitted Option												
Adj Saturation A (vph)	457	0		0	305		101	1517		101	1523	
Reference Time A (s)	0.0	0.0		0.0	18.5		0.0	54.5		170.5	52.1	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	8.0	0.0		8.9	12.0		NA	NA		NA	NA	
Reference Time (s)	0.0			12.0			54.5			170.5		
Adj Reference Time (s)	8.0			16.0			58.5			174.5		
Split Option												
Ref Time Combined (s)	0.0	0.0		0.0	4.0		0.0	54.5		11.4	52.1	
Ref Time Seperate (s)	0.0	0.0		0.9	0.0		0.0	53.0		11.4	52.1	
Reference Time (s)	0.0	0.0		4.0	4.0		54.5	54.5		52.1	52.1	
Adj Reference Time (s)	0.0	0.0		8.0	8.0		58.5	58.5		56.1	56.1	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		73.8									
Permitted Option (s)	16.0		174.5									
Split Option (s)	8.0		114.6									
Minimum (s)	8.0		73.8		81.9							
Right Turns												
	EBR											
Adj Reference Time (s)	8.0											
Cross Thru Ref Time (s)	56.1											
Oncoming Left Ref Time (s)	8.0											
Combined (s)	72.1											
Intersection Summary												
Intersection Capacity Utilization	68.2%		ICU Level of Service						C			
Reference Times and Phasing Options do not represent an optimized timing plan.												





















HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Buildout 2040 AM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	92	0	49	0	0	0	0	814	747	139	1256	0
Future Volume (veh/h)	92	0	49	0	0	0	0	814	747	139	1256	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	97	0	52				0	857	0	146	1322	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	295	0	262				0	1380		293	2274	0
Arrive On Green	0.17	0.00	0.17				0.00	0.39	0.00	0.16	0.64	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	97	0	52				0	857	0	146	1322	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	2.6	0.0	1.5				0.0	10.5	0.0	4.0	11.5	0.0
Cycle Q Clear(g_c), s	2.6	0.0	1.5				0.0	10.5	0.0	4.0	11.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	295	0	262				0	1380		293	2274	0
V/C Ratio(X)	0.33	0.00	0.20				0.00	0.62		0.50	0.58	0.00
Avail Cap(c_a), veh/h	657	0	584				0	2476		571	3924	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.9	0.0	19.4				0.0	13.3	0.0	20.5	5.6	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.4				0.0	0.7	0.0	1.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.5				0.0	3.4	0.0	1.5	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	0.0	19.8				0.0	14.0	0.0	21.5	5.9	0.0
LnGrp LOS	C	A	B				A	B		C	A	A
Approach Vol, veh/h		149						857	A		1468	
Approach Delay, s/veh		20.3						14.0			7.5	
Approach LOS		C						B			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.6	26.4				39.9		14.0				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 17	37.6				59.6		19.9				
Max Q Clear Time (g_c+I1), s	6.0	12.5				13.5		4.6				
Green Ext Time (p_c), s	0.2	8.5				19.1		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Buildout 2040 PM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	539	0	182	0	0	0	0	1103	309	63	1525	0
Future Volume (veh/h)	539	0	182	0	0	0	0	1103	309	63	1525	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	567	0	192				0	1161	0	66	1605	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	613	0	545				0	1360		166	1889	0
Arrive On Green	0.34	0.00	0.34				0.00	0.38	0.00	0.09	0.53	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	567	0	192				0	1161	0	66	1605	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	25.8	0.0	7.6				0.0	25.3	0.0	2.9	32.5	0.0
Cycle Q Clear(g_c), s	25.8	0.0	7.6				0.0	25.3	0.0	2.9	32.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	613	0	545				0	1360		166	1889	0
V/C Ratio(X)	0.93	0.00	0.35				0.00	0.85		0.40	0.85	0.00
Avail Cap(c_a), veh/h	674	0	599				0	1386		211	2005	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.6	0.0	20.7				0.0	23.9	0.0	36.0	16.9	0.0
Incr Delay (d2), s/veh	17.9	0.0	0.4				0.0	5.5	0.0	1.1	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.4	0.0	2.8				0.0	10.6	0.0	1.3	12.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	0.0	21.0				0.0	29.4	0.0	37.1	20.6	0.0
LnGrp LOS	D	A	C				A	C		D	C	A
Approach Vol, veh/h		759						1161	A		1671	
Approach Delay, s/veh		38.6						29.4			21.2	
Approach LOS		D						C			C	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.6	37.7				50.2		34.1				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 10	32.9				47.6		31.9				
Max Q Clear Time (g_c+I1), s	4.9	27.3				34.5		27.8				
Green Ext Time (p_c), s	0.0	4.0				10.3		1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			27.5									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												

Intersection										
Int Delay, s/veh	5.4									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	195	0	1579	549	168	1184	0
Future Vol, veh/h	0	0	0	195	0	1579	549	168	1184	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	205	0	1662	578	177	1246	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2431	-	0
Stage 1	1600	-	-
Stage 2	831	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	26	0	0
Stage 1	151	0	0
Stage 2	388	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 14	-	383
Mov Cap-2 Maneuver	~ 14	-	-
Stage 1	151	-	-
Stage 2	209	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 714.4	0	2.8
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	14	-	383	-
HCM Lane V/C Ratio	-	1.278	-	0.462	-
HCM Control Delay (s)	-	\$ 714.4	0	22.2	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	2.8	-	2.4	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection										
Int Delay, s/veh	7.4									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	200	0	1400	518	283	1823	0
Future Vol, veh/h	0	0	0	200	0	1400	518	283	1823	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	206	0	1443	534	292	1879	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	3185	-	0
Stage 1	2463	-	-
Stage 2	722	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	8	0	0
Stage 1	50	0	0
Stage 2	442	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 3	-	466
Mov Cap-2 Maneuver	~ 3	-	-
Stage 1	50	-	-
Stage 2	165	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 2704	0	3.3
HCM LOS	F		





















Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	3	-	466	-
HCM Lane V/C Ratio	-	2.405	-	0.626	-
HCM Control Delay (s)	-\$ 2704	0	24.8	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	1.9	-	4.2	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon



Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Buildout 2040 AM  
 11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	156	188	18	93	64	1302	0	0	1802	7
Future Volume (vph)	9	0	156	188	18	93	64	1302	0	0	1802	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.904						0.999	
Flt Protected	0.950			0.950	0.988		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1581	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.988		0.069					
Satd. Flow (perm)	1770	0	1583	1681	1581	0	129	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82		78							
Link Speed (mph)		25			30			40			40	
Link Distance (ft)		387			343			275			863	
Travel Time (s)		10.6			7.8			4.7			14.7	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	0	164	198	19	98	67	1371	0	0	1897	7
Shared Lane Traffic (%)				18%								
Lane Group Flow (vph)	9	0	164	162	153	0	67	1371	0	0	1904	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

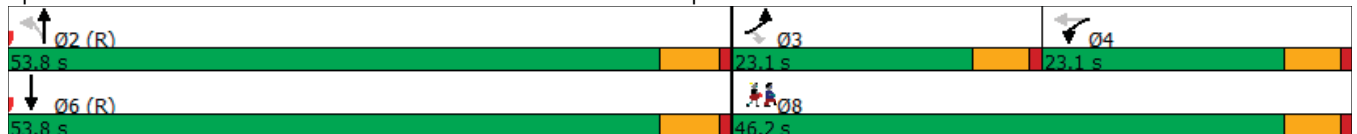
Buildout 2040 AM  
 11/29/2021

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		53.8	53.8			53.8	
Total Split (%)	23.1%		23.1%	23.1%	23.1%		53.8%	53.8%			53.8%	
Maximum Green (s)	18.0		18.0	18.0	18.0		48.4	48.4			48.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	11.8		11.8	14.3	14.3		58.4	58.4			58.4	
Actuated g/C Ratio	0.12		0.12	0.14	0.14		0.58	0.58			0.58	
v/c Ratio	0.04		0.64	0.68	0.52		0.89	0.66			0.92	
Control Delay	37.7		32.8	54.3	26.0		107.2	17.4			29.2	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	37.7		32.8	54.3	26.0		107.2	17.4			29.2	
LOS	D		C	D	C		F	B			C	
Approach Delay		33.0			40.6			21.5			29.2	
Approach LOS		C			D			C			C	

Intersection Summary

Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 27.4  
 Intersection Capacity Utilization 81.2%  
 Analysis Period (min) 15  
 Intersection LOS: C  
 ICU Level of Service D





















Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	46%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	

Lanes, Volumes, Timings  
11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Buildout 2040 PM  
11/29/2021

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	188	231	33	347	72	1617	0	0	1928	13
Future Volume (vph)	13	0	188	231	33	347	72	1617	0	0	1928	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.871						0.999	
Flt Protected	0.950			0.950	0.997		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1537	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.997		0.058					
Satd. Flow (perm)	1770	0	1583	1681	1537	0	108	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		216							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	14	0	200	246	35	369	77	1720	0	0	2051	14
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	14	0	200	221	429	0	77	1720	0	0	2065	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

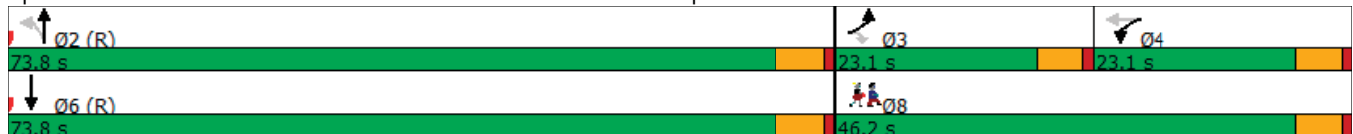
Buildout 2040 PM  
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Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		73.8	73.8			73.8	
Total Split (%)	19.3%		19.3%	19.3%	19.3%		61.5%	61.5%			61.5%	
Maximum Green (s)	18.0		18.0	18.0	18.0		68.4	68.4			68.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	14.5		14.5	21.5	21.5		68.4	68.4			68.4	
Actuated g/C Ratio	0.12		0.12	0.18	0.18		0.57	0.57			0.57	
v/c Ratio	0.07		0.80	0.73	0.95		1.26	0.85			1.02	
Control Delay	45.3		56.2	63.0	56.2		230.2	26.9			52.8	
Queue Delay	0.0		0.0	0.0	0.0		0.0	3.9			11.7	
Total Delay	45.3		56.2	63.0	56.2		230.2	30.8			64.6	
LOS	D		E	E	E		F	C			E	
Approach Delay		55.5						39.3			64.6	
Approach LOS		E			E			D			E	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 140  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.26  
 Intersection Signal Delay: 53.7  
 Intersection Capacity Utilization 96.3%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service F

Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

























Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	39%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	

























HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Buildout 2040 AM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	252	84	234	0	0	0	0	1996	240	0	1179	0
Future Volume (veh/h)	252	84	234	0	0	0	0	1996	240	0	1179	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	175	210	0				0	2079	0	0	1228	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	274	287					0	3726		0	3726	0
Arrive On Green	0.15	0.15	0.00				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	175	210	0				0	2079	0	0	1228	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	8.3	9.6	0.0				0.0	16.7	0.0	0.0	7.7	0.0
Cycle Q Clear(g_c), s	8.3	9.6	0.0				0.0	16.7	0.0	0.0	7.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	274	287					0	3726		0	3726	0
V/C Ratio(X)	0.64	0.73					0.00	0.56		0.00	0.33	0.00
Avail Cap(c_a), veh/h	732	769					0	3726		0	3726	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	35.7	36.3	0.0				0.0	5.5	0.0	0.0	4.3	0.0
Incr Delay (d2), s/veh	0.9	1.3	0.0				0.0	0.6	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.4	0.0				0.0	4.2	0.0	0.0	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	37.7	0.0				0.0	6.2	0.0	0.0	4.6	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		385	A					2079	A		1228	
Approach Delay, s/veh		37.2						6.2			4.6	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		71.1		18.9				71.1				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		42.5		37.0				42.5				
Max Q Clear Time (g_c+I1), s		18.7		11.6				9.7				
Green Ext Time (p_c), s		21.5		1.0				18.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			8.9									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Buildout 2040 PM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	311	78	214	0	0	0	0	1758	247	0	1460	0
Future Volume (veh/h)	311	78	214	0	0	0	0	1758	247	0	1460	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	209	259	0				0	1890	0	0	1570	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	320	336					0	3592		0	3592	0
Arrive On Green	0.18	0.18	0.00				0.00	0.70	0.00	0.00	0.70	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	209	259	0				0	1890	0	0	1570	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	9.8	11.9	0.0				0.0	15.7	0.0	0.0	11.8	0.0
Cycle Q Clear(g_c), s	9.8	11.9	0.0				0.0	15.7	0.0	0.0	11.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	320	336					0	3592		0	3592	0
V/C Ratio(X)	0.65	0.77					0.00	0.53		0.00	0.44	0.00
Avail Cap(c_a), veh/h	750	788					0	3592		0	3592	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.3	35.1	0.0				0.0	6.3	0.0	0.0	5.7	0.0
Incr Delay (d2), s/veh	0.8	1.4	0.0				0.0	0.6	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	5.4	0.0				0.0	4.2	0.0	0.0	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.1	36.6	0.0				0.0	6.8	0.0	0.0	6.1	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		468	A					1890	A		1570	
Approach Delay, s/veh		35.9						6.8			6.1	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		68.7		21.3				68.7				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		41.6		37.9				41.6				
Max Q Clear Time (g_c+I1), s		17.7		13.9				13.8				
Green Ext Time (p_c), s		20.7		1.2				20.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			B									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												



Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↶		↕		↵	↕↶		↵	↕↶	
Traffic Vol, veh/h	9	0	19	14	1	44	92	973	15	66	932	62
Future Vol, veh/h	9	0	19	14	1	44	92	973	15	66	932	62
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	21	15	1	48	100	1058	16	72	1013	67

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1921	-	540	1917	2490	537	1080	0	0	1074	0	0
Stage 1	1191	-	-	1266	1266	-	-	-	-	-	-	-
Stage 2	730	-	-	651	1224	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	41	0	486	41	29	488	641	-	-	645	-	-
Stage 1	199	0	-	179	238	-	-	-	-	-	-	-
Stage 2	380	0	-	424	250	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	29	-	486	32	22	488	641	-	-	645	-	-
Mov Cap-2 Maneuver	29	-	-	32	22	-	-	-	-	-	-	-
Stage 1	168	-	-	151	201	-	-	-	-	-	-	-
Stage 2	288	-	-	361	222	-	-	-	-	-	-	-

Approach	EB		WB		NB			SB		
HCM Control Delay, s	67.3		85.4		1			0.7		
HCM LOS	F		F							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	641	-	-	29	486	103	645	-	-
HCM Lane V/C Ratio	0.156	-	-	0.337	0.042	0.623	0.111	-	-
HCM Control Delay (s)	11.7	-	-	182.7	12.7	85.4	11.3	-	-
HCM Lane LOS	B	-	-	F	B	F	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-	1.1	0.1	3	0.4	-	-

Intersection												
Int Delay, s/veh	60.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵		↵		↕		↵	↕		↵	↕	
Traffic Vol, veh/h	50	0	77	11	0	36	13	1340	37	144	1323	9
Future Vol, veh/h	50	0	77	11	0	36	13	1340	37	144	1323	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	0	-	-	-	80	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	54	0	84	12	0	39	14	1457	40	157	1438	10





















Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2514	-	724	2538	3267	749	1448	0	0	1497	0	0
Stage 1	1757	-	-	1505	1505	-	-	-	-	-	-	-
Stage 2	757	-	-	1033	1762	-	-	-	-	-	-	-
Critical Hdwy	7.54	-	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	-	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	-	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	~ 14	0	368	14	9	354	464	-	-	444	-	-
Stage 1	88	0	-	127	182	-	-	-	-	-	-	-
Stage 2	366	0	-	249	136	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	~ 9	-	368	~ 8	6	354	464	-	-	444	-	-
Mov Cap-2 Maneuver	~ 9	-	-	~ 8	6	-	-	-	-	-	-	-
Stage 1	85	-	-	123	177	-	-	-	-	-	-	-
Stage 2	316	-	-	124	88	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$	1222.8	566.1	0.1	1.7
HCM LOS	F	F		






















Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	464	-	-	9	368	32	444	-	-
HCM Lane V/C Ratio	0.03	-	-	6.039	0.227	1.596	0.353	-	-
HCM Control Delay (s)	13	-	-	\$ 3078.9	17.6	\$ 566.1	17.5	-	-
HCM Lane LOS	B	-	-	F	C	F	C	-	-
HCM 95th %tile Q(veh)	0.1	-	-	8.2	0.9	5.7	1.6	-	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway





















													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (vph)	9	0	19	14	1	44	92	973	15	66	932	62	
Pedestrians													
Ped Button													
Pedestrian Timing (s)													
Free Right	No			No			No			No			
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120	
Volume Combined (vph)	9	0	19	0	59	0	92	988	0	66	994	0	
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.88	0.85	0.95	1.00	0.85	0.95	0.99	0.85	
Saturated Flow (vph)	1520	0	1360	0	1404	0	1520	3039	0	1520	3018	0	
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Pedestrian Frequency (%)	0.00			0.00			0.00			0.00			
Protected Option Allowed	No			No			Yes			Yes			
Reference Time (s)	1.7			0.0			7.3	39.0	0.0	5.2	39.5	0.0	
Adj Reference Time (s)	8.0			0.0			11.3	43.0	0.0	9.2	43.5	0.0	
Permitted Option													
Adj Saturation A (vph)	462	0	0	303	101	1520	101	1509					
Reference Time A (s)	2.3	0.0	0.0	23.4	108.9	39.0	78.2	39.5					
Adj Saturation B (vph)	0	0	0	0	NA	NA	NA	NA					
Reference Time B (s)	8.7	0.0	9.1	13.0	NA	NA	NA	NA					
Reference Time (s)	2.3			13.0			108.9			78.2			
Adj Reference Time (s)	8.0			17.0			112.9			82.2			
Split Option													
Ref Time Combined (s)	0.7	0.0	0.0	5.0	7.3	39.0	5.2	39.5					
Ref Time Seperate (s)	0.7	0.0	1.1	0.1	7.3	38.4	5.2	37.1					
Reference Time (s)	0.7	0.7	5.0	5.0	39.0	39.0	39.5	39.5					
Adj Reference Time (s)	8.0	8.0	9.0	9.0	43.0	43.0	43.5	43.5					
Summary													
	EB WB		NB SB		Combined								
Protected Option (s)	NA		54.8										
Permitted Option (s)	17.0		112.9										
Split Option (s)	17.0		86.5										
Minimum (s)	17.0		54.8		71.8								
Right Turns													
	EBR												
Adj Reference Time (s)	8.0												
Cross Thru Ref Time (s)	43.5												
Oncoming Left Ref Time (s)	9.0												
Combined (s)	60.6												
Intersection Summary													
Intersection Capacity Utilization	59.9%			ICU Level of Service				B					
Reference Times and Phasing Options do not represent an optimized timing plan.													

Intersection Capacity Utilization  
6: Rosemead Blvd & Project Driveway

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	0	77	11	0	36	13	1340	37	144	1323	9
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	50	0	77	0	47	0	13	1377	0	144	1332	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Turning Factor (vph)	0.95	1.00	0.85	0.95	0.87	0.85	0.95	1.00	0.85	0.95	1.00	0.85
Saturated Flow (vph)	1520	0	1360	0	1400	0	1520	3034	0	1520	3043	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			Yes			Yes	
Reference Time (s)			6.8			0.0	1.0	54.5	0.0	11.4	52.5	0.0
Adj Reference Time (s)			10.8			0.0	8.0	58.5	0.0	15.4	56.5	0.0
Permitted Option												
Adj Saturation A (vph)	457	0		0	305		101	1517		101	1522	
Reference Time A (s)	13.1	0.0		0.0	18.5		15.4	54.5		170.5	52.5	
Adj Saturation B (vph)	0	0		0	0		NA	NA		NA	NA	
Reference Time B (s)	11.9	0.0		8.9	12.0		NA	NA		NA	NA	
Reference Time (s)		11.9			12.0			54.5			170.5	
Adj Reference Time (s)		15.9			16.0			58.5			174.5	
Split Option												
Ref Time Combined (s)	3.9	0.0		0.0	4.0		1.0	54.5		11.4	52.5	
Ref Time Seperate (s)	3.9	0.0		0.9	0.0		1.0	53.0		11.4	52.2	
Reference Time (s)	3.9	3.9		4.0	4.0		54.5	54.5		52.5	52.5	
Adj Reference Time (s)	8.0	8.0		8.0	8.0		58.5	58.5		56.5	56.5	
Summary												
	EB WB		NB SB		Combined							
Protected Option (s)	NA		73.8									
Permitted Option (s)	16.0		174.5									
Split Option (s)	16.0		115.0									
Minimum (s)	16.0		73.8		89.9							
Right Turns												
	EBR											
Adj Reference Time (s)	10.8											
Cross Thru Ref Time (s)	56.5											
Oncoming Left Ref Time (s)	8.0											
Combined (s)	75.3											
Intersection Summary												
Intersection Capacity Utilization			74.9%		ICU Level of Service		D					
Reference Times and Phasing Options do not represent an optimized timing plan.												

HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps





















Buildout 2040 Plus Project AM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	92	0	49	0	0	0	0	817	747	139	1256	0
Future Volume (veh/h)	92	0	49	0	0	0	0	817	747	139	1256	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	97	0	52				0	860	0	146	1322	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	294	0	262				0	1383		293	2276	0
Arrive On Green	0.17	0.00	0.17				0.00	0.39	0.00	0.16	0.64	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	97	0	52				0	860	0	146	1322	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	2.6	0.0	1.5				0.0	10.5	0.0	4.0	11.5	0.0
Cycle Q Clear(g_c), s	2.6	0.0	1.5				0.0	10.5	0.0	4.0	11.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	294	0	262				0	1383		293	2276	0
V/C Ratio(X)	0.33	0.00	0.20				0.00	0.62		0.50	0.58	0.00
Avail Cap(c_a), veh/h	656	0	584				0	2472		570	3918	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.9	0.0	19.5				0.0	13.3	0.0	20.6	5.6	0.0
Incr Delay (d2), s/veh	0.6	0.0	0.4				0.0	0.7	0.0	1.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.5				0.0	3.4	0.0	1.5	2.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.6	0.0	19.8				0.0	14.0	0.0	21.5	5.9	0.0
LnGrp LOS	C	A	B				A	B		C	A	A
Approach Vol, veh/h		149						860	A		1468	
Approach Delay, s/veh		20.3						14.0			7.5	
Approach LOS		C						B			A	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.6	26.4				40.0		14.0				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 17	37.6				59.6		19.9				
Max Q Clear Time (g_c+I1), s	6.0	12.5				13.5		4.6				
Green Ext Time (p_c), s	0.2	8.5				19.1		0.3				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.5									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												



HCM 6th Signalized Intersection Summary  
 9: Paramount Blvd & I-5 On/Off Ramps (north)/I-5 On/Off Ramps

Buildout 2040 Plus Project PM  
 11/29/2021

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								 			 	
Traffic Volume (veh/h)	539	0	182	0	0	0	0	1103	309	63	1528	0
Future Volume (veh/h)	539	0	182	0	0	0	0	1103	309	63	1528	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	0	1870				0	1870	1870	1870	1870	0
Adj Flow Rate, veh/h	567	0	192				0	1161	0	66	1608	0
Peak Hour Factor	0.95	0.95	0.95				0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	0	2				0	2	2	2	2	0
Cap, veh/h	612	0	545				0	1361		166	1890	0
Arrive On Green	0.34	0.00	0.34				0.00	0.38	0.00	0.09	0.53	0.00
Sat Flow, veh/h	1781	0	1585				0	3647	1585	1781	3647	0
Grp Volume(v), veh/h	567	0	192				0	1161	0	66	1608	0
Grp Sat Flow(s),veh/h/ln	1781	0	1585				0	1777	1585	1781	1777	0
Q Serve(g_s), s	25.9	0.0	7.6				0.0	25.3	0.0	2.9	32.7	0.0
Cycle Q Clear(g_c), s	25.9	0.0	7.6				0.0	25.3	0.0	2.9	32.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	612	0	545				0	1361		166	1890	0
V/C Ratio(X)	0.93	0.00	0.35				0.00	0.85		0.40	0.85	0.00
Avail Cap(c_a), veh/h	673	0	599				0	1385		211	2003	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.7	0.0	20.7				0.0	23.9	0.0	36.0	16.9	0.0
Incr Delay (d2), s/veh	18.0	0.0	0.4				0.0	5.5	0.0	1.1	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	0.0	2.8				0.0	10.7	0.0	1.3	12.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	0.0	21.1				0.0	29.4	0.0	37.2	20.6	0.0
LnGrp LOS	D	A	C				A	C		D	C	A
Approach Vol, veh/h		759						1161	A		1674	
Approach Delay, s/veh		38.7						29.4			21.3	
Approach LOS		D						C			C	
Timer - Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	12.6	37.7				50.3		34.1				
Change Period (Y+Rc), s	* 4.7	5.4				5.4		5.1				
Max Green Setting (Gmax), s	* 10	32.9				47.6		31.9				
Max Q Clear Time (g_c+I1), s	4.9	27.3				34.7		27.9				
Green Ext Time (p_c), s	0.0	4.0				10.2		1.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			27.6									
HCM 6th LOS			C									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NER] is excluded from calculations of the approach delay and intersection delay.												

Intersection										
Int Delay, s/veh	5.4									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	195	0	1582	549	168	1184	0
Future Vol, veh/h	0	0	0	195	0	1582	549	168	1184	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	205	0	1665	578	177	1246	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	2433	-	0
Stage 1	1600	-	-
Stage 2	833	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	26	0	0
Stage 1	151	0	0
Stage 2	387	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 14	-	382
Mov Cap-2 Maneuver	~ 14	-	-
Stage 1	151	-	-
Stage 2	208	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 714.4	0	2.8
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	14	-	382	-
HCM Lane V/C Ratio	-	1.278	-	0.463	-
HCM Control Delay (s)	-	\$ 714.4	0	22.3	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	2.8	-	2.4	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Intersection										
Int Delay, s/veh	7.4									
Movement	WBL	WBR	SBL	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations				↗		↕	↗	↘	↕	
Traffic Vol, veh/h	0	0	0	200	0	1400	518	283	1826	0
Future Vol, veh/h	0	0	0	200	0	1400	518	283	1826	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	-	Free	-	-	Free	-	-	None
Storage Length	-	-	0	0	-	-	0	200	-	-
Veh in Median Storage, #	0	-	0	-	-	0	-	-	0	-
Grade, %	0	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	206	0	1443	534	292	1882	0





















Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	3188	-	0
Stage 1	2466	-	-
Stage 2	722	-	-
Critical Hdwy	6.84	-	4.14
Critical Hdwy Stg 1	5.84	-	-
Critical Hdwy Stg 2	5.84	-	-
Follow-up Hdwy	3.52	-	2.22
Pot Cap-1 Maneuver	8	0	0
Stage 1	50	0	0
Stage 2	442	0	0
Platoon blocked, %			
Mov Cap-1 Maneuver	~ 3	-	466
Mov Cap-2 Maneuver	~ 3	-	-
Stage 1	50	-	-
Stage 2	165	-	-

Approach	SB	NE	SW
HCM Control Delay, s	\$ 2704	0	3.3
HCM LOS	F		

Minor Lane/Major Mvmt	NET	SBLn1	SBLn2	SWL	SWT
Capacity (veh/h)	-	3	-	466	-
HCM Lane V/C Ratio	-	2.405	-	0.626	-
HCM Control Delay (s)	-\$ 2704	0	24.8	-	-
HCM Lane LOS	-	F	A	C	-
HCM 95th %tile Q(veh)	-	1.9	-	4.2	-

Notes  
 ~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

Lanes, Volumes, Timings  
11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	0	156	188	18	113	64	1342	0	0	1807	9
Future Volume (vph)	9	0	156	188	18	113	64	1342	0	0	1807	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Frt			0.850		0.890						0.999	
Flt Protected	0.950			0.950	0.993		0.950					
Satd. Flow (prot)	1770	0	1583	1681	1564	0	1770	3539	0	0	3536	0
Flt Permitted	0.950			0.950	0.993		0.069					
Satd. Flow (perm)	1770	0	1583	1681	1564	0	129	3539	0	0	3536	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82		119							1
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	9	0	164	198	19	119	67	1413	0	0	1902	9
Shared Lane Traffic (%)				12%								
Lane Group Flow (vph)	9	0	164	174	162	0	67	1413	0	0	1911	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

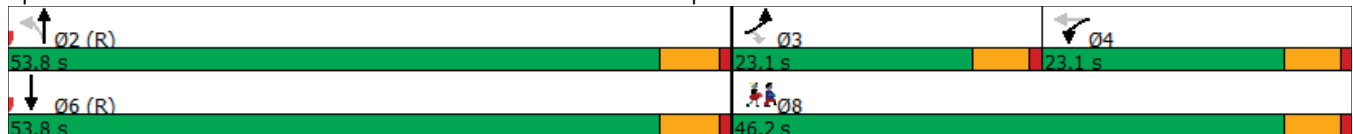
Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		53.8	53.8			53.8	
Total Split (%)	23.1%		23.1%	23.1%	23.1%		53.8%	53.8%			53.8%	
Maximum Green (s)	18.0		18.0	18.0	18.0		48.4	48.4			48.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	11.8		11.8	14.7	14.7		57.9	57.9			57.9	
Actuated g/C Ratio	0.12		0.12	0.15	0.15		0.58	0.58			0.58	
v/c Ratio	0.04		0.64	0.70	0.49		0.91	0.69			0.93	
Control Delay	37.7		32.8	55.5	17.2		109.6	18.2			30.7	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Delay	37.7		32.8	55.5	17.2		109.6	18.2			30.7	
LOS	D		C	E	B		F	B			C	
Approach Delay		33.0			37.0			22.4			30.7	
Approach LOS		C			D			C			C	

Intersection Summary





















Area Type: Other  
 Cycle Length: 100  
 Actuated Cycle Length: 100  
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green  
 Natural Cycle: 150  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.93  
 Intersection Signal Delay: 28.2      Intersection LOS: C  
 Intersection Capacity Utilization 82.0%      ICU Level of Service E  
 Analysis Period (min) 15

Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	46%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

Lanes, Volumes, Timings  
11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	188	231	33	350	72	1624	0	0	1966	32
Future Volume (vph)	13	0	188	231	33	350	72	1624	0	0	1966	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	0		50
Storage Lanes	1		1	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	*0.97	*0.97	1.00	1.00	*0.97	1.00	1.00	*0.96	0.95
Frt			0.850		0.871						0.998	
Flt Protected	0.950			0.950	0.997		0.950					
Satd. Flow (prot)	1770	0	1583	1717	1569	0	1770	3614	0	0	3569	0
Flt Permitted	0.950			0.950	0.997		0.058					
Satd. Flow (perm)	1770	0	1583	1717	1569	0	108	3614	0	0	3569	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			68		216							2
Link Speed (mph)		25			30			40				40
Link Distance (ft)		387			343			275				863
Travel Time (s)		10.6			7.8			4.7				14.7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	14	0	198	243	35	368	76	1709	0	0	2069	34
Shared Lane Traffic (%)				10%								
Lane Group Flow (vph)	14	0	198	219	427	0	76	1709	0	0	2103	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1		1	1	2		1	2				2
Detector Template	Left		Right	Left	Thru		Left	Thru				Thru
Leading Detector (ft)	20		20	20	100		20	100				100
Trailing Detector (ft)	0		0	0	0		0	0				0
Detector 1 Position(ft)	0		0	0	0		0	0				0
Detector 1 Size(ft)	20		20	20	6		20	6				6
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0		0.0	0.0				0.0
Detector 2 Position(ft)					94			94				94
Detector 2 Size(ft)					6			6				6
Detector 2 Type					Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				0.0
Turn Type	Prot		Perm	Prot	NA		Perm	NA				NA
Protected Phases	3			4				2				6
Permitted Phases			3		4		2					



Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8
Permitted Phases	

Lanes, Volumes, Timings  
 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp

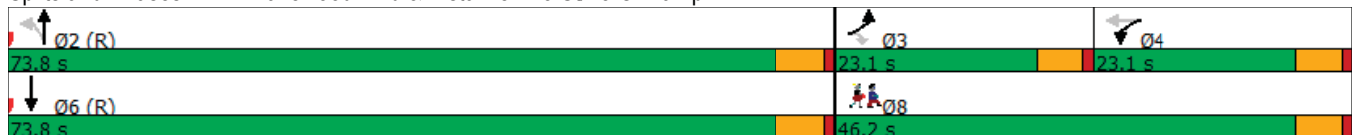
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3		3	4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0		10.0	10.0	10.0		10.0	10.0			10.0	
Minimum Split (s)	23.1		23.1	23.1	23.1		23.4	23.4			29.4	
Total Split (s)	23.1		23.1	23.1	23.1		73.8	73.8			73.8	
Total Split (%)	19.3%		19.3%	19.3%	19.3%		61.5%	61.5%			61.5%	
Maximum Green (s)	18.0		18.0	18.0	18.0		68.4	68.4			68.4	
Yellow Time (s)	4.1		4.1	4.1	4.1		4.4	4.4			4.4	
All-Red Time (s)	1.0		1.0	1.0	1.0		1.0	1.0			1.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0		0.0	0.0			0.0	
Total Lost Time (s)	5.1		5.1	5.1	5.1		5.4	5.4			5.4	
Lead/Lag	Lead		Lead	Lag	Lag							
Lead-Lag Optimize?	Yes		Yes	Yes	Yes							
Vehicle Extension (s)	2.0		2.0	2.0	2.0		5.0	5.0			5.0	
Minimum Gap (s)	2.0		2.0	2.0	2.0		2.0	2.0			2.0	
Time Before Reduce (s)	0.0		0.0	0.0	0.0		1.0	1.0			1.0	
Time To Reduce (s)	0.0		0.0	0.0	0.0		0.1	0.1			0.1	
Recall Mode	None		None	None	None		C-Max	C-Max			C-Max	
Walk Time (s)							7.0	7.0			7.0	
Flash Dont Walk (s)							10.0	10.0			17.0	
Pedestrian Calls (#/hr)							10	10			10	
Act Effct Green (s)	14.4		14.4	21.6	21.6		68.4	68.4			68.4	
Actuated g/C Ratio	0.12		0.12	0.18	0.18		0.57	0.57			0.57	
v/c Ratio	0.07		0.80	0.71	0.93		1.25	0.83			1.03	
Control Delay	45.5		55.8	60.8	52.4		224.5	25.6			55.4	
Queue Delay	0.0		0.0	0.0	0.0		0.0	3.0			13.5	
Total Delay	45.5		55.8	60.8	52.4		224.5	28.6			68.9	
LOS	D		E	E	D		F	C			E	
Approach Delay		55.1			55.2			37.0			68.9	
Approach LOS		E			E			D			E	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green  
 Natural Cycle: 140  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 1.25  
 Intersection Signal Delay: 54.4  
 Intersection Capacity Utilization 98.0%  
 Analysis Period (min) 15  
 Intersection LOS: D  
 ICU Level of Service F

\* User Entered Value



















Splits and Phases: 11: Lakewood Blvd & Vista Del Rio St/I-5 Off-ramp



Lane Group	Ø8
Detector Phase	
Switch Phase	
Minimum Initial (s)	10.0
Minimum Split (s)	42.1
Total Split (s)	46.2
Total Split (%)	39%
Maximum Green (s)	41.1
Yellow Time (s)	4.1
All-Red Time (s)	1.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Minimum Gap (s)	2.0
Time Before Reduce (s)	0.0
Time To Reduce (s)	0.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	10
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
<b>Intersection Summary</b>	























HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Buildout 2040 Plus Project AM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	84	234	0	0	0	0	2016	240	0	1182	0
Future Volume (veh/h)	272	84	234	0	0	0	0	2016	240	0	1182	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	186	224	0				0	2100	0	0	1231	0
Peak Hour Factor	0.96	0.96	0.96				0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	287	301					0	3688		0	3688	0
Arrive On Green	0.16	0.16	0.00				0.00	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	186	224	0				0	2100	0	0	1231	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	8.8	10.3	0.0				0.0	17.5	0.0	0.0	7.9	0.0
Cycle Q Clear(g_c), s	8.8	10.3	0.0				0.0	17.5	0.0	0.0	7.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	287	301					0	3688		0	3688	0
V/C Ratio(X)	0.65	0.74					0.00	0.57		0.00	0.33	0.00
Avail Cap(c_a), veh/h	732	769					0	3688		0	3688	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	35.4	36.0	0.0				0.0	5.9	0.0	0.0	4.6	0.0
Incr Delay (d2), s/veh	0.9	1.4	0.0				0.0	0.6	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	4.7	0.0				0.0	4.5	0.0	0.0	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.3	37.3	0.0				0.0	6.5	0.0	0.0	4.8	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		410	A					2100	A		1231	
Approach Delay, s/veh		36.9						6.5			4.8	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		70.4		19.6				70.4				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		42.5		37.0				42.5				
Max Q Clear Time (g_c+I1), s		19.5		12.3				9.9				
Green Ext Time (p_c), s		21.0		1.1				18.2				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			9.3									
HCM 6th LOS			A									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary  
 12: Lakewood Blvd & I-5 off ramp/I-5 on-ramp

Buildout 2040 Plus Project PM  
 11/29/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  			  	
Traffic Volume (veh/h)	314	78	214	0	0	0	0	1761	247	0	1479	0
Future Volume (veh/h)	314	78	214	0	0	0	0	1761	247	0	1479	0
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No						No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870				0	1870	1870	0	1870	0
Adj Flow Rate, veh/h	211	262	0				0	1894	0	0	1590	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	0
Cap, veh/h	323	339					0	3584		0	3584	0
Arrive On Green	0.18	0.18	0.00				0.00	0.70	0.00	0.00	0.70	0.00
Sat Flow, veh/h	1781	1870	1585				0	5274	1585	0	5443	0
Grp Volume(v), veh/h	211	262	0				0	1894	0	0	1590	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585				0	1702	1585	0	1702	0
Q Serve(g_s), s	9.9	12.0	0.0				0.0	15.8	0.0	0.0	12.1	0.0
Cycle Q Clear(g_c), s	9.9	12.0	0.0				0.0	15.8	0.0	0.0	12.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		0.00
Lane Grp Cap(c), veh/h	323	339					0	3584		0	3584	0
V/C Ratio(X)	0.65	0.77					0.00	0.53		0.00	0.44	0.00
Avail Cap(c_a), veh/h	750	788					0	3584		0	3584	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.2	35.1	0.0				0.0	6.4	0.0	0.0	5.8	0.0
Incr Delay (d2), s/veh	0.8	1.4	0.0				0.0	0.6	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	5.5	0.0				0.0	4.3	0.0	0.0	3.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	36.5	0.0				0.0	6.9	0.0	0.0	6.2	0.0
LnGrp LOS	D	D					A	A		A	A	A
Approach Vol, veh/h		473	A					1894	A		1590	
Approach Delay, s/veh		35.8						6.9			6.2	
Approach LOS		D						A			A	
Timer - Assigned Phs		2		4				6				
Phs Duration (G+Y+Rc), s		68.6		21.4				68.6				
Change Period (Y+Rc), s		5.4		5.1				5.4				
Max Green Setting (Gmax), s		41.6		37.9				41.6				
Max Q Clear Time (g_c+I1), s		17.8		14.0				14.1				
Green Ext Time (p_c), s		20.6		1.2				20.7				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			10.1									
HCM 6th LOS			B									
<b>Notes</b>												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, EBR] is excluded from calculations of the approach delay and intersection delay.												

# Appendix J: Traffic Signal Warrant Worksheets

## EXISTING PLUS PROJECT CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Rosemead Boulevard**

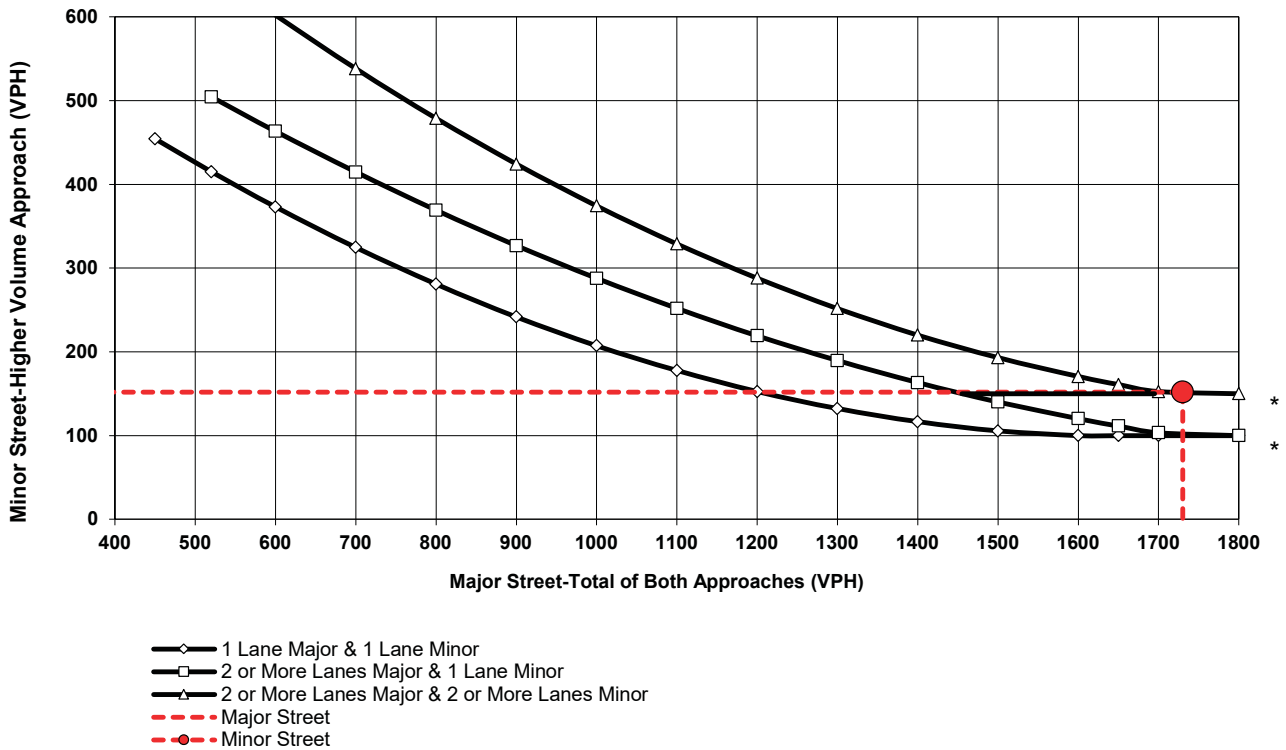
Minor Street: **SoCalGas Driveway**

Total of Both Approaches (VPH): **1730**  
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **152**  
Number of Approach Lanes: **1**

### SIGNAL WARRANT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



\* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1

## EXISTING PLUS PROJECT CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

**Peak Hour:** PM

**Major Street:** Rosemead Boulevard

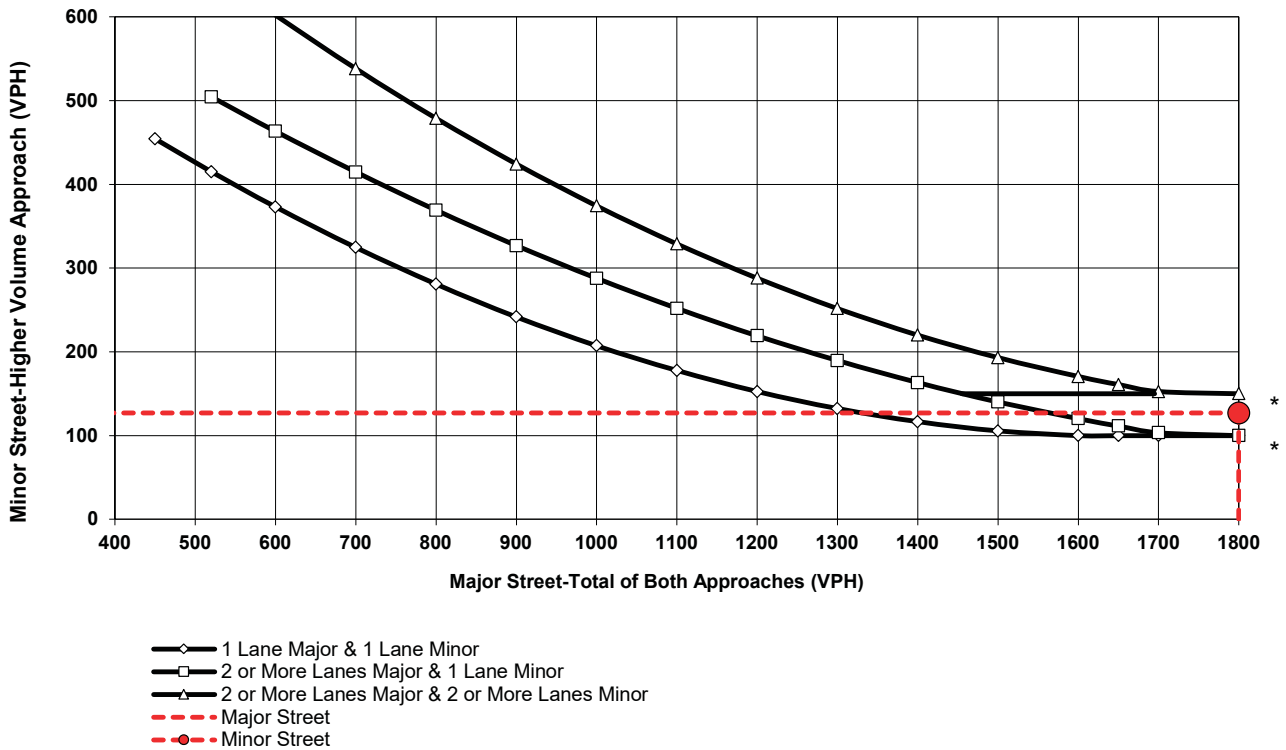
**Minor Street:** SoCalGas Driveway

Total of Both Approaches (VPH): **2418**  
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **127**  
Number of Approach Lanes: **1**

### SIGNAL WARRANT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



\* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1