

5TH & STERLING

TRAFFIC ANALYSIS

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CAMUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CMP	Congestion Management Program
DIF	Development Impact Fee
E+P	Existing plus Project
EA	Existing plus Ambient Growth
EAC	Existing plus Cumulative Projects
EAP	Existing plus Ambient Growth plus Project
EAPC	Existing plus Ambient Growth plus Cumulative plus Project
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
PCE	Passenger Car Equivalent
PHF	Peak Hour Factor
Project	5th & Sterling
SBCTA	San Bernardino County Transportation Authority
SCAQMD	South Coast Air Quality Management District
TA	Traffic Analysis
v/c	Volume to Capacity
vphgpl	Vehicles per Hour Green per Lane

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1 INTRODUCTION

This report presents the results of the Traffic Analysis (TA) for 5th & Sterling (“Project”), which is located on the northeast corner of Sterling Avenue and 5th Street in the City of San Bernardino, as shown on Exhibit 1-1. The purpose of this TA is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project and, where necessary, recommend improvements to achieve acceptable operations consistent with General Plan level of service goals and policies. This traffic study has been prepared in accordance with the City of San Bernardino’s Traffic Impact Analysis Guidelines, the San Bernardino County Congestion Management Program (CMP) Guidelines for CMP Traffic Impact Analysis Reports (Appendix B, 2016 Update), and consultation with City staff during the traffic study scoping process. (1) (2) The City approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TA.

1.1 SUMMARY OF FINDINGS

The Project is to construct the following improvements as design features in conjunction with development of the site:

- Northbound left turn lane with a minimum of 100-feet of storage at the intersection of Sterling Avenue & 6th Street (#4).
- Sterling Avenue at its ultimate half-section width as a Major Arterial (100-foot right-of-way) from 5th Street to 6th Street consistent with the City’s standards.
- 6th Street at its ultimate half-section width as a Collector (60-foot right-of-way) from Sterling Avenue to the Project’s eastern boundary consistent with the City’s standards.
- 5th Street at its ultimate half-section width as a Major Arterial (92-foot right-of-way) from Sterling Avenue to the Project’s eastern boundary consistent with the City’s standards.

Additional details and intersection lane geometrics are provided in Section 1.6 *Recommendations* of this report.

1.2 PROJECT OVERVIEW

The Project consists of the development of a 557,000 square foot warehouse building. This traffic analysis evaluates 557,000 square feet of high-cube transload and short-term storage warehouse use. A preliminary site plan for the proposed Project is shown on Exhibit 1-2. The Project will provide access to the following roadways:

- Sterling Avenue via Driveway 1 and Driveway 2, which will both serve passenger cars only
- Fifth Street via Driveway 3, which will serve trucks only and Driveway 5 which will serve both passenger cars and trucks
- Sixth Street via Driveway 4, which will serve primarily passenger cars but will also serve as a secondary access for trucks

EXHIBIT 1-1: LOCATION MAP

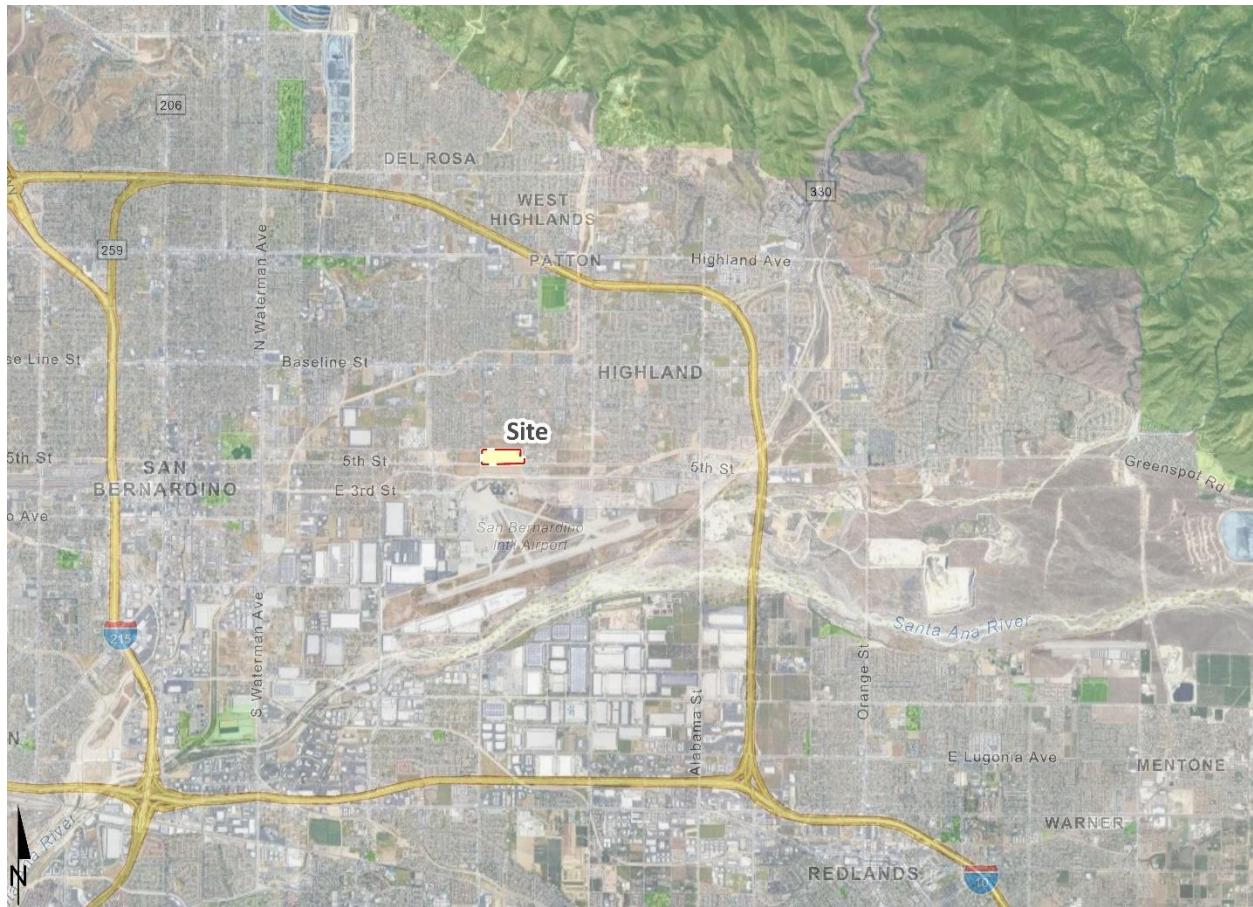
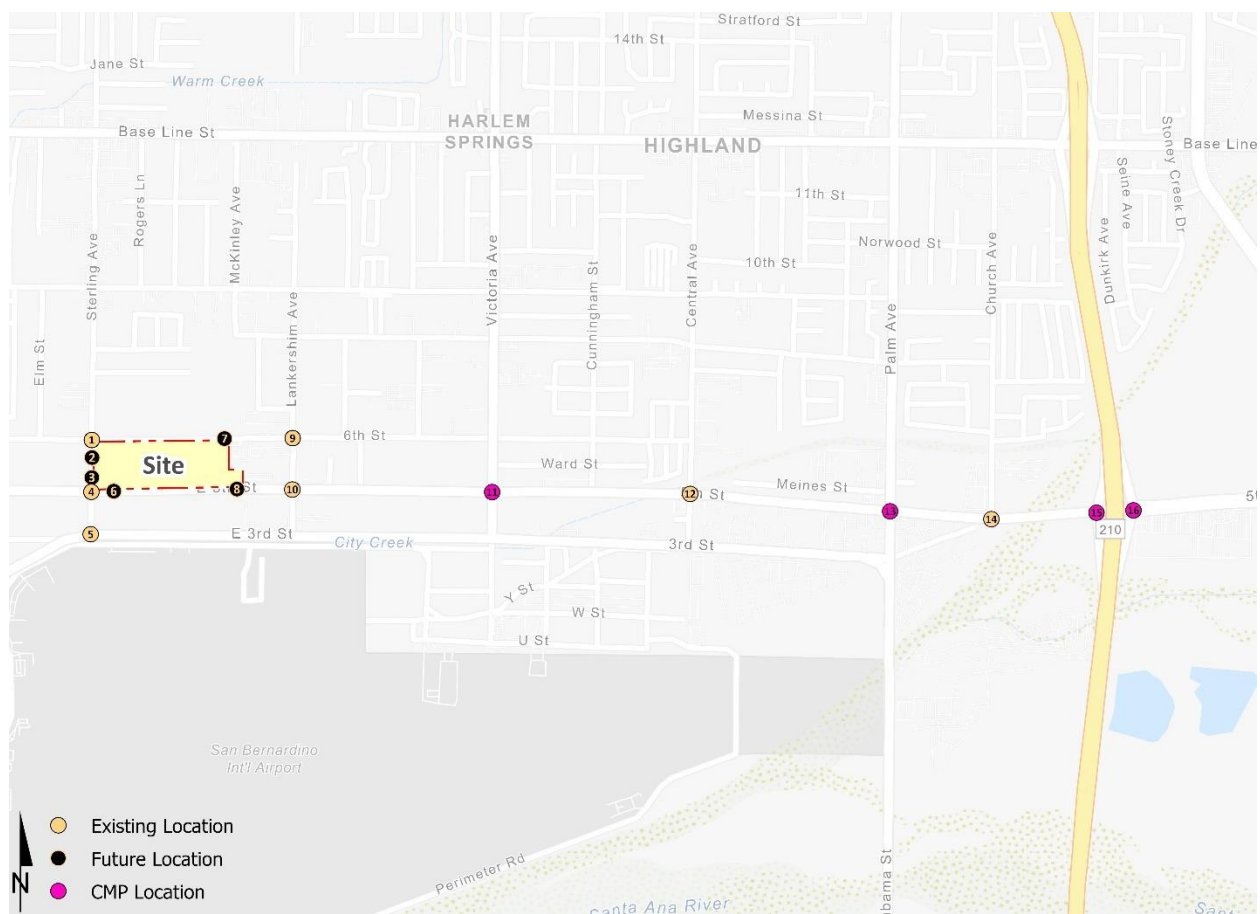


EXHIBIT 1-2: PRELIMINARY SITE PLAN



EXHIBIT 1-3: STUDY AREA



Regional access to the Project site is available from the I-210 Freeway via the 5th Street interchange. Exhibit 1-3 depicts the location of the proposed Project in relation to the existing roadway network and the study area intersections. All driveways are proposed to allow for full access (no turn restrictions), with the exception of Driveway 3 on 5th Street. Due to its proximity to the intersection at Sterling Avenue, Driveway 3 is proposed to be restricted to right-in/right-out access only. The Project is anticipated to have an opening year of 2026.

In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) for High-Cube Transload Warehouse (ITE Land Use Code 154) has been utilized. (3) The Project is anticipated to generate a total of 782 actual vehicle trip-ends per day with 45 AM peak hour trips and 57 PM peak hour trips. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

1.3 ANALYSIS SCENARIOS

For the purposes of this traffic study, potential deficiencies to traffic and circulation have been assessed for each of the following conditions:

- Existing (2023) Conditions
- Existing plus Project (E+P)
- Existing plus Ambient Growth (EA) (2026) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2026) Conditions
- Existing plus Ambient Growth plus Cumulative (EAC) (2026) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2026) Conditions

1.3.1 EXISTING (2023) CONDITIONS

Information for Existing (2023) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

1.3.2 E+P CONDITIONS

The E+P analysis determines traffic deficiencies that would occur on the existing roadway system with the addition of Project traffic.

1.3.3 EA AND EAP (2026) CONDITIONS

The EA traffic conditions analysis determines traffic deficiencies that would occur on the existing roadway system with the addition of ambient growth. To account for background traffic growth, an ambient growth factor from Existing conditions of 9.27% is included for EA (2026) traffic conditions (3 percent per year for 3 years). The ambient growth is consistent with the growth used by other projects in the area within the City of San Bernardino and is consistent with the City of San Bernardino traffic study guidelines. The EAP traffic conditions analysis includes the EA traffic forecasts plus the addition of Project traffic.

1.3.4 EAC AND EAPC (2026) CONDITIONS

The EAC traffic conditions analysis determines traffic deficiencies that would occur on the existing roadway system with the addition of ambient growth and the addition of traffic generated by other known or probably related projects. To account for background traffic growth, an ambient growth factor from Existing conditions of 9.27% is included for EAC (2026) traffic conditions (3 percent per year for 3 years). The ambient growth is consistent with the growth used by other projects in the area within the City of San Bernardino and is consistent with the City of San Bernardino traffic study guidelines. The related projects are at least in part already accounted for in the assumed 9.27% of ambient growth; and some of these related projects may not be implemented and operational within the 2026 Opening Year time frame assumed for the Project. The resulting traffic growth utilized in the TA (9.27% ambient growth factor plus traffic generated by related projects) would therefore tend to overstate rather than understate background cumulative traffic deficiencies under 2026 conditions. The EAPC traffic conditions analysis includes the EAC traffic forecasts plus the addition of Project traffic.

1.4 STUDY AREA

To ensure that this TA satisfies the City of San Bernardino's traffic study requirements, Urban Crossroads, Inc. prepared a Project traffic study scoping package for review by City of San Bernardino staff prior to the preparation of this report. This agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology. The agreement approved by the City is included in Appendix 1.1 of this TA.

The 16 study area intersections shown on Exhibit 1-3 and listed in Table 1-1 were selected for evaluation in this TA based on consultation with City of San Bernardino staff. At a minimum, the study area includes intersections where the Project is anticipated to contribute 50 or more peak hour trips per the City's traffic study guidelines. (1) The "50 peak hour trip" criterion represents a minimum number of trips at which a typical intersection would have the potential to be affected by a given development proposal. The 50 peak hour trip criterion is a traffic engineering rule of thumb that is accepted and widely used within San Bernardino County for estimating a potential area of influence (i.e., study area).

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection	Jurisdiction	CMP?
1	Sterling Av. & 6th St.	San Bernardino, Highland	No
2	Sterling Av. & Driveway 1	San Bernardino, Highland	No
3	Sterling Av. & Driveway 2	San Bernardino, Highland	No
4	Sterling Av. & 5th St.	San Bernardino, Highland	No
5	Sterling Av. & 3rd St.	San Bernardino, Highland	No
6	Driveway 3 & 5th St.	San Bernardino	No
7	Driveway 4 & 6th St.	San Bernardino, Highland	No
8	Driveway 5 & 5th St.	San Bernardino	No
9	Lankershim Av. & 6th St.	San Bernardino, Highland	No
10	Lankershim Av. & 5th St.	San Bernardino, Highland	No
11	Victoria Av. & 5th St.	San Bernardino, Highland	Yes
12	Central Av. & 5th St.	Highland	No
13	Palm Av. & 5th St.	Highland	Yes
14	Church Av. & 5th St.	Highland	No
15	I-210 SB Ramps & 5th St.	Highland, Caltrans	Yes
16	I-210 NB Ramps & 5th St.	Highland, Caltrans	Yes

The intent of a CMP is to link land use, transportation, and air quality, thereby prompting reasonable growth management programs that will effectively utilize new transportation funds, alleviate traffic congestion and related deficiencies, and improve air quality. The County of San Bernardino CMP became effective with the passage of Proposition 111 in 1990 and last updated in 2016 with an updated Nexus Study completed in 2020. (2) As shown in Table 1-1, there are 3 intersections identified as San Bernardino County Transportation Authority (SBCTA) CMP intersections.

1.5 DEFICIENCIES

This section provides a summary of deficiencies by analysis scenario. Section 2 *Methodologies* provides information on the methodologies used in the analysis and Section 5 *EA and EAP (2026) Traffic Conditions*, Section 6 *EAC and EAPC (2026) Traffic Conditions* includes the detailed analysis. A summary of LOS results for all analysis scenarios is presented in Table 1-2.

TABLE 1-2: SUMMARY OF LOS

# Intersection	Existing		E+P		EA (2026)		EAP (2026)		EAC (2026)		EAPC (2026)	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1 Sterling Av. & 6th St.	●	●	●	●	●	●	●	●	●	●	●	●
2 Sterling Av. & Driveway 1	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
3 Sterling Av. & Driveway 2	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
4 Sterling Av. & 5th St.	●	●	●	●	●	●	●	●	●	●	●	●
5 Sterling Av. & 3rd St.	●	●	●	●	●	●	●	●	●	●	●	●
6 Driveway 3 & 5th St.	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
7 Driveway 4 & 6th St.	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
8 Driveway 5 & 5th St.	N/A	N/A	●	●	N/A	N/A	●	●	N/A	N/A	●	●
9 Lankershim Av. & 6th St.	●	●	●	●	●	●	●	●	●	●	●	●
10 Lankershim Av. & 5th St.	●	●	●	●	●	●	●	●	●	●	●	●
11 Victoria Av. & 5th St.	●	●	●	●	●	●	●	●	●	●	●	●
12 Central Av. & 5th St.	●	●	●	●	●	●	●	●	●	●	●	●
13 Palm Av. & 5th St.	●	●	●	●	●	●	●	●	●	●	●	●
14 Church Av. & 5th St.	●	●	●	●	●	●	●	●	●	●	●	●
15 I-210 SB Ramps & 5th St.	●	●	●	●	●	●	●	●	●	●	●	●
16 I-210 NB Ramps & 5th St.	●	●	●	●	●	●	●	●	●	●	●	●

● = A - D ● = E ● = F

1.5.1 EXISTING (2023) CONDITIONS

All of the study area intersections are currently operating at an acceptable LOS during the weekday AM and PM peak hours.

1.5.2 E+P CONDITIONS

All of the study area intersections are anticipated to continue to operate at an acceptable LOS during the weekday AM and PM peak hours.

1.5.3 EA AND EAP (2026) CONDITIONS

The following study area intersection is anticipated to operate at an unacceptable LOS under EA (2026) traffic conditions:

- Sterling Avenue & 6th Street (#1) – LOS E AM peak hour only

1.5.4 EAC AND EAPC (2026) CONDITIONS

The following study area intersection is anticipated to operate at an unacceptable LOS under EAC (2026) traffic conditions:

- Sterling Avenue & 6th Street (#1) – LOS F AM peak hour; LOS E PM peak hour

1.6 RECOMMENDATIONS

1.6.1 SITE ADJACENT AND SITE ACCESS RECOMMENDATIONS

The following recommendations are based on the minimum improvements needed to accommodate site access and maintain acceptable peak hour operations for the proposed Project. The site adjacent recommendations are shown on Exhibit 1-4. The site adjacent queuing analysis worksheets are provided in Appendix 1.2.

Project to maintain the existing traffic control and lane geometrics at the intersection of Sterling Avenue & 5th Street (#4).

Recommendation 1 – Sterling Avenue & 6th Street (#1) – The following improvement is necessary to accommodate site access:

- Project to construct a northbound left turn lane with a minimum of 100-feet of storage.

Recommendation 2 – Sterling Avenue & Driveway 1 (#2) – The following improvements are necessary to accommodate site access:

- Project to install a stop sign on the westbound approach and construct a shared left-right turn lane.
- Project to construct a southbound left turn lane within a painted two-way left-turn lane.

Recommendation 3 – Sterling Avenue & Driveway 2 (#3) – The following improvements are necessary to accommodate site access:

- Project to install a stop sign on the westbound approach and construct a shared left-right turn lane.
- Project to construct a southbound left turn lane within a painted two-way left-turn lane.

Recommendation 4 – Driveway 3 & 5th Street (#6) – The following improvements are necessary to accommodate site access:

- Project to install a stop sign on the southbound approach and construct a right turn lane.
- Project to construct a westbound shared through-right turn lane.

Recommendation 5 – Driveway 4 & 5th Street (#7) – The following improvements are necessary to accommodate site access:

- Project to install a stop sign on the northbound approach and construct a shared left-right turn lane.
- Project to construct an eastbound shared through-right turn lane.

Recommendation 6 – Driveway 4 & 5th Street (#8) – The following improvements are necessary to accommodate site access:

- Project to install a stop sign on the southbound approach and construct a shared left-right turn lane.
- Project to construct an eastbound left turn lane within a painted two-way left-turn lane.
- Project to construct a westbound shared through-right turn lane.

EXHIBIT 1-4: SITE ACCESS RECOMMENDATIONS



1 Sterling Av. & 6th St.	2 Sterling Av. & Driveway 1	3 Sterling Av. & Driveway 2	4 Sterling Av. & 5th St.	6 Driveway 3 & 5th St.
7 Driveway 4 & 6th St.	8 Driveway 5 & 5th St.			

① = Existing Intersection Analysis Location
 ② = Future Intersection Analysis Location
 ⦿ = Existing Traffic Signal
 ⬮ = Existing Stop Sign
 ⬮ = Stop Sign Improvement
 ➡ = Existing Lane
 ➡ = Lane Improvement
 TWLTL = Two-way Left Turn Lane
 100' = Recommended Turn Pocket Length

Recommendation 7 – Sterling Avenue is a north-south oriented roadway located on the Project's western boundary. Project to construct Sterling Avenue at its ultimate half-section width as a Major Arterial (100-foot right-of-way) from 5th Street to 6th Street consistent with the City's standards.

Recommendation 8 – 6th Street is an east-west oriented roadway located on the Project's northern boundary. Project to construct 6th Street at its ultimate half-section width as a Collector (60-foot right-of-way) from Sterling Avenue to the Project's eastern boundary consistent with the City's standards.

Recommendation 9 – 5th Street is an east-west oriented roadway located on the Project's northern boundary. Project to construct 5th Street at its ultimate half-section width as a Major Arterial (92-foot right-of-way) from Sterling Avenue to the Project's eastern boundary consistent with the City's standards.

On-site traffic signing and striping should be implemented agreeable with the provisions of the California Manual on Uniform Traffic Control Devices (CA MUTCD) and in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard California Department of Transportation (Caltrans) and City of San Bernardino sight distance standards at the time of preparation of final grading, landscape, and street improvement plans.

1.6.2 OFF-SITE RECOMMENDATIONS

The recommended improvements needed to address the cumulative deficiencies identified under Existing (2023), E+P, EA & EAP (2026), and EAC & EAPC (2026) traffic conditions are shown in Table 1-3. For those improvements listed in Table 1-3 and not constructed as part of the Project, the Project Applicant's responsibility for the Project's contributions towards deficient intersections is fulfilled through payment of fees or fair share that would be assigned to construction of the identified recommended improvements. The Project Applicant would be required to pay fair share fees consistent with the City's requirements (see Section 8 *Local and Regional Funding Mechanisms*).

1.7 TRUCK ACCESS

Due to the typical wide turning radius of large trucks, a truck turning template has been overlaid on the site plan at each applicable Project driveway anticipated to be utilized by heavy trucks in order to determine appropriate curb radii and to verify that trucks will have sufficient space to execute turning maneuvers (see Exhibit 1-5 for driveways). A WB-67 truck (53-foot trailer) has been utilized for the purposes of this analysis. As shown on Exhibit 1-5, the Project driveways are anticipated to accommodate the wide turning radius of heavy trucks as currently designed.

TABLE 1-3: SUMMARY OF IMPROVEMENTS BY ANALYSIS SCENARIO

#	Intersection Location	Jurisdiction	Analysis Scenario					Improvements in DIF, TUMF, etc. ¹	Project Responsibility ²	Project Fair Share ³	
			Existing (2023)	E+P	EA (2026)	EAP (2026)	EAC (2026)				EAPC (2026)
1	Sterling Av. & 6th St.	San Bernardino, Highland	None	Add NB left turn lane	Same	Same	Same	Same	No	Construct	1.4%
					Add SB left turn lane	Same	Same	Same	No	Fair Share	
					Add EB left turn lane	Same	Same	Same	No	Fair Share	
					Add WB left turn lane	Same	Same	Same	No	Fair Share	

¹ Improvements included in the City of San Bernardino's Development Impact Fee Nexus have been identified as such. Traffic signals included in the City's DIF should be verified to determine any applicable credit.

² Program improvements constructed by Project may be eligible for fee credit. In lieu fee payment is at discretion of City.

Represents the fair share percentage for the Project during the most impacted peak hour. Identifies the Project's responsibility to construct an off-site improvement, contribute fair share, or fee payment towards the improvements shown. If identified as a Project construct obligation/in a fee program, then no fair share percentage has been identified.

³ As shown, total project fair share is applicable to the improvements which are not already included in the City DIF/TUMF.

EXHIBIT 1-5: TRUCK ACCESS (PAGE 1 OF 3)

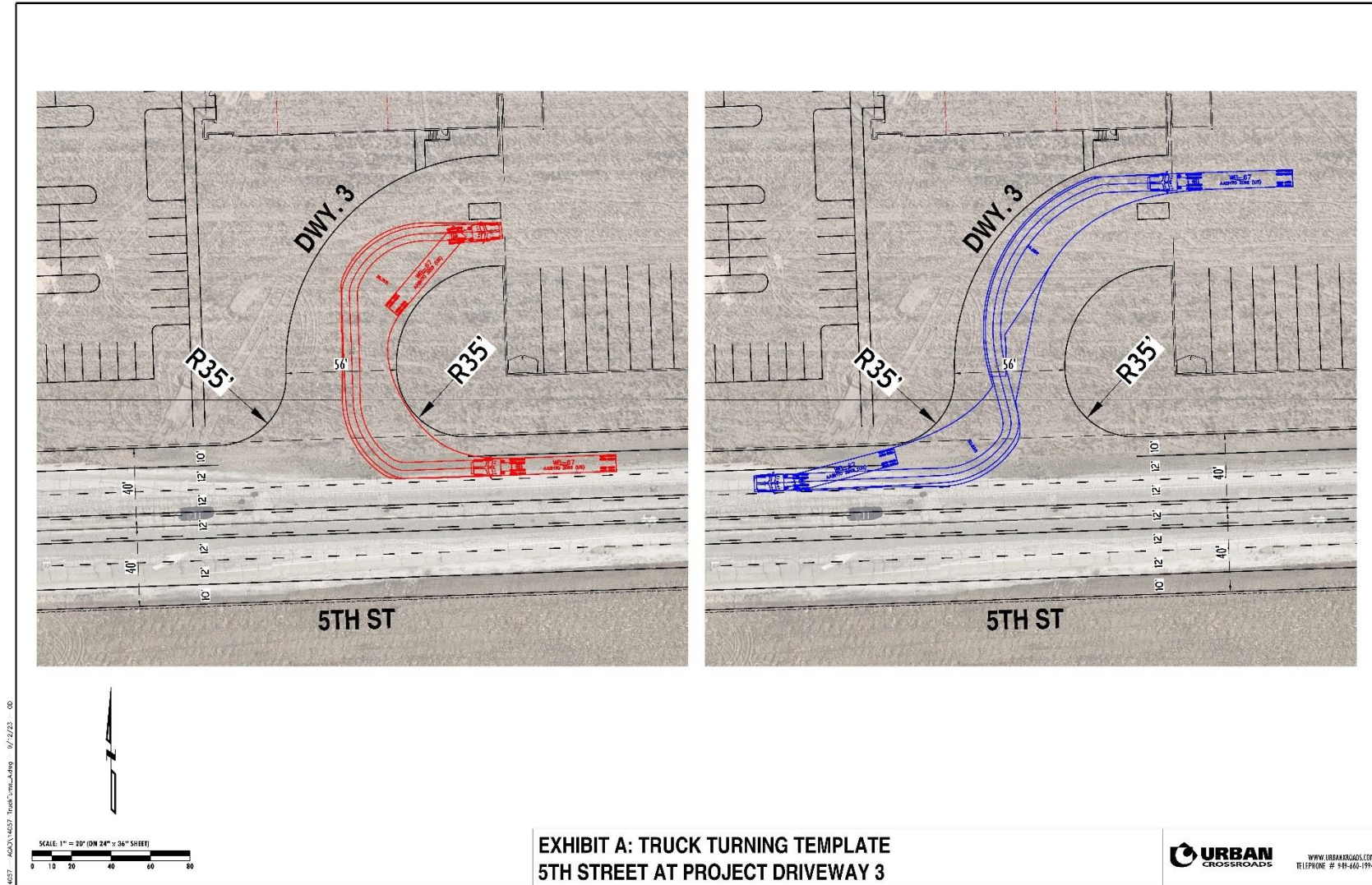


EXHIBIT 1-5: TRUCK ACCESS (PAGE 2 OF 3)

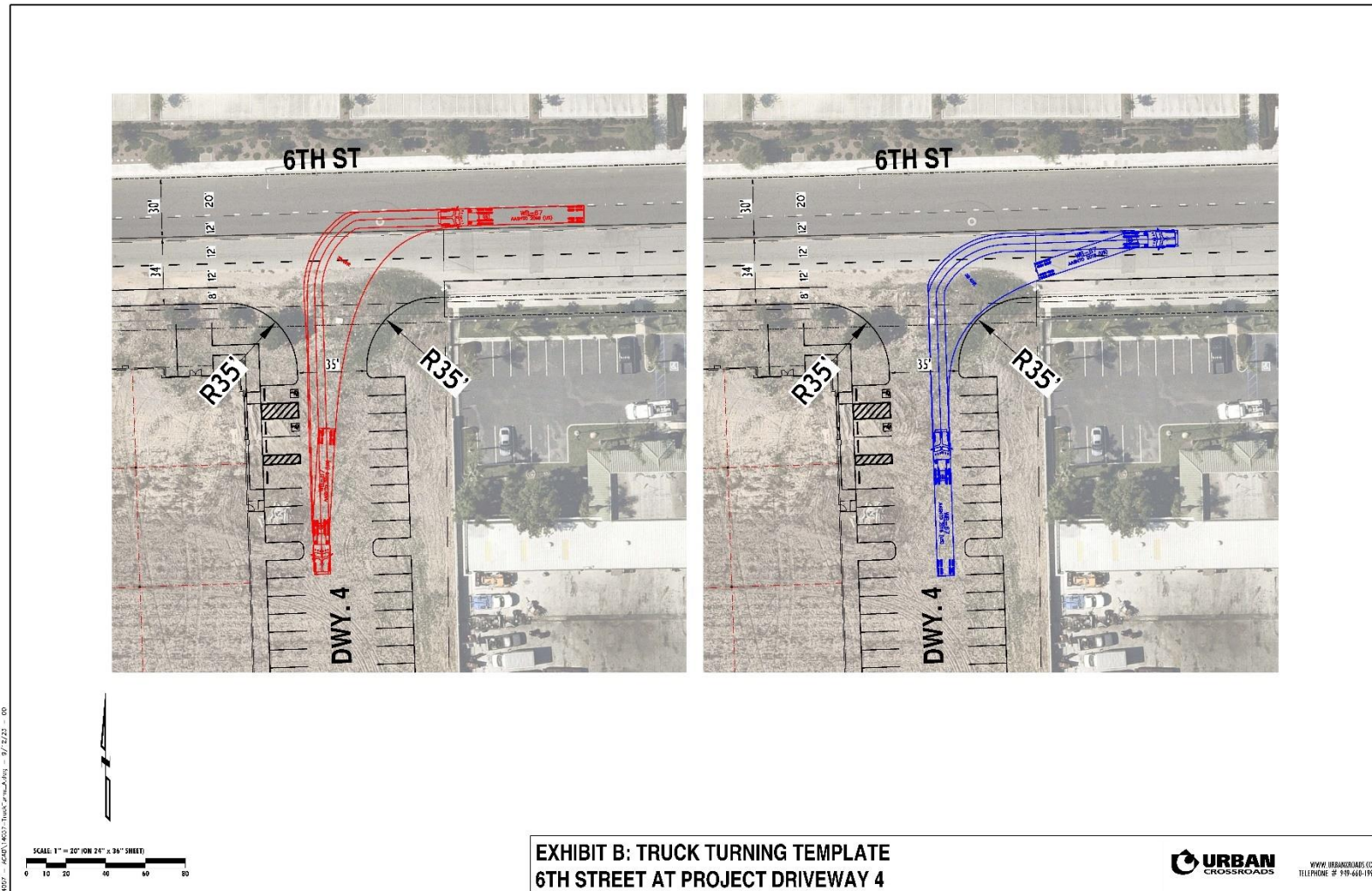
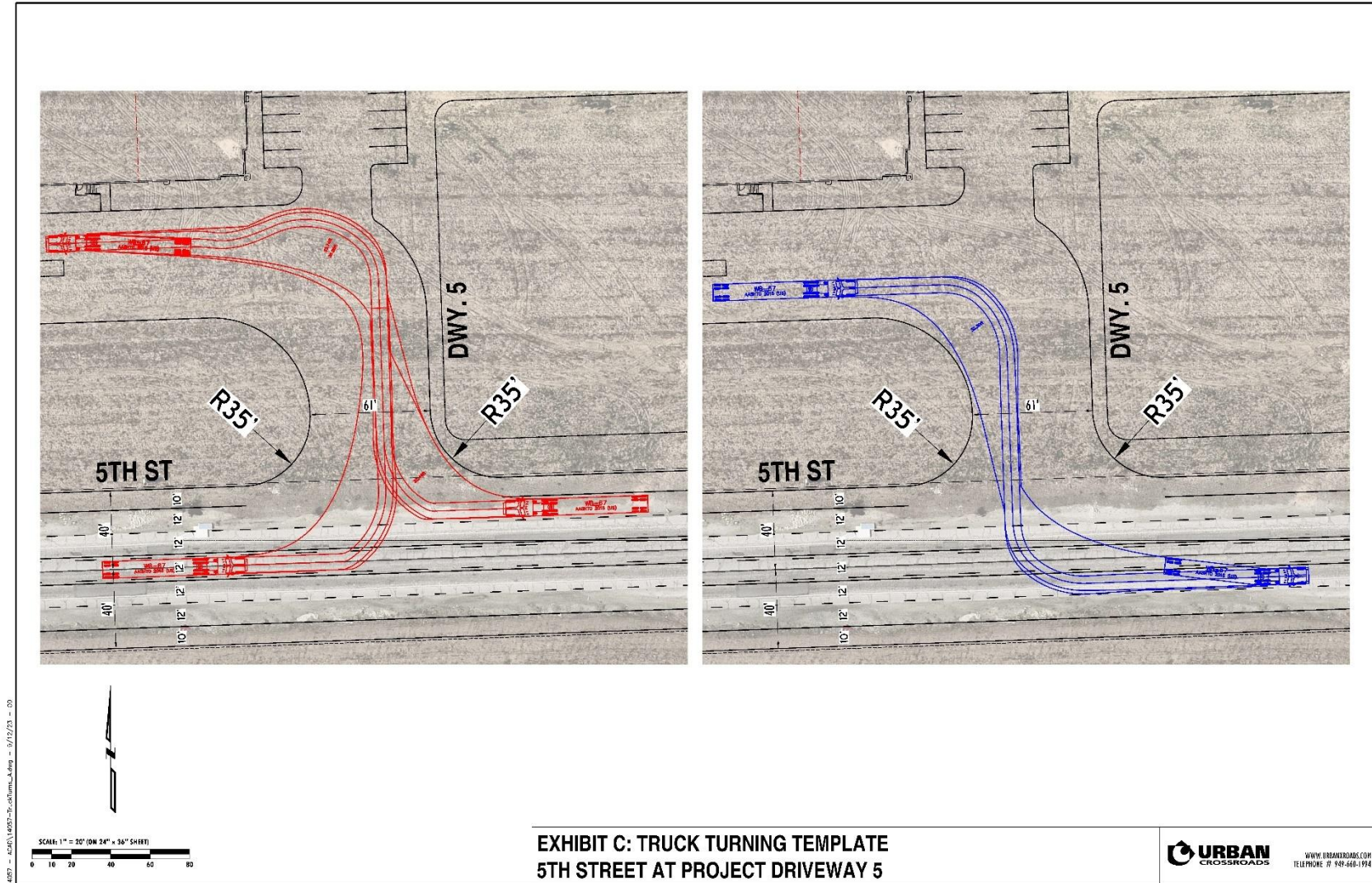


EXHIBIT 1-5: TRUCK ACCESS (PAGE 3 OF 3)



1.8 QUEUING ANALYSIS

A queuing analysis was conducted for each of the study area intersections for Horizon Year (2040) traffic conditions to determine the turn pocket lengths and lane geometric necessary to accommodate near-term 95th percentile queues and recommend storage lengths for the turning movements shown on Exhibit 1-4. The analysis was conducted for the weekday AM and weekday PM peak hours using the SimTraffic modeling software. The EAPC (2026) Conditions queuing analysis worksheets are provided in Appendix 1.2 of this TA.

SimTraffic is designed to model networks of signalized and unsignalized intersections, with the primary purpose of checking and fine-tuning signal operations. SimTraffic uses the input parameters from Synchro (Version 11) to generate random simulations. The 95th percentile queue is not necessarily ever observed; it is simply based on statistical calculations (or Average Queue plus 1.65 standard deviations). The random simulations generated by SimTraffic have been utilized to determine the 95th percentile queue lengths observed for each turn lane. A SimTraffic simulation has been recorded 5 times, during the weekday AM and weekday PM peak hours, and has been seeded for 30-minute periods with 60-minute recording intervals.

2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are consistent with City of San Bernardino's Traffic Study Guidelines.

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors, such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The 6th Edition Highway Capacity Manual (HCM) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (4) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of San Bernardino requires signalized intersection operations analysis based on the methodology described in the HCM. (4) Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), $V/C \leq 1.0$	Level of Service, $V/C \leq 1.0^1$
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F

Source: HCM, 6th Edition

¹ If V/C is greater than 1.0 then LOS is F per HCM.

Consistent with Appendix B of the San Bernardino County CMP, the following saturation flow rates, in vehicles per hour green per lane (vphgpl), will be utilized in the traffic analysis for signalized intersections:

Near-Term Traffic Conditions:

- Exclusive through: 1800 vphgpl
- Exclusive left: 1700 vphgpl
- Exclusive right: 1800 vphgpl
- Exclusive dual left: 1600 vphgpl
- Exclusive triple left: 1500 vphgpl

The traffic modeling and signal timing optimization software package Synchro (Version 11) has been utilized to analyze signalized intersections. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

The peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Customary practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g., $PHF = [Hourly Volume] / [4 \times Peak 15\text{-minute Flow Rate}]$). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour.

(4)

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of San Bernardino requires the operations of unsignalized intersections be evaluated using the methodology described in the HCM. (4) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2). At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. Delay for the intersection is reported for the worst individual movement at a two-way stop-controlled intersection. For all-way stop controlled intersections, LOS is computed for the intersection as a whole (average delay).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), $V/C \leq 1.0$	Level of Service, $V/C \leq 1.0^1$
Little or no delays.	0 to 10.00	A
Short traffic delays.	10.01 to 15.00	B
Average traffic delays.	15.01 to 25.00	C
Long traffic delays.	25.01 to 35.00	D
Very long traffic delays.	35.01 to 50.00	E
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F

Source: HCM, 6th Edition

¹ If V/C is greater than 1.0 then LOS is F per HCM.

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or determine the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD). (5)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicates that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (5) Specifically, this TA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions and for all future analysis scenarios for existing unsignalized intersections. Warrant 3 is appropriate to use for this TA because it provides specialized warrant criteria for intersections with rural characteristics. For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection. Urban warrants have been used as posted speed limits on the major roadways with unsignalized intersections are 40 miles per hour or below and rural warrants have been used where speeds exceed 40 miles per hour.

Future intersections that do not currently exist have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets. Similarly, the speed limit has been used as the basis for determining the use of Urban and Rural warrants. Traffic signal warrant analyses were performed for the following study area intersection shown in Table 2-3:

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

ID	Intersection	Jurisdiction
1	Sterling Av. & 6th St.	San Bernardino, Highland
2	Sterling Av. & Driveway 1	San Bernardino, Highland
3	Sterling Av. & Driveway 2	San Bernardino, Highland
7	Driveway 4 & 6th St.	San Bernardino, Highland
8	Driveway 5 & 5th St.	San Bernardino
9	Lankershim Av. & 6th St.	San Bernardino, Highland
10	Lankershim Av. & 5th St.	San Bernardino, Highland

Although unsignalized, the intersection of Driveway 3 & 5th Street is proposed for restricted access (right-in/right-out only), therefore traffic signal warrants have not been evaluated at this location. The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *EA and EAP (2026) Traffic Conditions*, and Section 6 *EAC and EAPC (2026) Traffic Conditions* of this report. It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.4 OFF-RAMP QUEUING ANALYSIS

A queuing analysis has been performed for the study area off-ramp intersections at the I-210 Freeway/5th Street interchange. Specifically, the queuing analysis is utilized to identify any potential queuing and “spill back” onto the I-210 Freeway mainline from the off-ramps or out of the turn pockets.

The traffic progression analysis tool and HCM intersection analysis program, Synchro, has been used to assess the potential deficiencies/needs of the intersections with traffic added from the proposed Project. Storage (turn-pocket) length recommendations at the ramps have been based upon the 95th percentile queue resulting from the Synchro progression analysis. There are two footnotes which appear on the Synchro outputs. One footnote indicates whether the 95th percentile cycle exceeds capacity. Traffic is simulated for two complete cycles of the 95th percentile traffic in Synchro in order to account for the effects of spillover between cycles. In practice, the 95th percentile queue shown will rarely be exceeded and the queues shown with the footnote are acceptable for the design of storage bays. The other footnote indicates whether or not the volume for the 95th percentile queue is metered by an upstream signal. If the upstream intersection is at or near capacity, the 50th percentile queue represents the maximum queue experienced.

2.5 MINIMUM ACCEPTABLE LEVELS OF SERVICE (LOS)

Minimum Acceptable LOS and associated definitions of intersection deficiencies has been obtained from each of the applicable surrounding jurisdictions.

2.5.1 CITY OF SAN BERNARDINO

The definition of an intersection deficiency in the City of San Bernardino is based on the City of San Bernardino General Plan Circulation Element. The City of San Bernardino General Plan states that target LOS D be maintained at City intersections wherever possible. (1)

2.5.2 CITY OF HIGHLAND

According to City of Highland General Plan Circulation Element, LOS D is the minimum acceptable condition that should be maintained during the peak commute hours. Therefore, any intersection operating at LOS E or F is considered deficient/unsatisfactory.

2.5.2 CMP

The CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, where feasible, except where an existing LOS F condition is identified in the CMP document. (2)

2.6 DEFICIENCY CRITERIA

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. The following deficiency criteria has been utilized for the City of San Bernardino. To determine whether the addition of project-related traffic at a study intersection would result in a deficiency, the following will be utilized:

The City of San Bernardino traffic study guidelines identifies a traffic deficiency at an intersection when any of the following changes in the volume-to-capacity (v/c) ratios occur between the Without Project and the With Project conditions:

LOS <u>Without Project</u>	V/C <u>Difference</u>
C	> 0.0400
D	> 0.0200
E, F	> 0.0100

Improvement recommendations for Project deficiencies would only mitigate the Project's proportional change in delay or v/c ratio to pre-Project conditions or better. Improvement recommendations will be identified for study area intersections that show a cumulative deficiency per the above changes in v/c and operate at LOS E or worse under 2026 traffic conditions. The LOS with improvements must be improved to LOS D or better for intersections.

2.7 PROJECT FAIR SHARE CALCULATION METHODOLOGY

Improvements found to be included in the TUMF and/or DIF will be identified as such. For improvements that do not appear to be in either of the pre-existing fee programs, a fair share contribution based on the Project's proportional share may be imposed in order to address the Project's share of deficiencies in lieu of construction. It should be noted that fair share calculations are for informational purposes only and the City Traffic Engineer will determine the appropriate improvements to be implemented by a project (to be identified in the conditions of approval). The Project's fair share contribution is determined based on the following equation, which is the ratio of Project traffic to net new traffic (where net new traffic is the future traffic less existing traffic):

$$\text{Project Fair Share \%} = \text{Project Buildout Traffic} / (\text{EAPC (2026) Traffic} - \text{Existing Traffic})$$

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3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of San Bernardino General Plan Circulation Network, and a review of existing peak hour intersection operations and traffic signal warrant analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with City of San Bernardino staff (Appendix 1.1), the study area includes a total of 16 existing and future intersections as shown previously on Exhibit 1-3. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF SAN BERNARDINO GENERAL PLAN CIRCULATION ELEMENT

As noted previously, the Project site is located within the City of San Bernardino. The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the study area, as identified on the City of San Bernardino General Plan Circulation Element, are described subsequently. Exhibit 3-2 shows the City of San Bernardino General Plan Circulation Element and Exhibit 3-3 illustrates the City of San Bernardino General Plan roadway cross-sections.

The study area roadway that is classified as a Major Arterial is identified as having a 100-foot right-of-way and 72-80-foot curb-to-curb measurement. Major Arterials include two lanes of travel in each direction and a 10-14-foot curbed and/or landscaped median. The following study area roadways within the City of San Bernardino are classified as Major Arterials:

- Sterling Avenue
- 5th Street
- Palm Avenue

The study area roadway that is classified as a Secondary Arterial is identified as having an 88-foot right-of-way and 64-66-foot curb-to-curb measurement. Secondary Arterials include two lanes of travel in each direction and a 11-12-foot two-way turn pocket in the painted median. The following study area roadway within the City of San Bernardino is classified as a Secondary Arterial:

- Lankershim Avenue

The study area roadway that is classified as a Collector is identified as having a 60-foot right-of-way and 40-foot curb-to-curb measurement. Collectors include two lanes of travel (one in each direction). The following study area roadways within the City of San Bernardino are classified as a Secondary Arterial:

- 6th Street
- Central Avenue

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS (PAGE 1 OF 2)

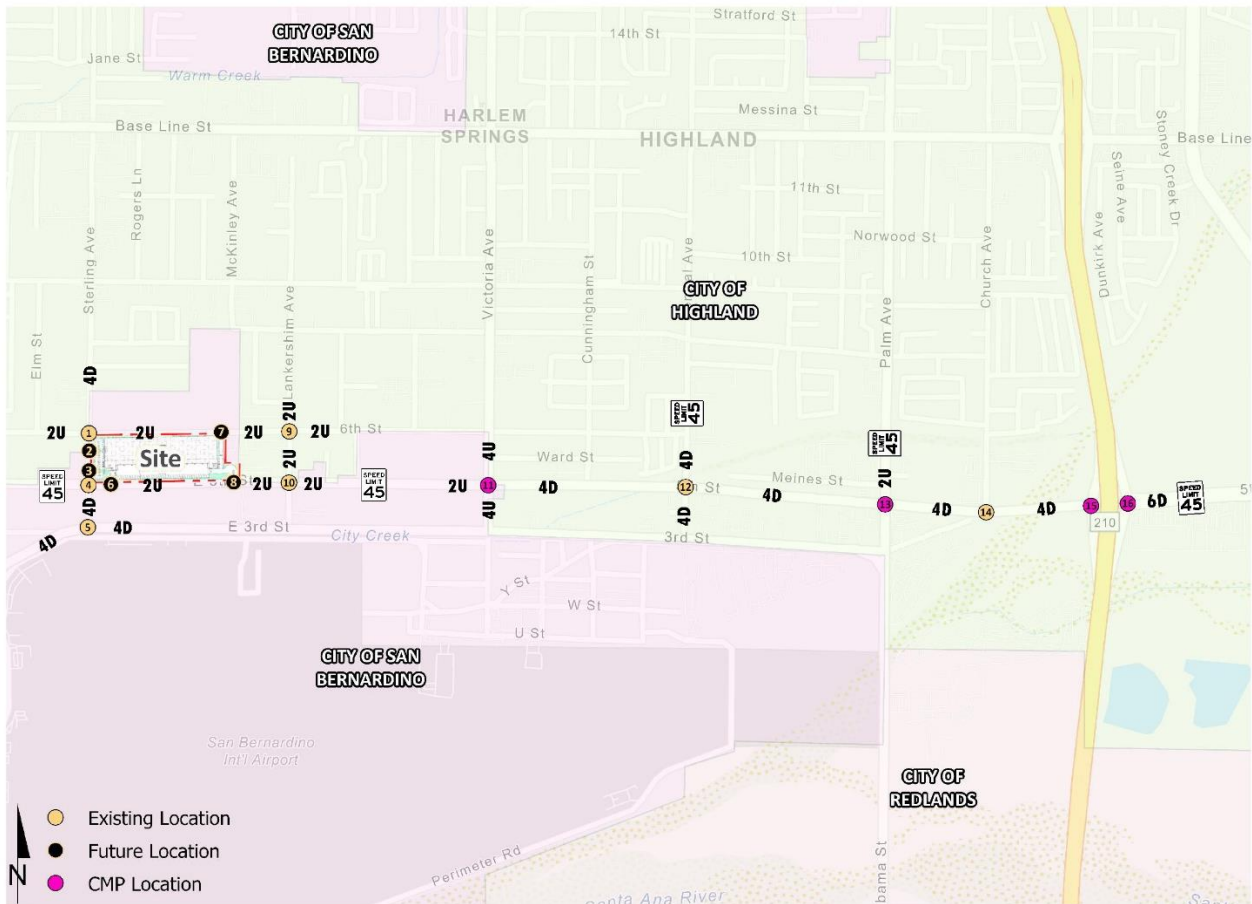


EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS (PAGE 2 OF 2)

1	Sterling Av. & 6th St.	2	Sterling Av. & Driveway 1	3	Sterling Av. & Driveway 2	4	Sterling Av. & 5th St.	5	Sterling Av. & 3rd St.
		Future Intersection		Future Intersection					
6	Driveway 3 & 5th St.	7	Driveway 4 & 6th St.	8	Driveway 5 & 5th St.	9	Lankershim Av. & 6th St.	10	Lankershim Av. & 5th St.
Future Intersection		Future Intersection		Future Intersection					
11	Victoria Av. & 5th St.	12	Central Av. & 5th St.	13	Palm Av. & 5th St.	14	Church Av. & 5th St.	15	I-210 SB Ramps & 5th St.
16	I-210 NB Ramps & 5th St.	= Traffic Signal = Stop Sign = Traffic Lane RTO = Right Turn Overlap DEF = Defacto Right Turn							

EXHIBIT 3-2: CITY OF SAN BERNARDINO GENERAL PLAN CIRCULATION ELEMENT

Circulation Plan

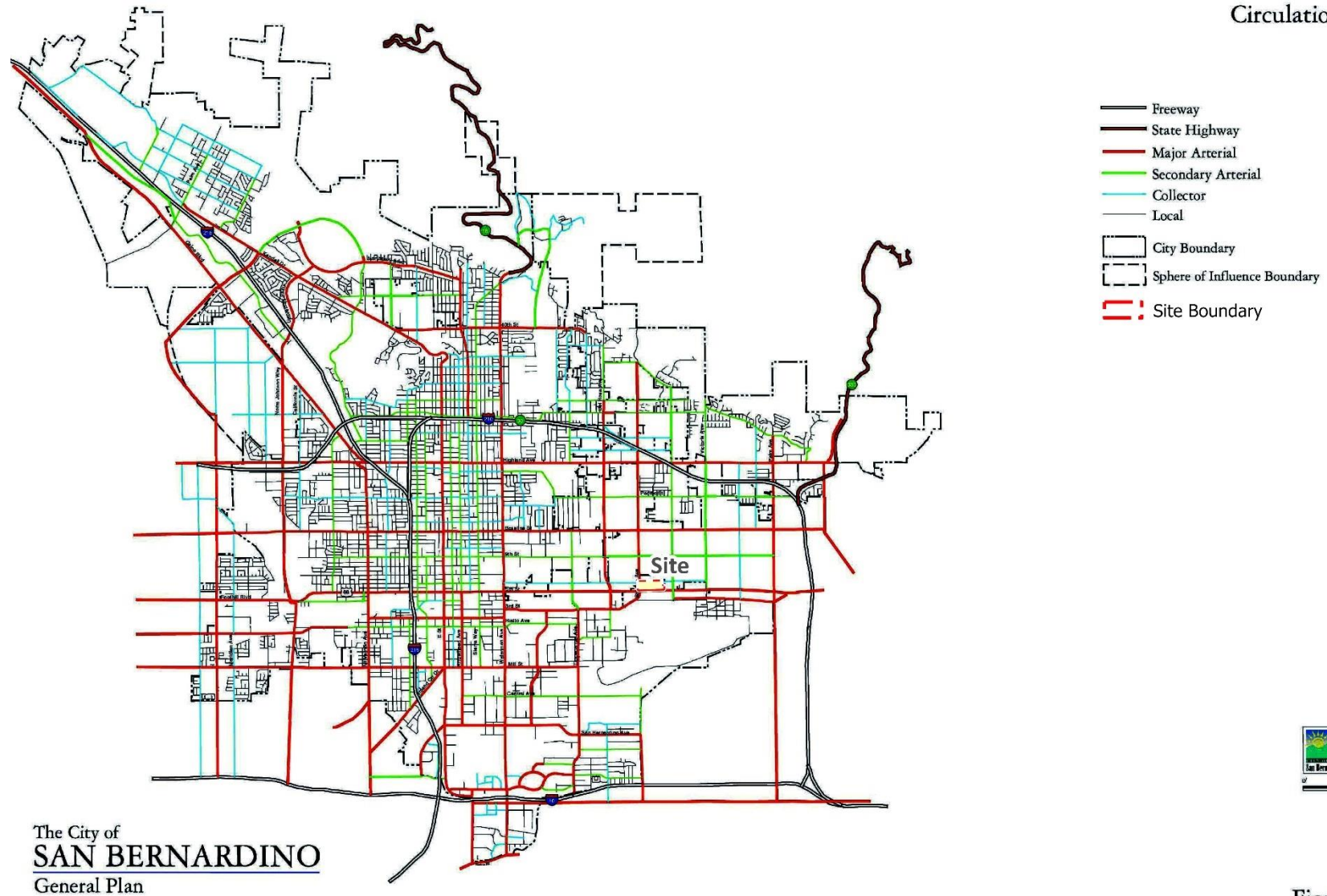
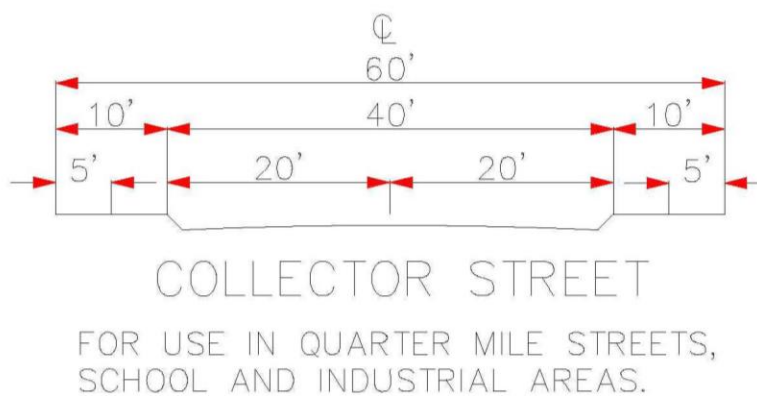
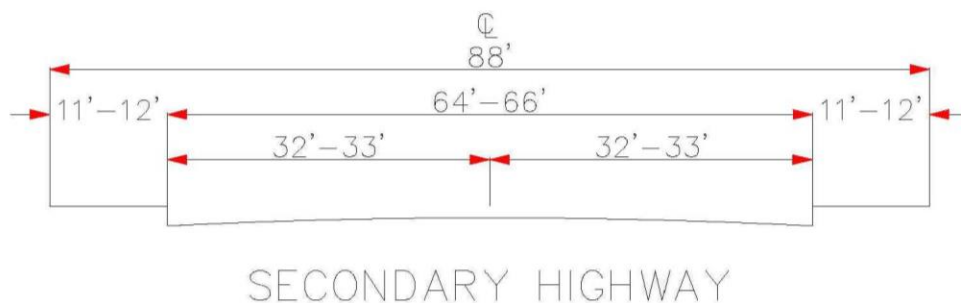
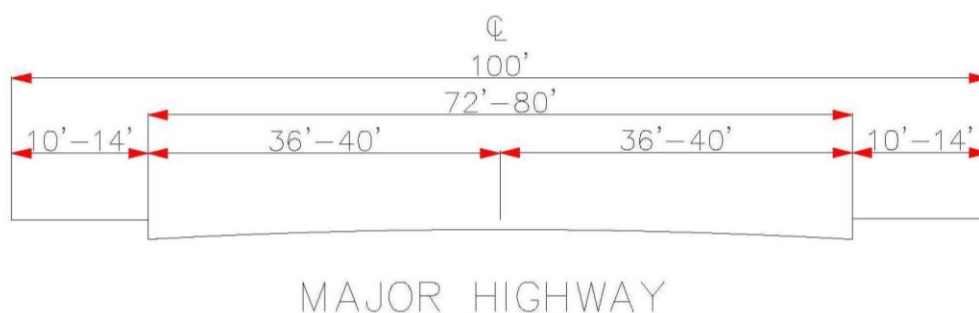
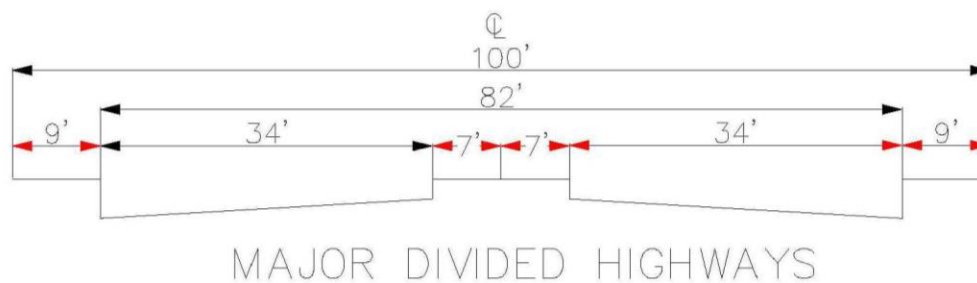


Figure C-2

EXHIBIT 3-3: CITY OF SAN BERNARDINO GENERAL PLAN ROADWAY CROSS-SECTIONS



3.3 BICYCLE, EQUESTRIAN, & PEDESTRIAN FACILITIES

Exhibit 3-4 illustrates the City of San Bernardino bicycle facilities. 5th Street is designated as a bicycle route per the City of San Bernardino General Plan, while Sterling Avenue is identified as a bicycle route within the City of Highland General Plan. Existing pedestrian facilities within the study area are shown on Exhibit 3-5. Field observations and traffic counts conducted in May 2023 indicate light pedestrian and bicycle activity within the study area.

3.4 TRANSIT SERVICE

The study area within the City of San Bernardino is currently served by Omnitrans, a public transit agency serving various jurisdictions within San Bernardino County. Based on a review of the existing transit routes within the vicinity of the proposed Project, Route 15 currently runs along 9th Street. Transit service is reviewed and updated by Omnitrans periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate. As such, it is recommended that the applicant work in conjunction with Omnitrans to potentially provide bus service to the site. Existing transit routes in the vicinity of the study area are illustrated on Exhibit 3-6.

3.5 EXISTING (2023) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in May 2023. The following peak hours were selected for analysis:

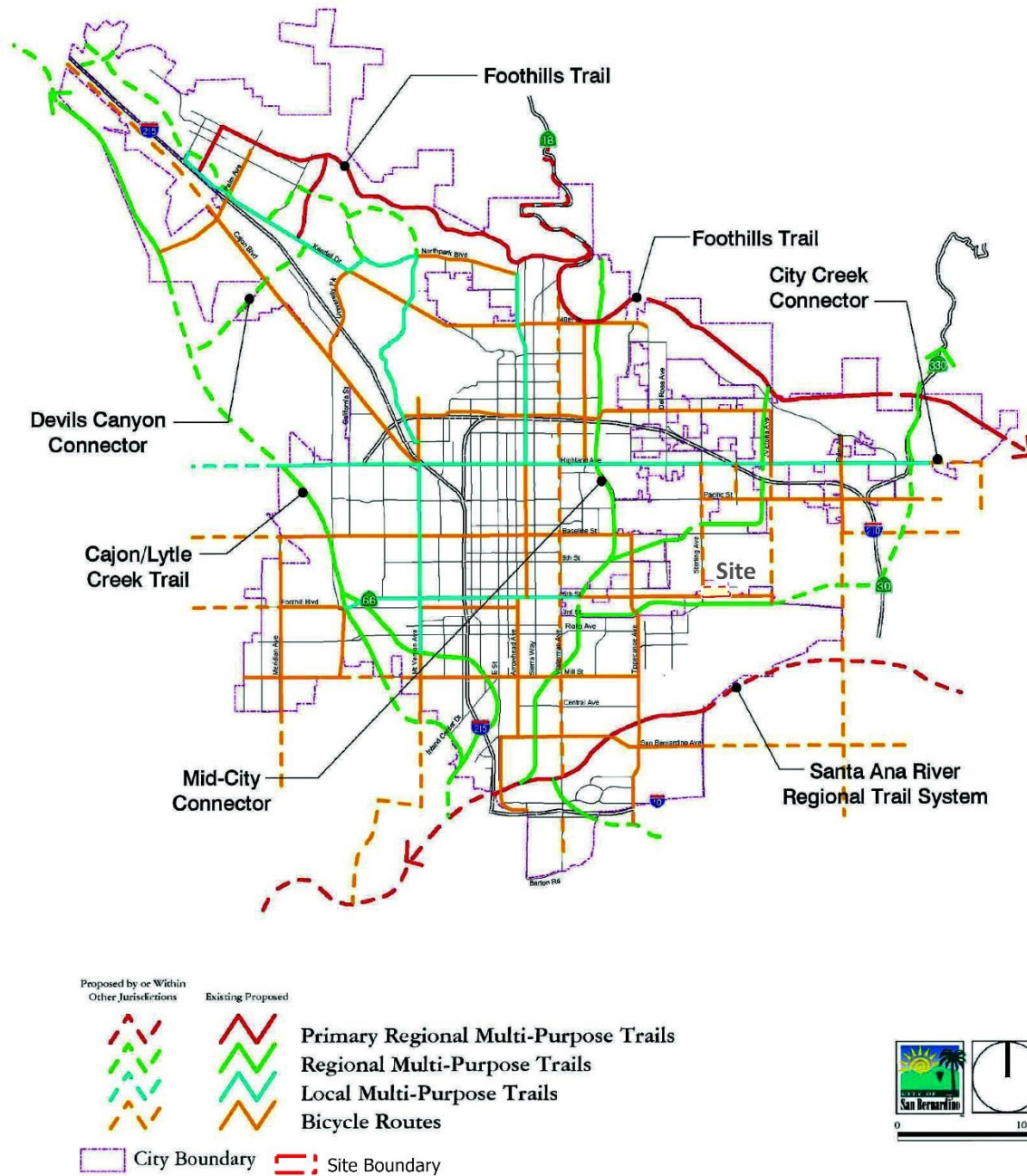
- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The 2023 weekday AM and weekday PM peak hour count data is representative of typical weekday peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules. As such, no additional adjustments were made to the traffic counts to establish the baseline condition. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1.

To represent the effect large trucks, buses, and recreational vehicles have on traffic flow, all trucks were converted into passenger car equivalent (PCE). By their size alone, these vehicles occupy the same space as two or more passenger cars. In addition, the time it takes for them to accelerate and slow-down is also much longer than for passenger cars and varies depending on the type of vehicle and number of axles. For this analysis, the following PCE factors have been used to estimate each turning movement: 2.0 for 2-axle trucks, 2.5 for 3-axle trucks, and 3.0 for 4+-axle trucks. These factors are consistent with the values recommended for use in the City's Guidelines.

EXHIBIT 3-4: CITY OF SAN BERNARDINO BICYCLE FACILITIES

Conceptual Trail System



The City of
SAN BERNARDINO
General Plan

Figure PRT-2

EXHIBIT 3-5: EXISTING PEDESTRIAN FACILITIES

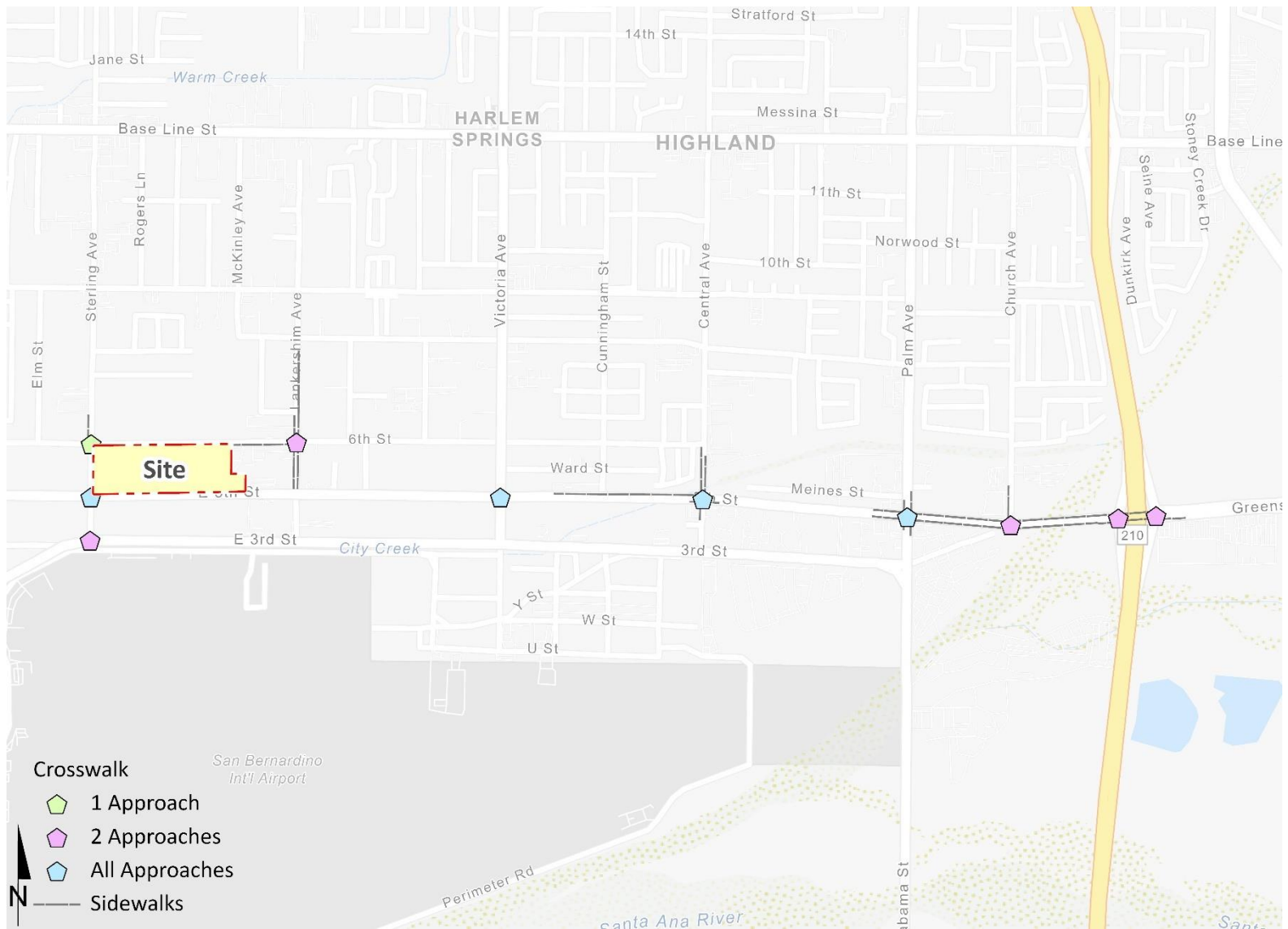
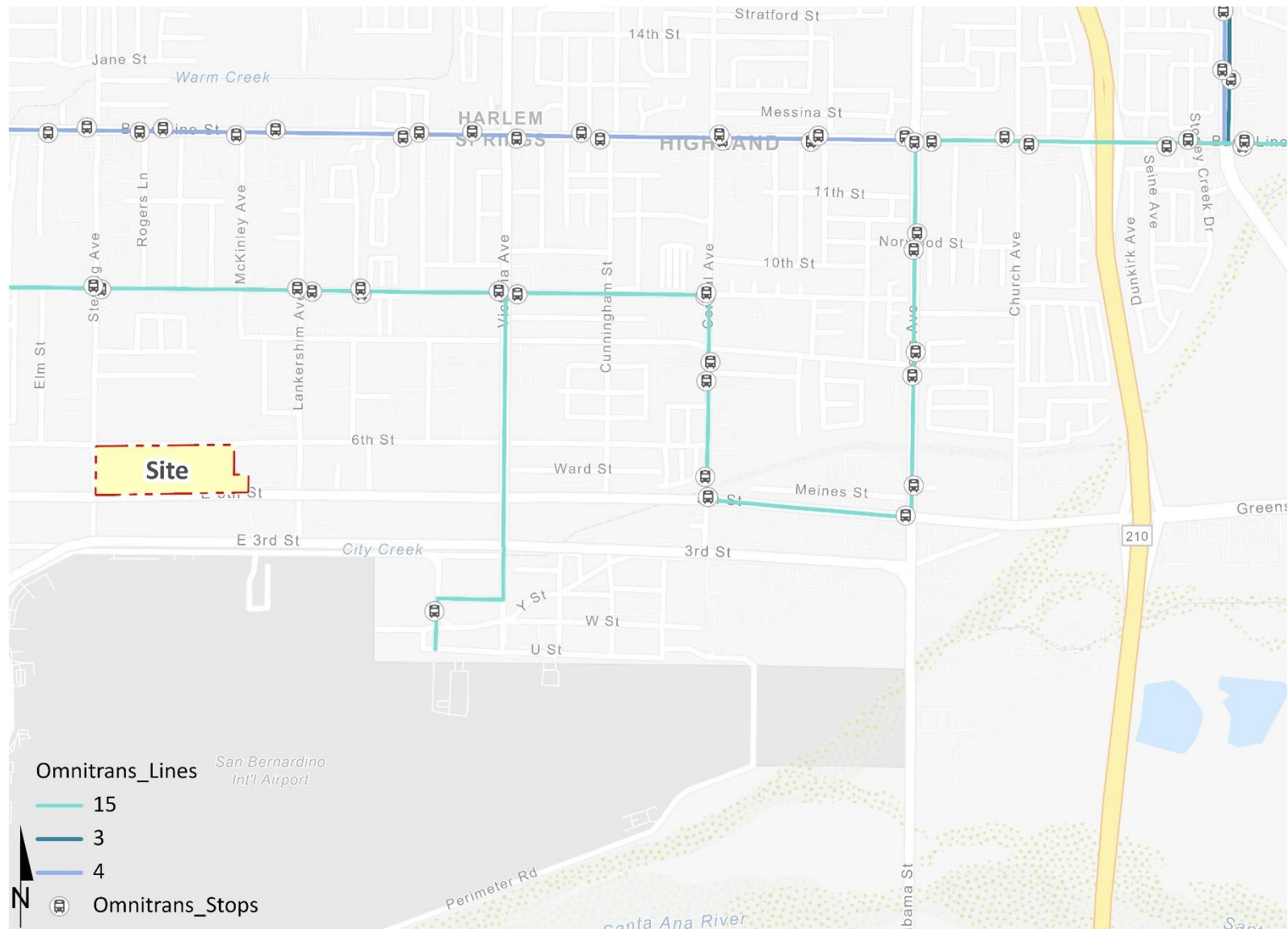


EXHIBIT 3-6: EXISTING TRANSIT ROUTES



Existing weekday ADT volumes are shown on Exhibit 3-7 for actual vehicles. The PCE traffic volumes utilized for the analysis are provided in Appendix 3.2. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

$$\text{Weekday PM Peak Hour (Approach Volume + Exit Volume)} \times 14.36 = \text{Leg Volume}$$

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 6.96 percent. As such, the above equation utilizing a factor of 14.36 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 14.36 percent (i.e., $1/0.0696 = 14.36$) and was assumed to sufficiently estimate ADT volumes for planning-level analyses. Existing weekday peak hour intersection volumes are also shown on Exhibit 3-7.

3.6 INTERSECTION OPERATIONS ANALYSIS

Existing peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2.2 *Intersection Capacity Analysis* of this report. The intersection operations analysis results are summarized in Table 3-1, which indicates that all existing study area intersections are currently operating at acceptable LOS during the peak hours. The intersection operations analysis worksheets are included in Appendix 3.2 of this TA.

TABLE 3-1: INTERSECTION ANALYSIS FOR EXISTING (2023) CONDITIONS

#	Intersection	Traffic Control ¹	Delay ² (secs.)		Level of Service	
			AM	PM	AM	PM
1	Sterling Av. & 6th St.	CSS	29.4	24.6	D	C
2	Sterling Av. & Driveway 1		Future Intersection			
3	Sterling Av. & Driveway 2		Future Intersection			
4	Sterling Av. & 5th St.	TS	8.2	8.2	A	A
5	Sterling Av. & 3rd St.	TS	13.3	11.7	B	B
6	Driveway 3 & 5th St.		Future Intersection			
7	Driveway 4 & 6th St.		Future Intersection			
8	Driveway 5 & 5th St.		Future Intersection			
9	Lankershim Av. & 6th St.	CSS	10.6	10.7	B	B
10	Lankershim Av. & 5th St.	CSS	13.2	14.1	B	B
11	Victoria Av. & 5th St.	TS	9.3	8.9	A	A
12	Central Av. & 5th St.	TS	15.0	14.0	B	B
13	Palm Av. & 5th St.	TS	21.5	29.0	C	C
14	Church Av. & 5th St.	TS	9.8	8.5	A	A
15	I-210 SB Ramps & 5th St.	TS	16.1	16.3	B	B
16	I-210 NB Ramps & 5th St.	TS	11.9	11.8	B	B

¹ TS = Traffic Signal; CSS = Cross-Street Stop

² Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

3.7 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. There are no unsignalized study area intersections that currently warrant a traffic signal for Existing traffic conditions. Existing conditions traffic signal warrant analysis worksheets are provided in Appendix 3.3.

3.8 OFF-RAMP QUEUING ANALYSIS

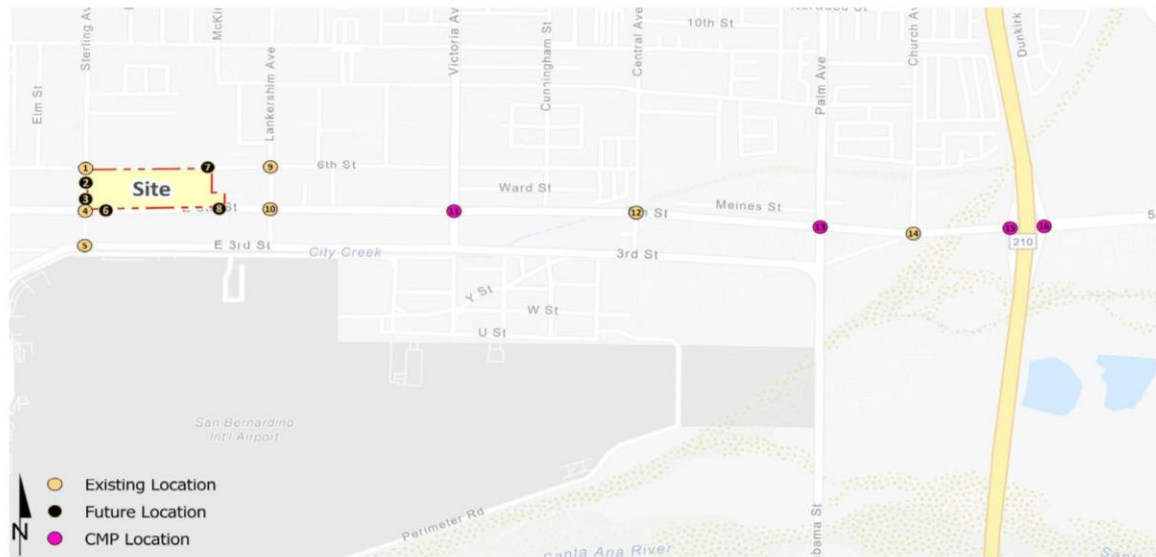
Queuing analysis findings are presented in Table 3-2. As shown in Table 3-2, there are currently no study area off-ramps experiencing queuing issues during the peak hours under Existing (2023) traffic conditions. Worksheets for Existing (2023) traffic conditions queuing analysis are provided in Appendix 3.4.

TABLE 3-2: PEAK HOUR QUEUING SUMMARY FOR EXISTING (2023) CONDITIONS

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak Hour	PM Peak Hour	AM	PM
I-210 SB Ramps & 5th St. (#15)	SBL/T	920	271	331	Yes	Yes
	SBR	350	96	51	Yes	Yes
I-210 NB Ramps & 5th St. (#16)	NBL	1,130	125	84	Yes	Yes
	NBL/T	700	126	81	Yes	Yes
	NBR	580	33	40	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 25 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

EXHIBIT 3-7: EXISTING (2023) TRAFFIC VOLUMES (ACTUAL VEHICLES)



1 Sterling Av. & 6th St.	2 Sterling Av. & Driveway 1	3 Sterling Av. & Driveway 2	4 Sterling Av. & 5th St.	5 Sterling Av. & 3rd St.
8,800 41(17) 431(259) 29(23) 45(29) 76(74) 18(17) 4,950 14(22) 84(60) 15(15) 10(15) 165(419) 11(22) 3,050 10,750	10,750 464(291) 186(456) 10,750	10,750 464(291) 186(456) 10,750	10,750 70(40) 374(234) 20(17) 20(86) 78(271) 12(60) 6,950 20(20) 238(135) 31(16) 2(5) 146(350) 5(24) 8,550 9,900	9,900 333(156) 84(154) 127(329) 247(904) 19,250 26(50) 590(231)
6 Driveway 3 & 5th St.	7 Driveway 4 & 6th St.	8 Driveway 5 & 5th St.	9 Lankershim Av. & 6th St.	10 Lankershim Av. & 5th St.
6,950 289(171) 103(312) 6,950	3,100 104(95) 99(122) 3,100	6,950 291(171) 101(312) 6,950	1,700 20(11) 31(25) 6(5) 16(33) 79(84) 4(5) 2,850 1(15) 79(81) 8(2) 5(3) 14(29) 2(11) 3,100 1,100	1,100 17(9) 17(17) 9(6) 5(9) 96(296) 0(7) 6,750 5(4) 274(156) 2(2) 0(6) 11(30) 2(6) 6,950 1,000
11 Victoria Av. & 5th St.	12 Central Av. & 5th St.	13 Palm Av. & 5th St.	14 Church Av. & 5th St.	15 I-210 SB Ramps & 5th St.
12,600 28(18) 273(205) 67(50) 15(65) 88(233) 4(10) 11,000 68(124) 252(138) 236(57) 1(6) 81(416) 26(164) 6,750 12,300	2,950 38(23) 0(1) 40(53) 8(46) 173(400) 6(0) 12,100 36(79) 523(308) 1(0) 2(1) 1(2) 0(4) 11,150 100	16,000 55(33) 384(302) 132(136) 12(44) 187(364) 63(73) 18,500 81(132) 460(263) 255(164) 49(91) 175(466) 123(228) 12,450 18,200	3,700 53(37) 112(73) 21(53) 415(701) 20,100 82(95) 765(530) 17,600	7,150 196(153) 41(4) 224(342) 246(576) 281(198) 22,750 651(472) 493(194) 20,100 5,700
16 I-210 NB Ramps & 5th St.				
6,500 241(306) 891(482) 57(143) 413(775) 27,300 2(3) 275(338) 22,750 7,550				

###(###) AM(PM) Peak Hour Intersection Volumes
Average Daily Trips

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4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. A preliminary site plan for the proposed Project is shown previously on Exhibit 1-2. The Project consists of the development of a 557,000 square foot warehouse building. The Traffic Study will evaluate 557,000 square feet of high-cube transload and short-term storage warehouse use. A preliminary site plan for the proposed Project is shown on Exhibit 1. The Project will provide access to the following roadways:

- Sterling Avenue via Driveway 1 and Driveway 2 which will both serve passenger cars only
- Fifth Street via Driveway 3 which will serve trucks only and Driveway 5 which will serve both passenger cars and trucks
- Sixth Street via Driveway 4 which will serve primarily passenger cars but will also serve as a secondary access for trucks

All driveways are proposed to allow for full access (no turn restrictions), with the exception of Driveway 3 on 5th Street. Due to its proximity to the intersection at Sterling Avenue, Driveway 3 is proposed to be restricted to right-in/right-out access only. The Project is anticipated to have an opening year of 2026.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic which is both attracted to and produced by a development. Determining traffic generation for a specific project is therefore based upon forecasting the amount of traffic that is expected to be both attracted to and produced by the specific land uses being proposed for a given development. In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the ITE Trip Generation Manual (11th Edition, 2021) for the following land use code and vehicles mixes (see also Table 4-1): (3)

- ITE land use code 154 (High-Cube Transload and Short-Term Storage Warehouse) has been used to derive site specific trip generation estimates. High-cube transload/short-term storage warehouse data regarding the truck percentage and vehicle mix has been obtained from the ITE's Trip Generation Manual. The truck percentages were further broken down by axle type per the following South Coast Air Quality Management District (SCAQMD) recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

Trip generation for the proposed Project are summarized in Table 4-2 for actual vehicles and PCE. As shown in Table 4-2, the proposed Project is anticipated to generate a total of 782 actual vehicle trip-ends per day with 45 AM peak hour trips and 57 PM peak hour trips. For the purposes of this traffic study, the PCE trip generation shown in Table 4-2 has been utilized for the analysis.

TABLE 4-1: TRIP GENERATION RATES

Land Use ¹	Units ²	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
High-Cube Transload and Short-Term Storage Warehouse ³	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (AM=75.0%, PM=90.0%, Daily=84.3%)			0.052	0.008	0.060	0.023	0.067	0.090	1.180
2-Axle Trucks (AM=4.2%, PM=1.7%, Daily=2.6%)			0.002	0.001	0.003	0.001	0.001	0.002	0.037
3-Axle Trucks (AM=5.2%, PM=2.1%, Daily=3.3%)			0.002	0.002	0.004	0.001	0.001	0.002	0.046
4+-Axle Trucks (AM=15.7%, PM=6.3%, Daily=9.8%)			0.006	0.007	0.013	0.003	0.003	0.006	0.138
Passenger Car Equivalent (PCE) Trip Generation Rates ⁶									
High-Cube Transload and Short-Term Storage Warehouse ³	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars			0.052	0.008	0.060	0.023	0.067	0.090	1.180
2-Axle Trucks (PCE = 2.0)			0.004	0.003	0.007	0.002	0.001	0.003	0.073
3-Axle Trucks (PCE = 2.5)			0.005	0.005	0.010	0.003	0.003	0.005	0.114
4+-Axle Trucks (PCE = 3.0)			0.018	0.020	0.038	0.009	0.010	0.019	0.413

¹ Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

² TSF = thousand square feet

³ Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.

Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

TABLE 4-2: TRIP GENERATION SUMMARY

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
High-Cube Transload Warehouse	557.000 TSF							
Passenger Cars:		29	5	34	13	37	50	658
2-axle Trucks:		1	1	2	1	0	1	20
3-axle Trucks:		1	1	2	1	1	2	26
4+-axle Trucks:		3	4	7	2	2	4	78
Total Truck Trips (Actual Vehicles):		5	6	11	4	3	7	124
Total Trips (Actual Vehicles)²		34	11	45	17	40	57	782
Passenger Car Equivalent (PCE):								
High-Cube Transload Warehouse	557.000 TSF							
Passenger Cars:		29	5	34	13	37	50	658
2-axle Trucks:		2	1	3	1	1	2	42
3-axle Trucks:		3	3	6	1	1	2	64
4+-axle Trucks:		10	11	21	5	5	10	230
Total Truck Trips (PCE):		15	15	30	7	7	14	336
Total Trips (PCE)²		44	20	64	20	44	64	994

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the regional freeway system. In addition, truck routes for neighboring agencies have been taken into consideration in the development of the trip distribution patterns for heavy trucks. The Project passenger car and truck trip distribution patterns are shown on Exhibits 4-1 and 4-2, respectively.

4.3 MODAL SPLIT

The potential for Project trips (non-truck) to be reduced by the use of public transit, walking or bicycling have not been included as part of the Project's estimated trip generation. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes would reduce the forecasted traffic volumes.

4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation, trip distribution, and the arterial highway and local street system improvements that would be in place by the time of initial occupancy of the Project. Based on the identified Project traffic generation and trip distribution patterns, Project weekday ADT and weekday peak hour intersection turning movement volumes are shown on Exhibit 4-3 for actual vehicles.

EXHIBIT 4-1: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION

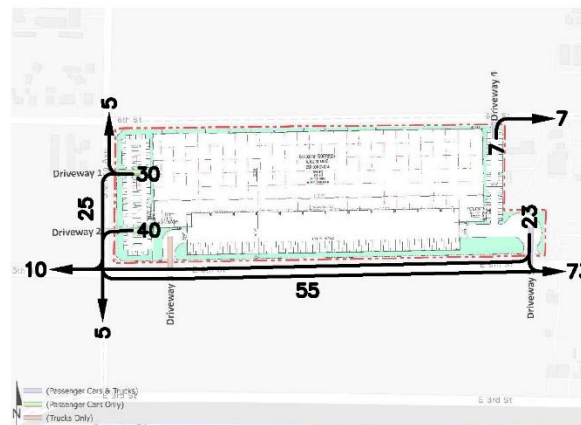
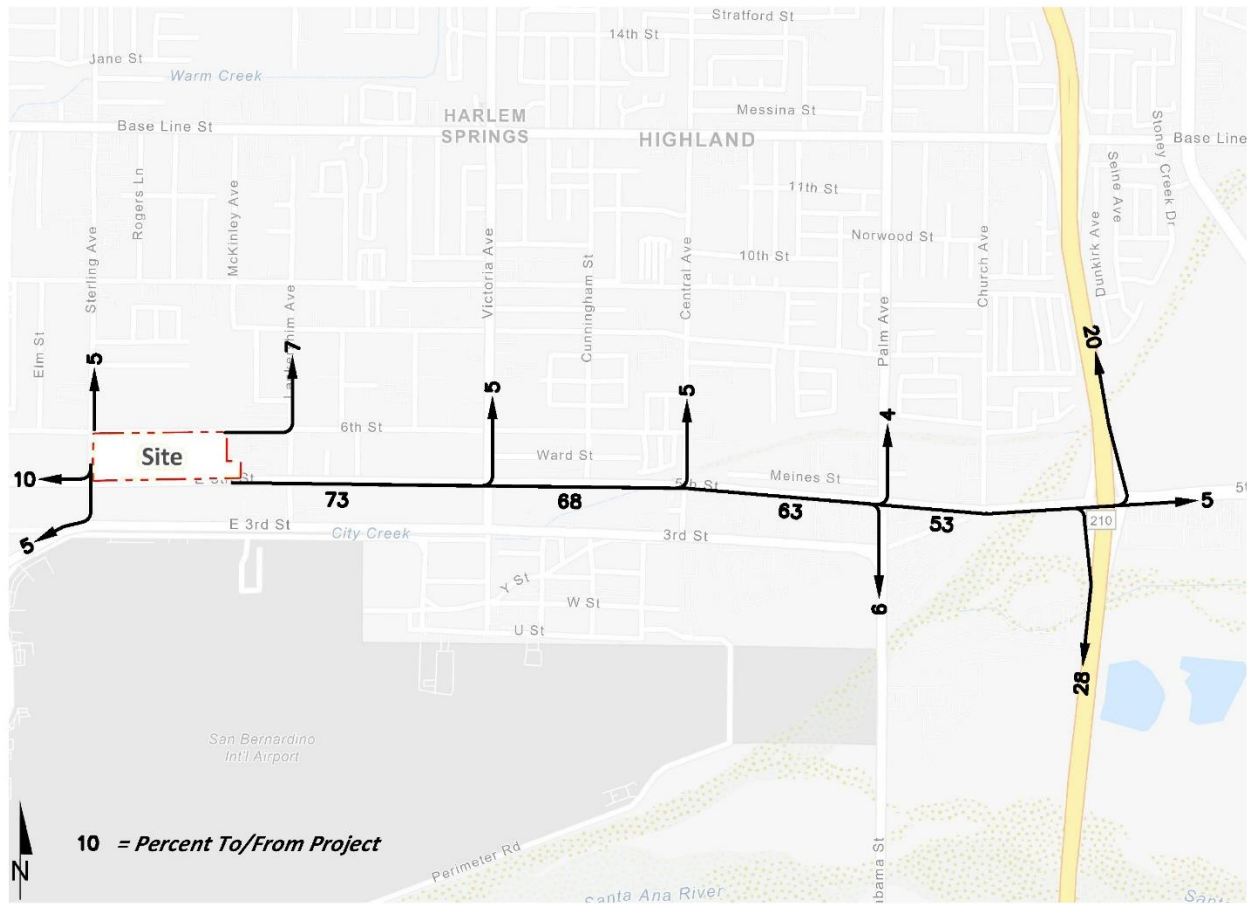


EXHIBIT 4-2: PROJECT (TRUCK) TRIP DISTRIBUTION

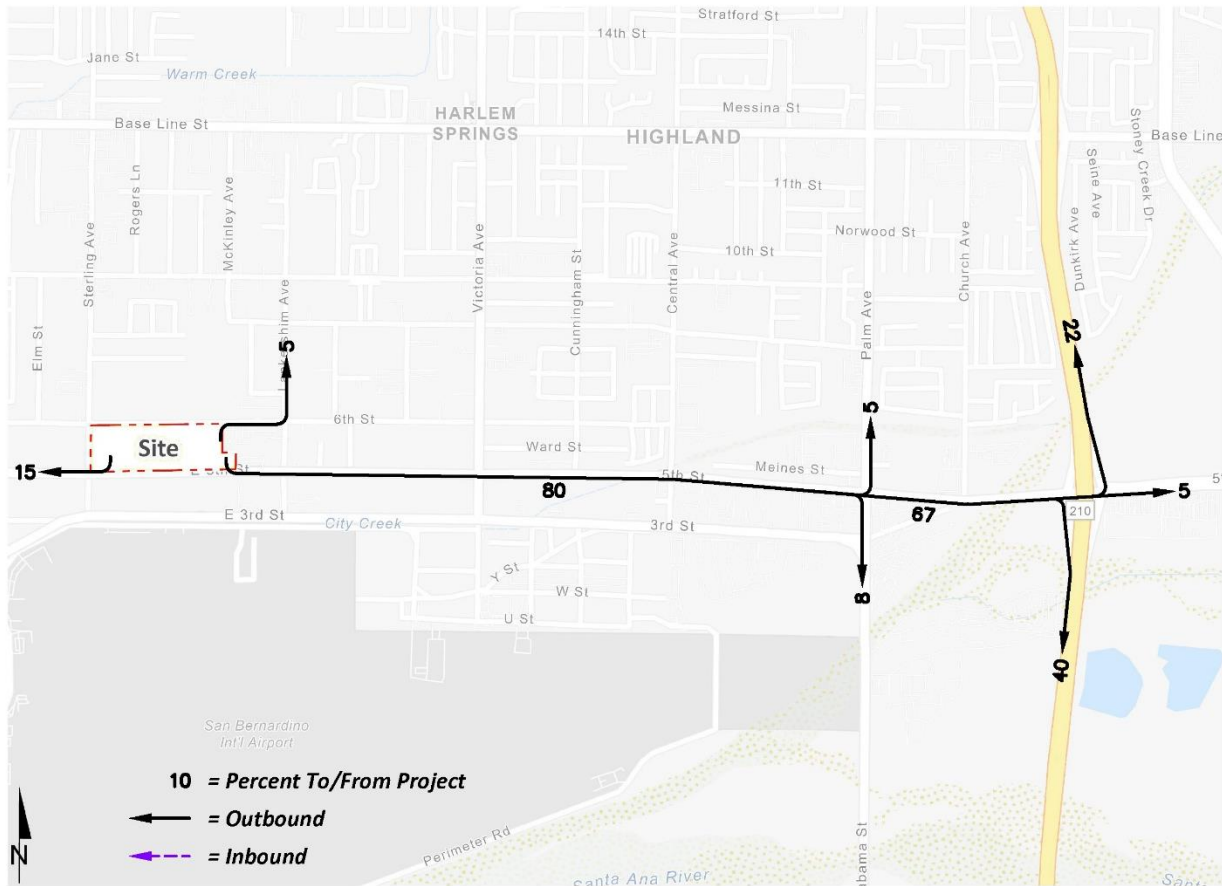
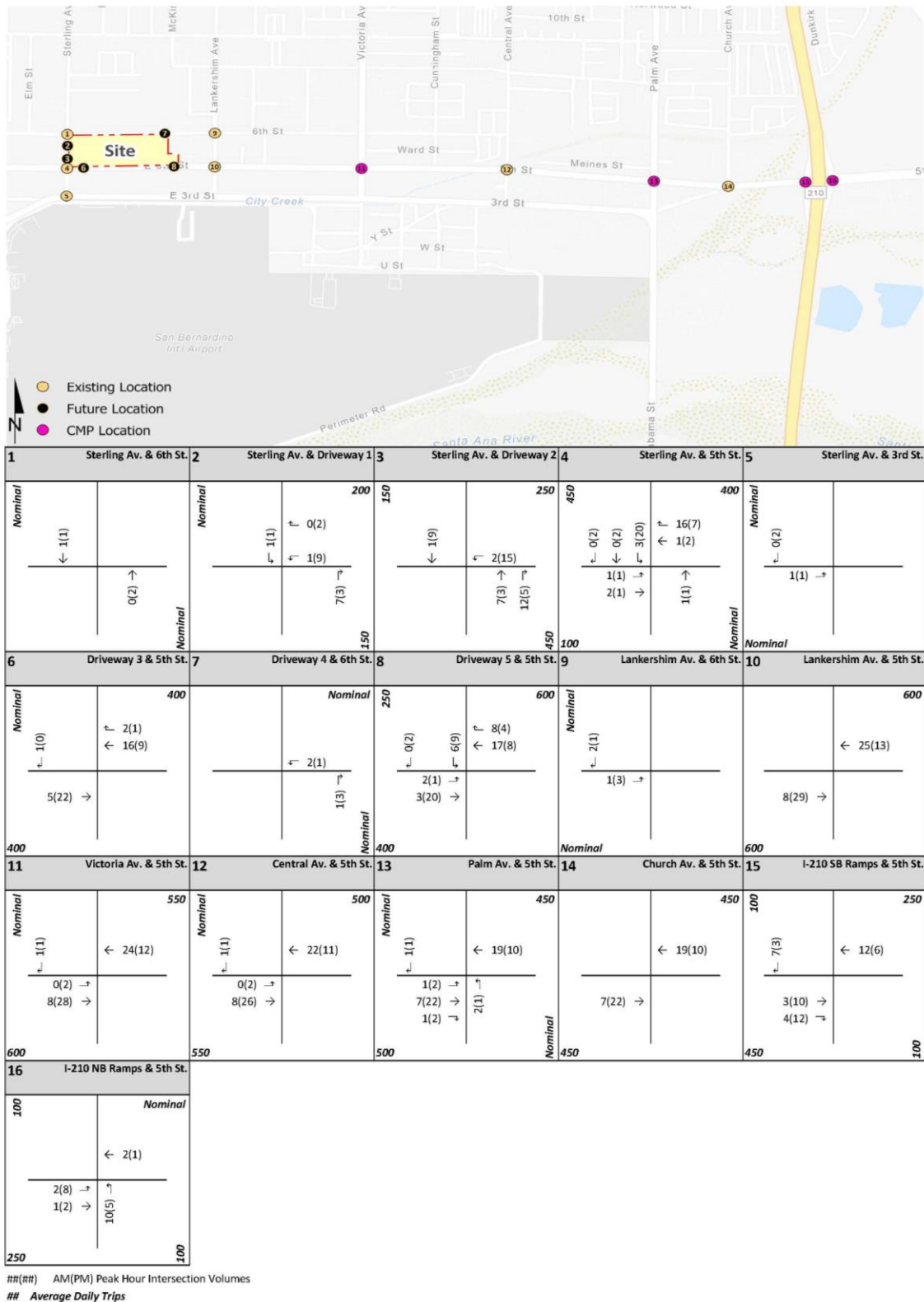


EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES (ACTUAL VEHICLES)



4.5 BACKGROUND TRAFFIC

Future year traffic forecasts have been based upon background (ambient) growth at 3% per year for 2026 traffic conditions. The total ambient growth is 9.27% for 2023 traffic conditions. The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in conjunction with traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies. EA and EAC (2026) traffic volumes are provided in Section 5 and Section 6 of this report. The traffic generated by the proposed Project was then manually added to the base volume to determine EAP and EAPC forecasts.

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

A cumulative project list was developed for the purposes of this analysis through consultation with planning and engineering staff from the City of San Bernardino. The cumulative projects listed are those that would generate traffic and would contribute traffic to study area intersections. Exhibit 4-4 illustrates the cumulative development location map. A summary of cumulative development projects and their proposed land uses are shown in Table 4-3. If applicable, the traffic generated by individual cumulative projects was manually added to the EA and EAP forecasts to ensure that traffic generated by the listed cumulative development projects in Table 4-3 are reflected as part of the background traffic. In an effort to conduct a conservative analysis, the cumulative projects are added in conjunction with the ambient growth identified in Section 4.5.1 *Background Traffic: Opening Year Cumulative Conditions*. Cumulative ADT and peak hour intersection turning movement volumes, in actual vehicles, are shown on Exhibit 4-5.

EXHIBIT 4-4: CUMULATIVE DEVELOPMENT LOCATION MAP

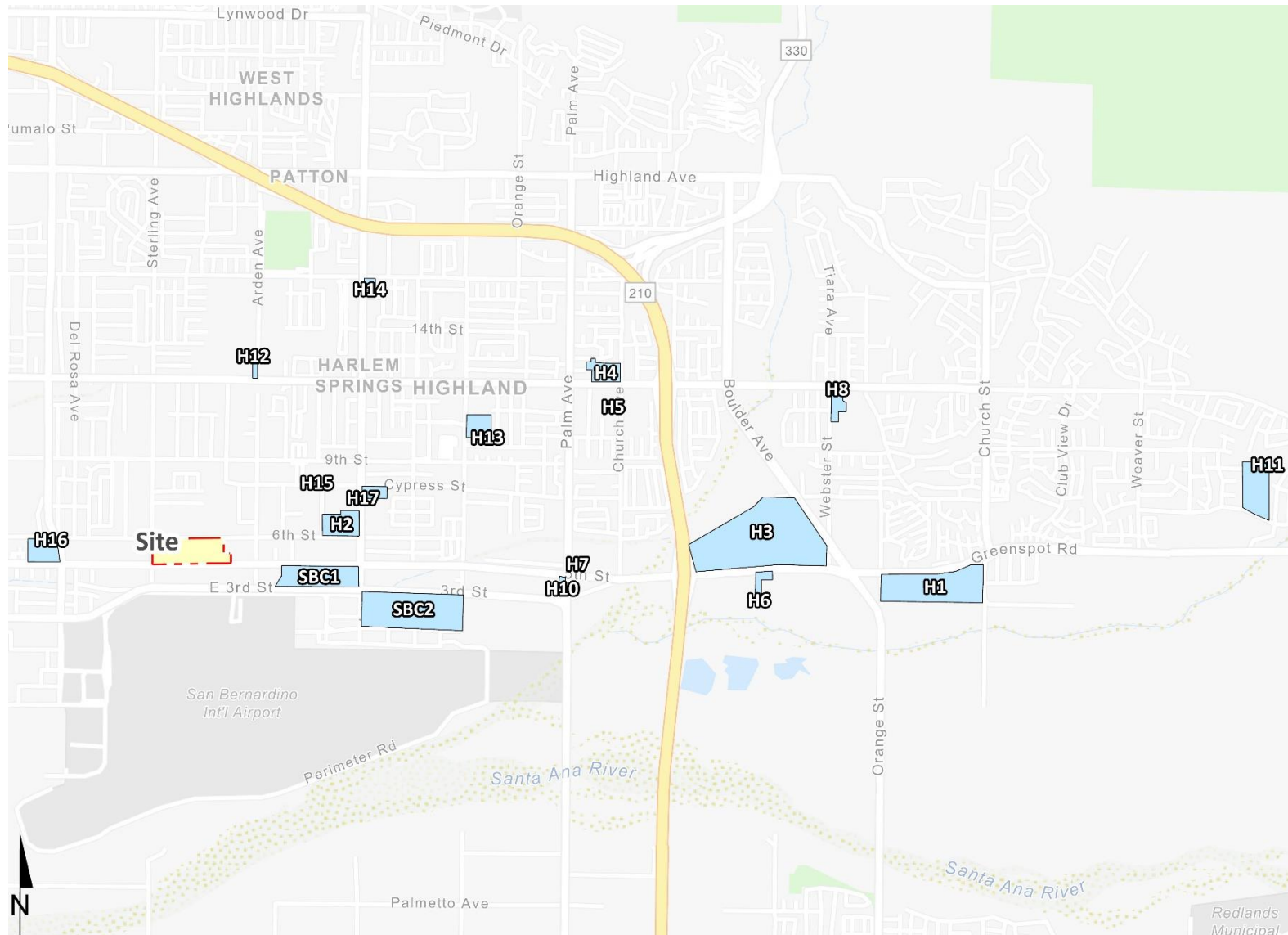


EXHIBIT 4-5: CUMULATIVE ONLY TRAFFIC VOLUMES (ACTUAL VEHICLES)

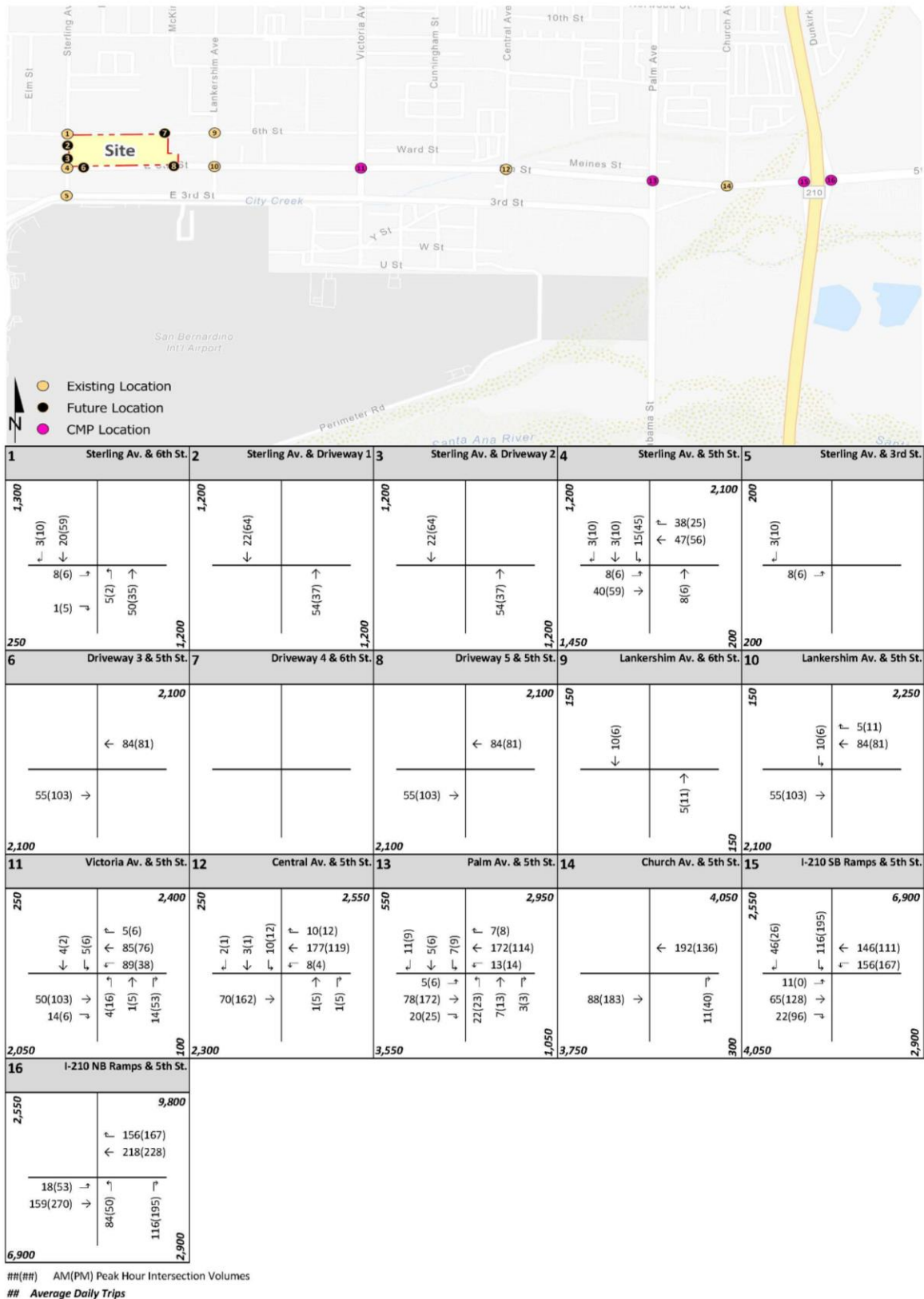


TABLE 4-3: CUMULATIVE DEVELOPMENT LAND USE SUMMARY

No.	Project Name	Land Use	Quantity ¹
City of San Bernardino			
SBC1	Patriot Partners Warehouse (3rd Street & Central Avenue)	High-Cube Warehouse	188.000 TSF
SBC2	The Landing at San Manuel	High-Cube Warehouse	1153.644 TSF
City of Highland			
H1	Blossom Trails/East Highlands Ranch	Multifamily Housing	137 DU
H2	Patriot Partners (6th & Victoria)	High-Cube Warehouse	306.000 TSF
H3	Greenspot Village & Marketplace Specific Plan	Multifamily Housing	546 DU
		Commercial Retail	85.000 TSF
H4	Woodcrest Real Estate Development (Tractor Supply Co.)	General Light Industrial	22.000 TSF
		Multifamily Housing	21 DU
H5	St. Adelaide Expansion - New Ministry Offices	General Office	9.000 TSF
H6	Greenspot Connection	Self-Storage	30.000 TSF
H7	8020 Palm Av.	Gas Station with Convenience Market	16 VFP
H8	Immanuel Baptist Church	Church Expansion	90.000 TSF
H9	Mediterra Specific Plan	Single Family Detached Residential	306 DU
H10	Express Car Wash	Automated Car Wash	1.800 TSF
H11	Kiel 54 - Beazer Homes	Single Family Detached Residential	54 DU
H12	26038 Base Line	Assisted Living	60 DU
H13	Highland Housing Authority/Wakeland	Multifamily Housing	90 DU
H14	Highland Heights	Commercial Retail	22.000 TSF
H15	Patriot Partners Warehouse (Cypress & Grape)	Warehousing	90.000 TSF
H16	Patriot Partners Warehouse (6th & Del Rosa)	Warehousing	47.000 TSF
H17	Patriot Partners Warehouse (Victoria & Cypress)	Warehousing	187.000 TSF

¹ TSF = Thousand Square Feet; DU = Dwelling Unit; VFP = Vehicle Fueling Positions

5 E+P TRAFFIC CONDITIONS

This section discusses the methods used to develop E+P traffic forecasts, and the resulting intersection operations, traffic signal warrant, and freeway off-ramp queuing analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).

5.2 E+P TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus the addition of Project traffic. The weekday ADT and weekday AM and PM peak hour volumes, in actual vehicles, which can be expected for E+P traffic conditions are shown on Exhibit 5-1.

5.3 INTERSECTION OPERATIONS ANALYSIS

LOS calculations were conducted for the study intersections to evaluate their operations under E+P traffic conditions with roadway and intersection geometrics consistent with Section 5.1 *Roadway Improvements*. As shown in Table 5-1, the study area intersections are anticipated to continue to operate at an acceptable LOS under E+P traffic conditions, consistent with Existing (2023) traffic conditions. The intersection operations analysis worksheets for E+P traffic conditions are included in Appendix 5.1 of this TA.

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

Traffic signal warrants have been performed for E+P traffic conditions based on peak hour intersection turning movements volumes or planning level (ADT) volumes. There are unsignalized study area intersections anticipated to meet a traffic signal warrant under E+P traffic conditions. The E+P traffic conditions traffic signal warrant analysis worksheets are provided in Appendix 5.2.

EXHIBIT 5-1: E+P TRAFFIC VOLUMES (ACTUAL VEHICLES)

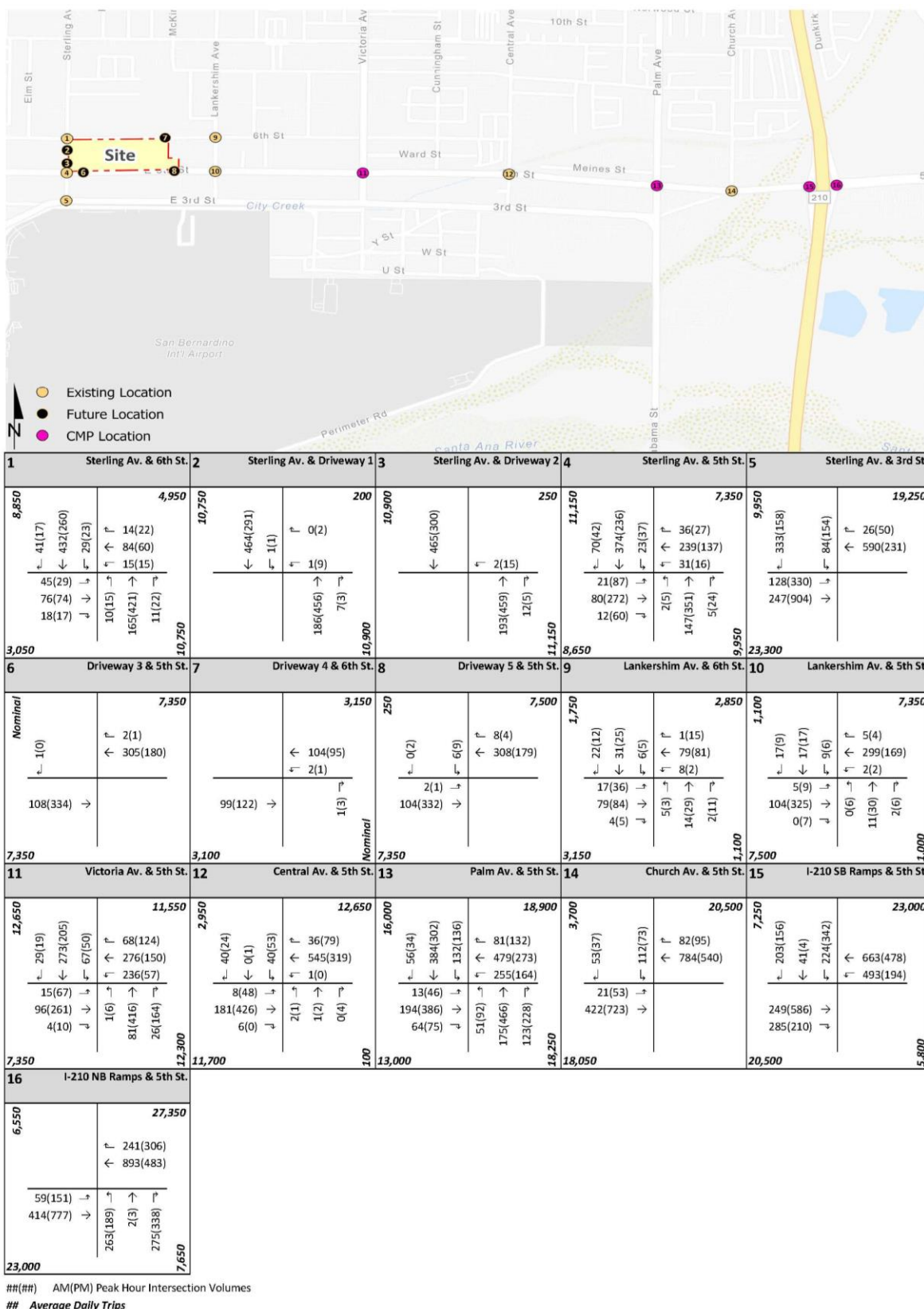


TABLE 5-1: INTERSECTION ANALYSIS FOR E+P CONDITIONS

# Intersection	Traffic Control ²	Existing (2023)				E+P			
		Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM
1 Sterling Av. & 6th St.	CSS	29.4	24.6	D	C	29.4	24.7	D	C
2 Sterling Av. & Driveway 1	CSS	Future Intersection				10.5	11.7	B	B
3 Sterling Av. & Driveway 2	CSS	Future Intersection				10.6	12.2	B	B
4 Sterling Av. & 5th St.	TS	8.2	8.2	A	A	8.3	8.2	A	A
5 Sterling Av. & 3rd St.	TS	13.3	11.7	B	B	13.3	11.7	B	B
6 Driveway 3 & 5th St.	CSS	Future Intersection				9.3	8.9	A	A
7 Driveway 4 & 6th St.	CSS	Future Intersection				8.6	8.7	A	A
8 Driveway 5 & 5th St.	CSS	Future Intersection				11.5	11.4	B	B
9 Lankershim Av. & 6th St.	CSS	10.6	10.7	B	B	10.6	10.8	B	B
10 Lankershim Av. & 5th St.	CSS	13.2	14.1	B	B	13.9	14.9	B	B
11 Victoria Av. & 5th St.	TS	9.3	8.9	A	A	9.4	9.0	A	A
12 Central Av. & 5th St.	TS	15.0	14.0	B	B	15.0	14.0	B	B
13 Palm Av. & 5th St.	TS	21.5	29.0	C	C	21.5	29.7	C	C
14 Church Av. & 5th St.	TS	9.8	8.5	A	A	9.8	8.5	A	A
15 I-210 SB Ramps & 5th St.	TS	16.1	16.3	B	B	16.2	16.4	B	B
16 I-210 NB Ramps & 5th St.	TS	11.9	11.8	B	B	12.1	11.9	B	B

¹ Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a

² TS = Traffic Signal; CSS = Cross-street Stop; **CSS** = Improvement

5.5 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for E+P traffic conditions are presented in Table 5-2. As shown in Table 5-2, the study area off-ramps are not anticipated to experience queuing issues during the peak hours under E+P traffic conditions, consistent with Existing (2023) traffic conditions. Worksheets for E+P traffic conditions queuing analysis are provided in Appendix 5.3.

TABLE 5-2: PEAK HOUR QUEUING SUMMARY FOR E+P CONDITIONS

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2023)				E+P			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak	PM Peak	AM	PM	AM Peak	PM Peak	AM	PM
I-210 SB Ramps & 5th St. (#15)	SBL/T	920	271	331	Yes	Yes	272	335	Yes	Yes
	SBR	350	96	51	Yes	Yes	110	53	Yes	Yes
I-210 NB Ramps & 5th St. (#16)	NBL	1,130	125	84	Yes	Yes	132	86	Yes	Yes
	NBL/T	700	126	81	Yes	Yes	133	84	Yes	Yes
	NBR	580	33	40	Yes	Yes	33	42	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 25 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

5.6 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

5.6.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

As shown previously in Table 5-1, there are no study area intersections anticipated to experience queuing issues under E+P traffic conditions. As such, no improvements have been identified.

5.6.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES FOR OFF-RAMP QUEUES

As shown previously in Table 5-2, there are no study area off-ramps anticipated to experience queuing issues under E+P traffic conditions. As such, no improvements have been identified.

6 EA AND EAP (2026) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for EA and EAP (2026) conditions and the resulting intersection operations and traffic signal warrant analyses.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EA and EAP conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAP conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

6.2 EA GROWTH TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 9.27%. The weekday ADT and weekday peak hour intersection turning movement volumes, in actual vehicles, which can be expected for EA (2026) traffic conditions are shown on Exhibit 6-1.

6.3 EAP TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 9.27% and the addition of Project traffic. The weekday ADT and weekday peak hour intersection turning movement volumes, in actual vehicles, which can be expected for EAP (2026) traffic conditions are shown on Exhibit 6-2.

6.4 INTERSECTION OPERATIONS ANALYSIS

EA and EAP (2026) peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 6-1 for EA and EAP (2026) traffic conditions, which indicates that the following study area intersection is anticipated to operate at an unacceptable LOS under EA (2026) traffic conditions:

- Sterling Avenue & 6th Street (#1) – LOS E AM peak hour only

With the addition of Project traffic, there are no additional study area intersections anticipated to operate at an unacceptable LOS during the peak hours under EAP (2026) traffic conditions. The intersection operations analysis worksheets for EA and EAP (2026) traffic conditions are included in Appendices 6.1 and 6.2 of this TA, respectively.

EXHIBIT 6-1: EA (2026) TRAFFIC VOLUMES (ACTUAL VEHICLES)

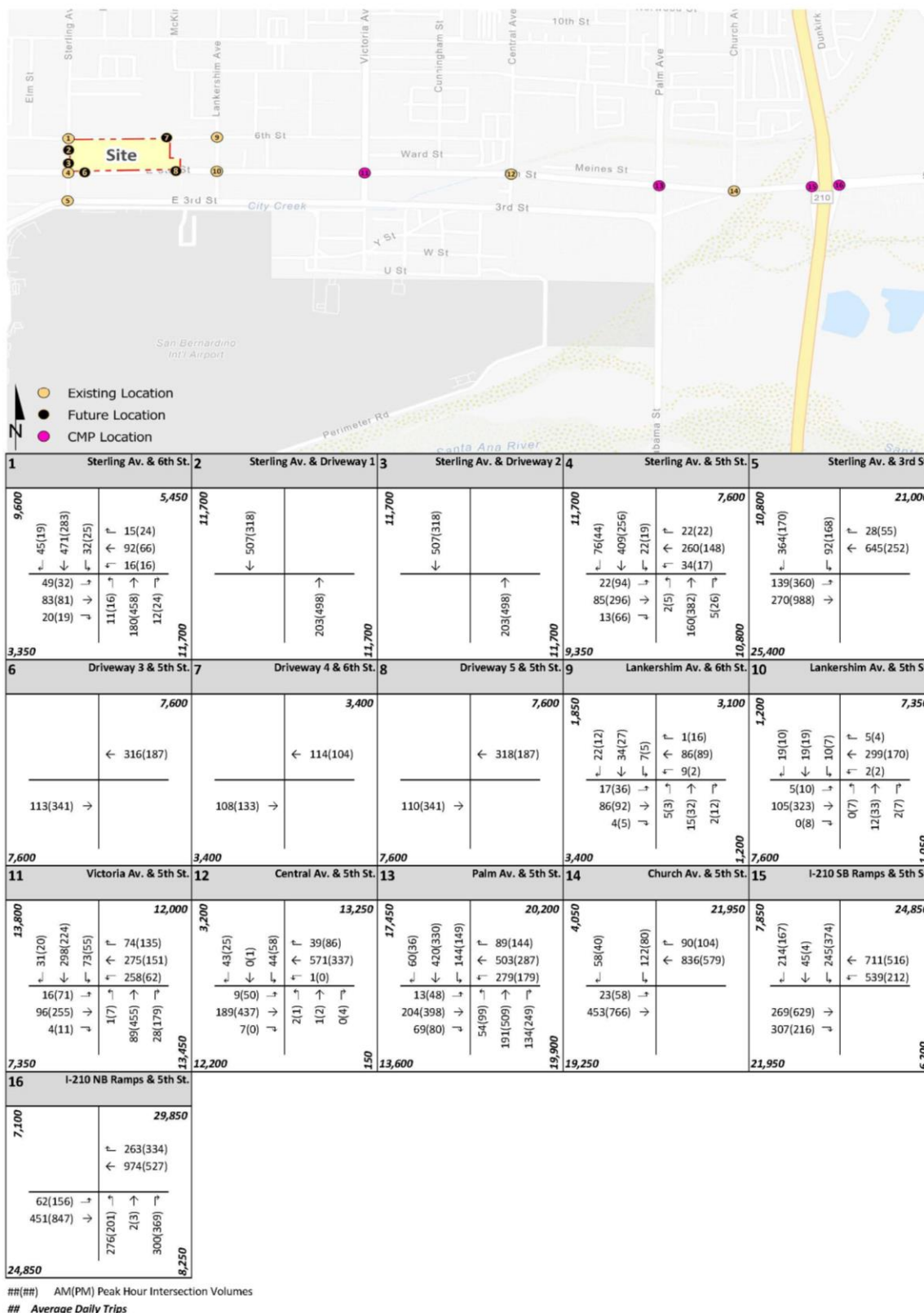
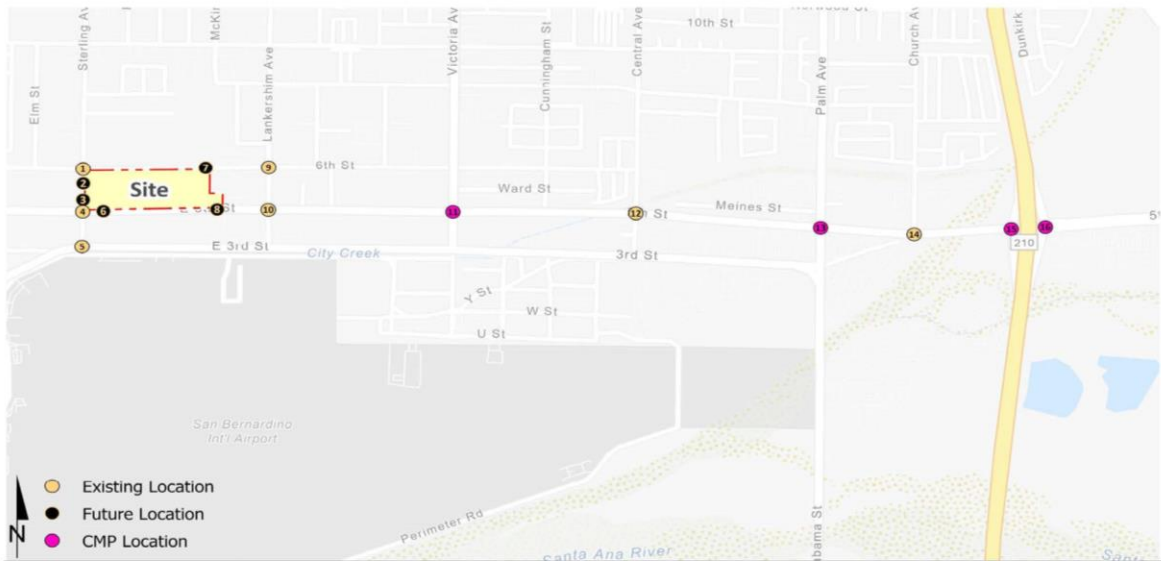


EXHIBIT 6-2: EAP (2026) TRAFFIC VOLUMES (ACTUAL VEHICLES)



1 Sterling Av. & 6th St.	2 Sterling Av. & Driveway 1	3 Sterling Av. & Driveway 2	4 Sterling Av. & 5th St.	5 Sterling Av. & 3rd St.
9,650 45(19) ↓ 472(284) ↓ 33(25) ↓ 15(24) ↑ 92(66) ↑ 16(16) ↑ 49(32) → 83(81) → 20(19) → 11(16) → 180(460) → 12(24) → 3,350	11,750 507(318) ↓ 1(1) ↓ 0(2) ↑ 1(9) ↑ 203(498) → 7(3) → 11,900	11,900 508(327) ↓ 2(15) ↓ 210(501) ↑ 12(5) ↑ 12,150	12,150 76(46) ↓ 409(258) ↓ 25(39) ↓ 38(29) ↑ 261(150) ↑ 34(17) ↑ 23(95) → 87(297) → 13(66) → 2(5) → 16(383) → 5(26) → 8,000	10,850 364(172) ↓ 92(168) ↓ 28(55) ↑ 645(252) ↑ 140(361) → 270(988) → 21,000
6 Driveway 3 & 5th St.	7 Driveway 4 & 6th St.	8 Driveway 5 & 5th St.	9 Lankershim Av. & 6th St.	10 Lankershim Av. & 5th St.
Nominal 1(0) ↓ 2(1) ↑ 332(196) ↑ 118(363) → 8,000	3,450 114(104) ↓ 2(1) ↓ 108(133) → 1(3) → Nominal	250 0(2) ↓ 6(9) ↓ 8(4) ↑ 335(195) ↑ 2(1) → 113(361) → 8,150	1,900 24(13) ↓ 34(27) ↓ 7(5) ↓ 1(16) ↑ 86(89) ↑ 9(2) ↑ 18(39) → 86(92) → 4(5) → 5(3) → 15(32) → 2(12) → 3,100	1,200 19(10) ↓ 19(19) ↓ 10(7) ↓ 5(4) ↑ 324(183) ↑ 2(2) ↑ 5(10) → 113(352) → 0(8) ↓ 0(7) → 12(33) → 2(7) → 7,950
11 Victoria Av. & 5th St.	12 Central Av. & 5th St.	13 Palm Av. & 5th St.	14 Church Av. & 5th St.	15 I-210 SB Ramps & 5th St.
13,800 32(21) ↓ 298(224) ↓ 73(55) ↓ 74(135) ↑ 299(163) ↑ 258(62) ↑ 16(73) → 104(283) → 4(11) → 1(7) → 89(455) → 28(179) → 7,950	3,250 44(26) ↓ 0(1) ↓ 44(58) ↓ 39(86) ↑ 593(348) ↑ 1(0) ↑ 9(52) → 197(463) → 7(0) ↓ 2(1) → 1(2) → 0(4) → 12,750	17,500 61(37) ↓ 420(330) ↓ 144(149) ↓ 89(144) ↑ 522(297) ↑ 279(179) ↑ 14(50) → 211(420) → 70(82) → 56(100) → 191(509) → 134(249) → 20,650	4,050 58(40) ↓ 122(80) ↓ 90(104) ↑ 855(589) ↑ 23(58) → 460(788) → 22,400	7,900 221(170) ↓ 45(4) ↓ 245(374) ↓ 723(522) ↑ 539(212) ↑ 272(639) → 311(228) → 25,100
16 I-210 NB Ramps & 5th St.				
7,150 263(334) ↑ 976(528) ↑ 64(164) → 452(849) → 286(206) → 2(3) → 300(369) → 25,100				

###(###) AM(PM) Peak Hour Intersection Volumes

Average Daily Trips

TABLE 6-1: INTERSECTION ANALYSIS FOR EA AND EAP (2026) CONDITIONS

# Intersection	Traffic Control ²	EA (2026)				EAP (2026)			
		Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM
1 Sterling Av. & 6th St.	CSS	41.3	30.9	E	D	41.3	30.9	E	D
2 Sterling Av. & Driveway 1	<u>CSS</u>	Future Intersection				10.7	12.1	B	B
3 Sterling Av. & Driveway 2	<u>CSS</u>	Future Intersection				10.8	12.7	B	B
4 Sterling Av. & 5th St.	TS	8.4	8.3	A	A	8.4	8.4	A	A
5 Sterling Av. & 3rd St.	TS	13.7	12.1	B	B	13.7	12.1	B	B
6 Driveway 3 & 5th St.	<u>CSS</u>	Future Intersection				9.4	8.9	A	A
7 Driveway 4 & 6th St.	<u>CSS</u>	Future Intersection				8.6	8.7	A	A
8 Driveway 5 & 5th St.	<u>CSS</u>	Future Intersection				11.8	11.7	B	B
9 Lankershim Av. & 6th St.	CSS	10.8	11.0	B	B	10.8	11.0	B	B
10 Lankershim Av. & 5th St.	CSS	13.7	14.9	B	B	14.5	15.8	B	B
11 Victoria Av. & 5th St.	TS	9.6	9.2	A	A	9.8	9.2	A	A
12 Central Av. & 5th St.	TS	15.0	14.3	B	B	15.0	14.3	B	B
13 Palm Av. & 5th St.	TS	22.5	34.6	C	C	22.6	35.7	C	D
14 Church Av. & 5th St.	TS	10.1	8.9	B	A	10.1	8.9	B	A
15 I-210 SB Ramps & 5th St.	TS	18.1	18.0	B	B	18.3	18.1	B	B
16 I-210 NB Ramps & 5th St.	TS	12.3	12.2	B	B	12.4	12.3	B	B

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

¹ Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

² TS = Traffic Signal; CSS = Cross-street Stop; CSS = Improvement

6.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

The traffic signal warrant analysis for EA and EAP (2026) traffic conditions are based on the peak hour volumes or planning level ADT volume-based traffic signal warrants. No study area intersections are anticipated to meet either peak hour volume or ADT volume-based warrants with the addition of Project traffic (see Appendices 6.3 and 6.4, respectively).

6.6 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for EA and EAP (2026) traffic conditions are presented in Table 6-2. As shown in Table 6-2, the study area off-ramps are not anticipated to experience queuing issues during the peak hours under both EA and EAP (2026) traffic conditions, consistent with Existing (2023) traffic conditions. Worksheets for EA and EAP (2026) traffic conditions queuing analysis are provided in Appendices 6.5 and 6.6, respectively.

TABLE 6-2: PEAK HOUR QUEUING SUMMARY FOR EA AND EAP (2026) CONDITIONS

Intersection	Movement	Available Stacking Distance (Feet)	EA (2026)				EAP (2026)			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak	PM Peak	AM	PM	AM Peak	PM Peak	AM	PM
I-210 SB Ramps & 5th St. (#15)	SBL/T	920	322	383	Yes	Yes	326	383	Yes	Yes
	SBR	350	142	63	Yes	Yes	158	64	Yes	Yes
I-210 NB Ramps & 5th St. (#16)	NBL	1,130	148	96	Yes	Yes	155	100	Yes	Yes
	NBL/T	700	148	93	Yes	Yes	155	97	Yes	Yes
	NBR	580	36	65	Yes	Yes	36	67	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 25 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

6.7 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

6.7.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the identified improvement strategies to address EA and EAP (2026) traffic deficiencies are presented in Table 6-3. Worksheets for EA and EAP (2026) conditions, with improvements, HCM calculation worksheets are provided in Appendices 6.7 and 6.8, respectively.

TABLE 6-3: INTERSECTION ANALYSIS FOR EA AND EAP (2026) CONDITIONS WITH IMPROVEMENTS

# Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
		Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
		L	T	R	L	T	R	L	T	R	L	T	R				
1 Sterling Av. & 6th St.																	
- Without Project	CSS	1	2	0	1	2	0	1	1	0	1	1	0	18.5	17.4	C	C
- With Project	CSS	1	2	0	1	2	0	1	1	0	1	1	0	18.5	17.4	C	C

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; **1** = Improvement

² Per the Highway Capacity Manual 6th Edition, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

³ CSS = Cross-street Stop

6.7.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES FOR OFF-RAMP QUEUES

As shown previously in Table 6-2, there are no study area off-ramps anticipated to experience queuing issues under EA and EAP (2026) traffic conditions. As such, no improvements have been identified.

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7 EAC AND EAPC (2026) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for EAC and EAPC (2026) conditions and the resulting intersection operations, traffic signal warrant, and freeway off-ramp queuing analyses.

7.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for EAC and EAPC conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for EAPC conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for EAC and EAPC (2026) conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).

7.2 EAC TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 9.27% and the addition of traffic generated by cumulative development projects. The weekday ADT and weekday peak hour intersection turning movement volumes, in actual vehicles, which can be expected for EAC (2026) traffic conditions are shown on Exhibit 7-1.

7.3 EAPC TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 9.27%, the addition of traffic generated by cumulative development projects, and the addition of Project traffic. The weekday ADT and weekday peak hour intersection turning movement volumes, in actual vehicles, which can be expected for EAPC (2026) traffic conditions are shown on Exhibit 7-2.

7.4 INTERSECTION OPERATIONS ANALYSIS

EAC and EAPC (2026) peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TA. The intersection analysis results are summarized in Table 7-1 for EAC and EAPC (2026) traffic conditions, which indicates that the following study area intersection is anticipated to operate at an unacceptable LOS under EAC (2026) traffic conditions:

- Sterling Avenue & 6th Street (#1) – LOS F AM peak hour; LOS E PM peak hour

With the addition of Project traffic, there are no additional study area intersections anticipated to operate at an unacceptable LOS during the peak hours under EAPC (2026) traffic conditions. The intersection operations analysis worksheets for EAC and EAPC (2026) traffic conditions are included in Appendices 7.1 and 7.2 of this TA, respectively.

EXHIBIT 7-1: EAC (2026) TRAFFIC VOLUMES (ACTUAL VEHICLES)

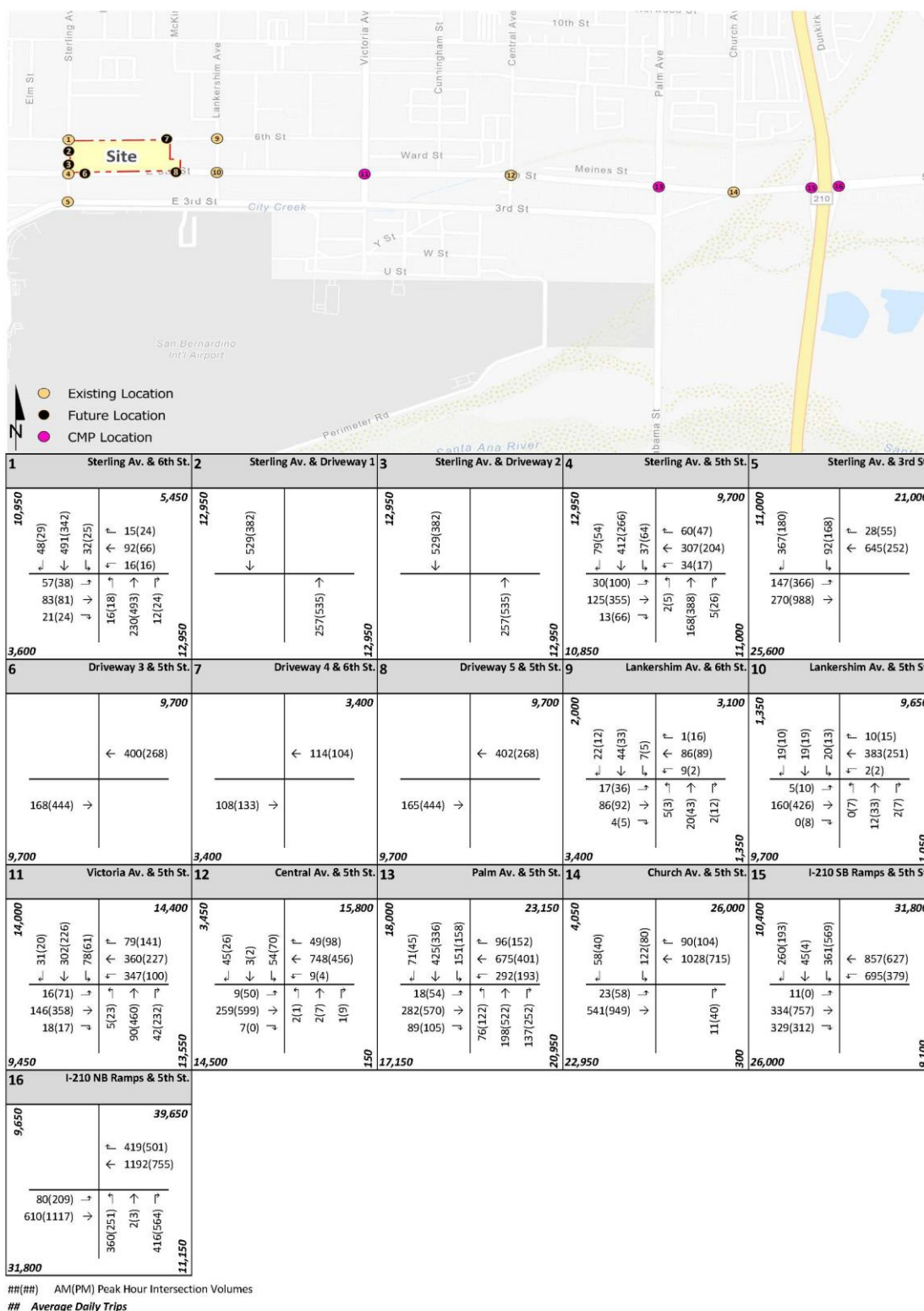


EXHIBIT 7-2: EAPC (2026) TRAFFIC VOLUMES (ACTUAL VEHICLES)

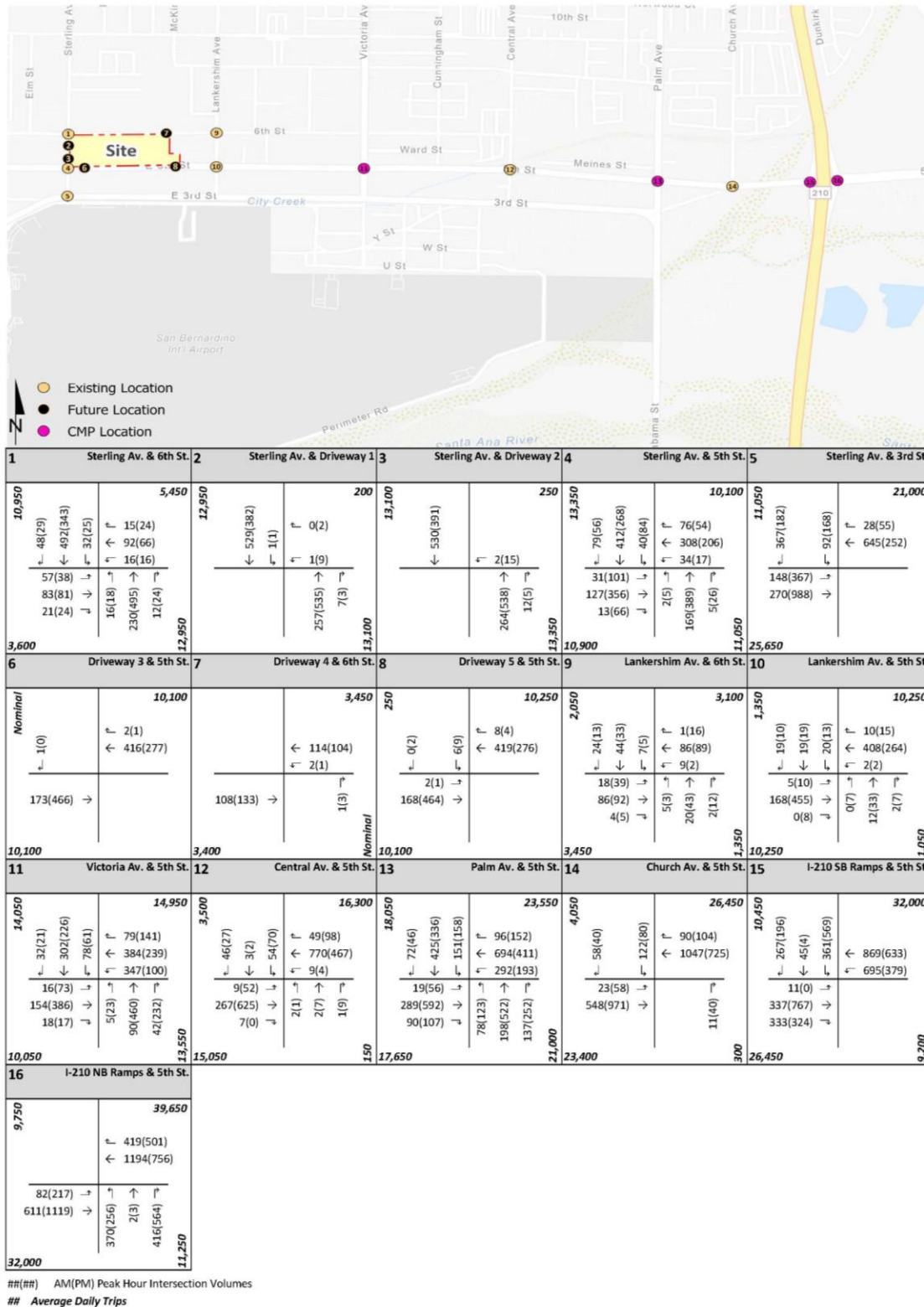


TABLE 7-1: INTERSECTION ANALYSIS FOR EAC AND EAPC (2026) CONDITIONS

# Intersection	Traffic Control ²	EAC (2026)				EAPC (2026)			
		Delay ¹ (secs.)		Level of Service		Delay ¹ (secs.)		Level of Service	
		AM	PM	AM	PM	AM	PM	AM	PM
1 Sterling Av. & 6th St.	CSS	71.3	46.9	F	E	71.3	46.0	F	E
2 Sterling Av. & Driveway 1	CSS	Future Intersection				11.1	12.6	B	B
3 Sterling Av. & Driveway 2	CSS	Future Intersection				11.2	13.2	B	B
4 Sterling Av. & 5th St.	TS	8.6	8.6	A	A	8.6	8.7	A	A
5 Sterling Av. & 3rd St.	TS	13.9	12.1	B	B	13.9	12.1	B	B
6 Driveway 3 & 5th St.	CSS	Future Intersection				9.8	9.2	A	A
7 Driveway 4 & 6th St.	CSS	Future Intersection				8.6	8.7	A	A
8 Driveway 5 & 5th St.	CSS	Future Intersection				12.8	12.9	B	B
9 Lankershim Av. & 6th St.	CSS	10.9	11.2	B	B	11.0	11.3	B	B
10 Lankershim Av. & 5th St.	CSS	16.9	19.1	C	C	18.2	20.4	C	C
11 Victoria Av. & 5th St.	TS	11.5	10.4	B	B	11.8	10.6	B	B
12 Central Av. & 5th St.	TS	15.2	16.6	B	B	15.3	16.7	B	B
13 Palm Av. & 5th St.	TS	24.1	48.8	C	D	24.3	50.7	C	D
14 Church Av. & 5th St.	TS	10.2	9.0	B	A	10.2	9.0	B	A
15 I-210 SB Ramps & 5th St.	TS	30.7	40.0	C	D	31.2	40.5	C	D
16 I-210 NB Ramps & 5th St.	TS	14.3	15.5	B	B	14.6	15.8	B	B

* **BOLD** = Level of Service (LOS) does not meet the applicable jurisdictional requirements (i.e., unacceptable LOS).

¹ Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

² TS = Traffic Signal; CSS = Cross-street Stop; **CSS** = Improvement

7.5 TRAFFIC SIGNAL WARRANTS ANALYSIS

The traffic signal warrant analysis for EAC and EAPC (2023) traffic conditions are based on the peak hour volumes or planning level ADT volume-based traffic signal warrants. No study area intersections are anticipated to meet either peak hour volume or ADT volume-based warrants with the addition of Project traffic (see Appendices 7.3 and 7.4, respectively).

7.6 OFF-RAMP QUEUING ANALYSIS

Queuing analysis findings for EAC and EAPC (2026) traffic conditions are presented in Table 7-2. As shown in Table 7-2, the study area off-ramps are not anticipated to experience queuing issues during the peak hours under both EAC and EAPC (2026) traffic conditions, consistent with Existing (2023) traffic conditions. Worksheets for EAC and EAPC (2026) traffic conditions queuing analysis are provided in Appendices 7.5 and 7.6, respectively.

TABLE 7-2: PEAK HOUR QUEUING SUMMARY FOR EAC AND EAPC (2026) CONDITIONS

Intersection	Movement	Available Stacking Distance (Feet)	EAC (2026)				EAPC (2026)			
			95th Percentile Queue (Feet)		Acceptable? ¹		95th Percentile Queue (Feet)		Acceptable? ¹	
			AM Peak	PM Peak	AM	PM	AM Peak	PM Peak	AM	PM
I-210 SB Ramps & 5th St. (#15)	SBL/T	920	524 ²	702 ²	Yes	Yes	524 ²	702 ²	Yes	Yes
	SBR	350	236	109	Yes	Yes	251	110	Yes	Yes
I-210 NB Ramps & 5th St. (#16)	NBL	1,130	213	153	Yes	Yes	222	160	Yes	Yes
	NBL/T	700	213	155	Yes	Yes	222	161	Yes	Yes
	NBR	580	51	253	Yes	Yes	51	258	Yes	Yes

¹ Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided. An additional 25 feet of stacking which is assumed to be provided in the transition for turn pockets is reflected in the stacking distance shown on this table, where applicable.

² 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

7.7 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

7.7.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the identified improvement strategies to address EAC and EAPC (2026) traffic deficiencies are presented in Table 7-3. Worksheets for EAC and EAPC (2026) conditions, with improvements, HCM calculation worksheets are provided in Appendices 7.7 and 7.8, respectively.

TABLE 7-3: INTERSECTION ANALYSIS FOR EAC AND EAPC (2026) CONDITIONS WITH IMPROVEMENTS

# Intersection	Traffic Control ³	Intersection Approach Lanes ¹												Delay ² (secs.)		Level of Service	
		Northbound			Southbound			Eastbound			Westbound			AM	PM	AM	PM
		L	T	R	L	T	R	L	T	R	L	T	R				
1 Sterling Av. & 6th St.																	
- Without Project	CSS	1	2	0	1	2	0	1	1	0	1	1	0	20.6	18.8	C	C
- With Project	CSS	1	2	0	1	2	0	1	1	0	1	1	0	20.6	18.9	C	C

¹ When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right; **1** = Improvement

² Per the Highway Capacity Manual 6th Edition, overall average intersection delay and level of service are shown for intersections with a traffic signal or all-way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

³ CSS = Cross-street Stop

7.7.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES FOR OFF-RAMP QUEUES

As shown previously in Table 7-2, there are no study area off-ramps anticipated to experience queuing issues under EAC and EAPC (2026) traffic conditions. As such, no improvements have been identified.

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8 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the City of San Bernardino are funded through a combination of improvements constructed by the Project, development impact fee programs or fair share contributions. Fee programs applicable to the Project are described below.

8.1 CITY OF SAN BERNARDINO DEVELOPMENT IMPACT FEE (DIF) PROGRAM

The City of San Bernardino has created its own local Development Impact Fee (DIF) program to impose and collect fees from new residential, commercial, and industrial development for the purpose of funding roadways and intersections necessary to accommodate City growth as identified in the City's General Plan Circulation Element. The City's DIF includes a Regional Circulation System Fee to comply with Measure "I" and a Local Circulation System Fee to address transportation improvements which are locally significant. The fee schedule was recently updated in June 2014 and is adjusted annually based upon changes in the construction cost index. Under the City's DIF program, the City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program. The City may grant to developers a credit against specific components of fees when those developers construct certain facilities and landscaped medians identified in the list of improvements funded by the DIF program.

The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department. Periodic traffic counts, review of traffic accidents, and a review of traffic trends throughout the City are also periodically performed by City staff and consultants. The City uses this data to determine the timing of implementing the improvements listed in its facilities list. The City also uses this data to ensure that the improvements listed on the facilities list are constructed before the LOS falls below the LOS performance standards adopted by the City. In this way, the improvements are constructed before the LOS falls below the City's LOS performance thresholds.

The Project Applicant will be subject to the City's DIF fee program and will pay the requisite City DIF fees at the rates then in effect. The Project Applicant's payment of the requisite DIF fees at the rates then in effect pursuant to the DIF Program will mitigate its impacts to DIF-funded facilities. After the City's DIF fees are collected, they are placed in a separate interest-bearing account pursuant to the requirements of Government Code § 66000 et seq. The timing to use the DIF fees is established through periodic capital improvement programs which are overseen by the City's Public Works Department.

8.2 MEASURE "I"

In 2004, the voters of San Bernardino County approved the 30-year extension of Measure "I", a one-half of one percent sales tax on retail transactions, through the year 2040, for transportation projects including, but not limited to, infrastructure improvements, commuter rail, public transit, and other identified improvements. The Measure "I" extension requires that a regional traffic impact fee be created to ensure development is paying its fair share. A regional Nexus study was prepared by the SBCTA and concluded that each jurisdiction should include a regional fee component in their local programs in order to meet the Measure "I" requirement. The regional component assigns specific facilities and cost sharing formulas to each jurisdiction and was most recently updated in March 2019. (6) Revenues collected through these programs are used in tandem with the City's DIF funds to deliver projects identified in the Nexus Study. While Measure "I" is a self-executing sales tax administered by SBCTA, it bears discussion here because the funds raised through Measure "I" have funded in the past and will continue to fund new transportation facilities in San Bernardino County.

8.3 FAIR SHARE CONTRIBUTION

Project improvements may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City's discretion). When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak hour, have been provided in Table 8-1 for the applicable deficient study area intersection and for each applicable phase. These fees are collected with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

TABLE 8-1: PROJECT FAIR SHARE CALCULATIONS

#	Intersection	Existing	Project Only	EAPC (2026)	Net New Traffic	Project % of New Traffic
1	Sterling Av. & 6th St.					
	AM:	939	1	1,114	175	0.6%
	PM:	972	3	1,182	210	1.4%

BOLD = Denotes highest fair share percentage.

9 REFERENCES

1. **Fehr & Peers for City of San Bernardino.** *Traffic Impact Analysis Guidelines*. City of San Bernardino : s.n., August 2020.
2. **San Bernardino Associated Governments.** *Congestion Management Program for County of San Bernardino*. County of San Bernardino : s.n., Updated June 2016.
3. **Institute of Transportation Engineers.** *Trip Generation Manual*. 11th Edition. 2021.
4. **Transportation Research Board.** *Highway Capacity Manual (HCM)*. 6th Edition. s.l. : National Academy of Sciences, 2016.
5. **California Department of Transportation.** California Manual on Uniform Traffic Control Devices (CA MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CA MUTCD)*. 2014, Updated March 30, 2021 (Revision 6).

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APPENDIX 1.1: TRAFFIC STUDY SCOPING AGREEMENT

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City of San Bernardino Public Works / Traffic Engineering Department Traffic Scope Approval Form

To be completed by applicant consultant and approved by Public Works prior to start of study

Project
Name: Project 5th & Sterling Avenue
Address: Project NEC of Sterling Ave. & 5th St.
Description: 557,000 SF warehouse building
Developer's Name: SBABP I, LLC
Address:
Telephone No. 26569 Community Center Drive
Highland, CA 92346
(909)864-8933 ext 50-3019
Email address: peter.mateo@sanmanuel-nsn.gov

Trip Generation Rates from ITE Latest Edition

Land Use (1) High-Cube Transload
Development Sq Ft 557,000 SF
ITE Land Use Code Source: ITE
Daily Trips 994
AM Peak Hour Trips
(PCE) Inbound 44
Outbound 20
Total 64
PM Peak Hour Trips
Inbound 20
Outbound 44
Total 64

(Use Additional Sheet(s), if necessary)

Land Use (2)
Development Sq Ft
ITE Land Use Code
Daily Trips
AM Peak Hour Trips
(PCE) Inbound
Outbound
Total
PM Peak Hour Trips
Inbound
Outbound
Total

Pass-by Trips (%), if applicable: N/A %
Land Use (1)
ITE Land Use Code
Daily Trips
AM Peak Hour Trips
Inbound
Outbound
Total
PM Peak Hour Trips:
Inbound
Outbound
Total

Land Use (2)
ITE Land Use Code
Daily Trips
AM Peak Hour Trips
Inbound
Outbound
Total
PM Peak Hour Trips:
Inbound
Outbound
Total

Project Opening Year: 2026
Study Intersections: 1 See attached memo for list 6
2 7
3 8
4 9
5 10

(Use Additional Sheet(s) and Maps to show project Boundaries & Attach memo for project Description)



City of San Bernardino Public Works / Traffic Engineering Department
Traffic Scope Approval Form

To be completed by applicant consultant and approved by Public Works prior to start of study

Study Roadway Segments: 1 _____ 2 _____
3 _____ 4 _____
5 _____ 6 _____

Proposed Development Use: ☐ Residential ☐ Commercial ☐ Mixed Use ☒ Other

Software Methodology: ☒ Synchro ☐ HCS

Additional issues to be considered: ☐ Traffic calming measures ☒ Queuing Analysis
☒ Bike/Ped Accommodations ☐ Merge Analysis ☐ Gap Analysis
☐ Actuation/Coordination ☐ Safety Analysis ☐ Sight Distance Analysis

Is the project screened from VMT assessment? ☒ Yes ☐ No

VMT Screening Justification: Low VMT Area Screening: Per the SBCTA VMT Screening Tool
the Project is located within a Low VMT Area (see attachment).

Ambient Growth Rate: 3.0 % or 9.27% for 2026

Trip Distribution: East varies % West varies % North varies % South varies %

Consultant Preparer's Name: Charlene So, Urban Crossroads, Inc.

Address: 1133 Camelback St. #8329, Newport Beach, CA 92658

Telephone No. 949-861-0177 PE / TE License #: TR 2414

Email Address: cso@urbanxroads.com

Signature: Charlene So Date: 6/26/23

Approved By (Public Works Department):

Signature: Azzam Tabshch Date: 8/9/2023

Name: AZZAM TABSHEH Title: Traffic Engineer

Submit a TIA
Submit a VMT memo



DATE: June 26, 2023
TO: Azzam Jabsheh, City of San Bernardino
FROM: Charlene So, Urban Crossroads, Inc.
JOB NO: 14057-01 TA Scope

5TH & STERLING AVENUE TRAFFIC ANALYSIS SCOPING AGREEMENT

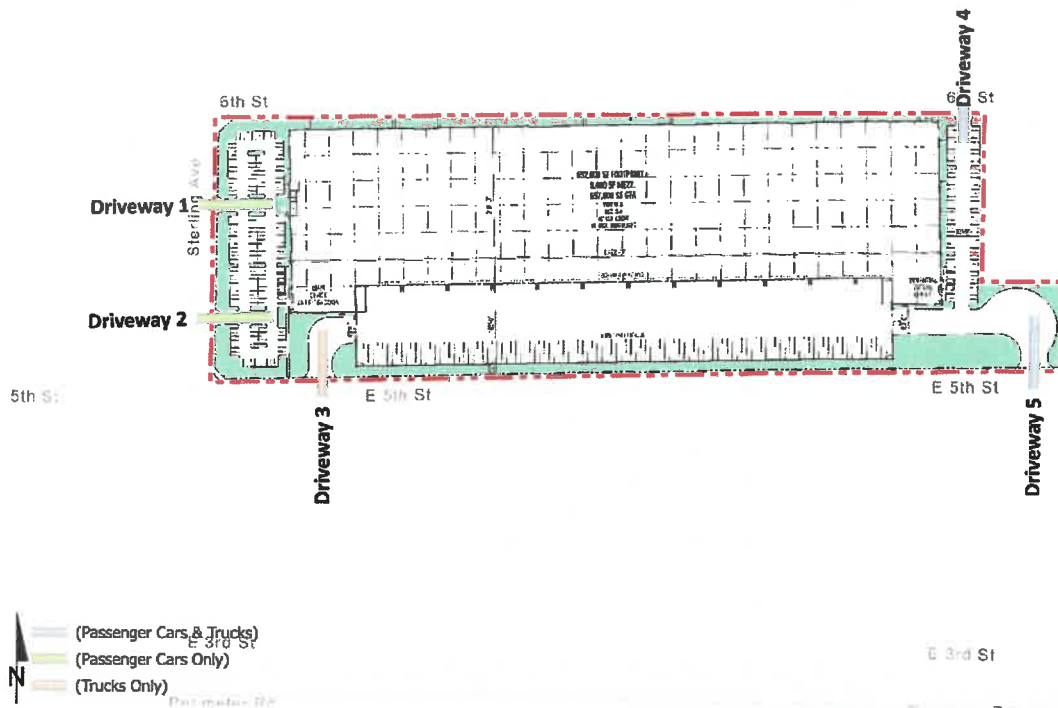
Urban Crossroads, Inc. is pleased to submit this scoping letter to City of San Bernardino for the proposed 5th & Sterling Avenue development (**Project**), which is located on the northeast corner of Sterling Avenue and 5th Street in the City of San Bernardino. This letter describes the draft proposed Project trip generation, trip distribution, and analysis methodology, which have been used to establish the proposed Project study area and analysis locations. The purpose of this work effort is to determine whether additional traffic analysis is necessary for the proposed Project based on the City of San Bernardino's Traffic Impact Analysis Guidelines (August 2020) (**City Guidelines**).

PROPOSED PROJECT

The Project consists of the development of a 557,000 square foot warehouse building. The Traffic Study will evaluate 557,000 square feet of high-cube transload and short-term storage warehouse use. A preliminary site plan for the proposed Project is shown on Exhibit 1. The Project will provide access to the following roadways:

- Sterling Avenue via Driveway 1 and Driveway 2 which will both serve passenger cars only
- Fifth Street via Driveway 3 which will serve trucks only and Driveway 5 which will serve both passenger cars and trucks
- Sixth Street via Driveway 4 which will serve primarily passenger cars but will also serve as a secondary access for trucks

All driveways are proposed to allow for full access (no turn restrictions), with the exception of Driveway 3 on 5th Street. Due to its proximity to the intersection at Sterling Avenue, Driveway 3 is proposed to be restricted to right-in/right-out access only. The Project is anticipated to have an opening year of 2026.

EXHIBIT 1: PRELIMINARY SITE PLAN**TRIP GENERATION**

The proposed Project consists of a single 557,000 square foot warehouse building. In order to develop the traffic characteristics of the proposed project, trip-generation statistics published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition, 2021) was used for the proposed Project. Table 1 summarizes the trip generation rates. For purposes of this assessment, the following land use and vehicle mix has been utilized:

- ITE land use code 154 (High-Cube Transload and Short-Term Storage Warehouse) has been used to derive site specific trip generation estimates for up to 557,000 square feet. High-cube transload/short-term storage warehouse data regarding the truck percentage and vehicle mix has been obtained from the ITE's Trip Generation Manual. The truck percentages were further broken down by axle type per the following South Coast Air Quality Management District (SCAQMD) recommended truck mix: 2-Axle = 16.7%; 3-Axle = 20.7%; 4+-Axle = 62.6%.

TABLE 1: TRIP GENERATION RATES

Land Use ¹	Units ²	ITE LU Code	AM Peak Hour			PM Peak Hour			Daily
			In	Out	Total	In	Out	Total	
Actual Vehicle Trip Generation Rates									
High-Cube Transload and Short-Term Storage	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars (AM=75.0%, PM=90.0%, Daily=84.3%)			0.052	0.008	0.060	0.023	0.067	0.090	1.180
2-Axle Trucks (AM=4.2%, PM=1.7%, Daily=2.6%)			0.002	0.001	0.003	0.001	0.001	0.002	0.037
3-Axle Trucks (AM=5.2%, PM=2.1%, Daily=3.3%)			0.002	0.002	0.004	0.001	0.001	0.002	0.046
4+-Axle Trucks (AM=15.7%, PM=6.3%, Daily=9.8%)			0.006	0.007	0.013	0.003	0.003	0.006	0.138
Passenger Car Equivalent (PCE) Trip Generation									
High-Cube Transload and Short-Term Storage	TSF	154	0.062	0.018	0.080	0.028	0.072	0.100	1.400
Passenger Cars			0.052	0.008	0.060	0.023	0.067	0.090	1.180
2-Axle Trucks (PCE = 2.0)			0.004	0.003	0.007	0.002	0.001	0.003	0.073
3-Axle Trucks (PCE = 2.5)			0.005	0.005	0.010	0.003	0.003	0.005	0.114
4+-Axle Trucks (PCE = 3.0)			0.018	0.020	0.038	0.009	0.010	0.019	0.413

¹ Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), Trip Generation Manual, Eleventh Edition (2021).

² TSF = thousand square feet

³ Truck Mix: South Coast Air Quality Management District's (SCAQMD) recommended truck mix, by axle type.
Normalized % - Without Cold Storage: 16.7% 2-Axle trucks, 20.7% 3-Axle trucks, 62.6% 4-Axle trucks.

Passenger car equivalent (**PCE**) factors were applied to the trip generation rates for heavy trucks (2-4-axles and 5+-axles). PCEs allow the typical "real-world" mix of vehicle types to be represented as a single, standardized unit, such as the passenger car, to be used for the purposes of capacity and LOS analyses. The PCE factors are consistent with the recommended PCE factors in the City's Guidelines.

The trip generation summary illustrating daily, and peak hour trip generation estimates for the proposed Project are summarized on Table 2 in actual vehicles. The proposed Project is anticipated to generate 782 two-way trips per day with 45 AM peak hour trips and 57 PM peak hour trips (actual vehicles).

Intersection operations analysis for a truck-intensive project would be required to utilize the PCE trip generation consistent with the City's Guidelines. As such, the Project's trip generation in PCE is also shown on Table 3. The Project is anticipated to generate 994 two-way PCE trips per day with 64 PCE AM peak hour trips and 64 PCE PM peak hour trips.

TABLE 2: PROJECT TRIP GENERATION SUMMARY

Land Use	Quantity Units ¹	AM Peak Hour			PM Peak Hour			Daily
		In	Out	Total	In	Out	Total	
Actual Vehicles:								
High-Cube Transload Warehouse	557.000 TSF							
Passenger Cars:		29	5	34	13	37	50	658
2-axle Trucks:		1	1	2	1	0	1	20
3-axle Trucks:		1	1	2	1	1	2	26
4+-axle Trucks:		3	4	7	2	2	4	78
Total Truck Trips (Actual Vehicles):		5	6	11	4	3	7	124
Total Trips (Actual Vehicles)²		34	11	45	17	40	57	782
Passenger Car Equivalent (PCE):								
High-Cube Transload Warehouse	557.000 TSF							
Passenger Cars:		29	5	34	13	37	50	658
2-axle Trucks:		2	1	3	1	1	2	42
3-axle Trucks:		3	3	6	1	1	2	64
4+-axle Trucks:		10	11	21	5	5	10	230
Total Truck Trips (PCE):		15	15	30	7	7	14	336
Total Trips (PCE)²		44	20	64	20	44	64	994

¹ TSF = thousand square feet

² Total Trips = Passenger Cars + Truck Trips.

PROJECT TRIP DISTRIBUTION

The Project trip distribution represents the directional orientation of traffic to and from the Project site. Trip distribution is the process of identifying the probable destinations, directions or traffic routes that will be utilized by Project traffic. The potential interaction between the planned land uses and surrounding regional access routes are considered, to identify the route where the Project traffic would distribute. Exhibits 2 and 3 show the Project truck and passenger car trip distribution patterns, respectively.

EXHIBIT 2: PROJECT (TRUCK) TRIP DISTRIBUTION

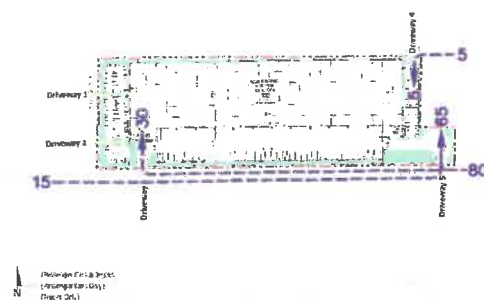
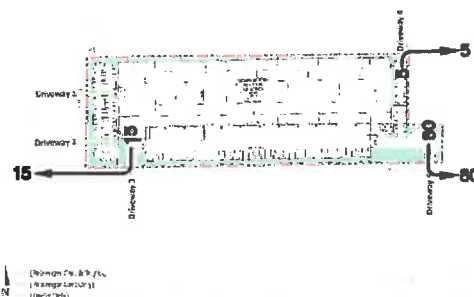
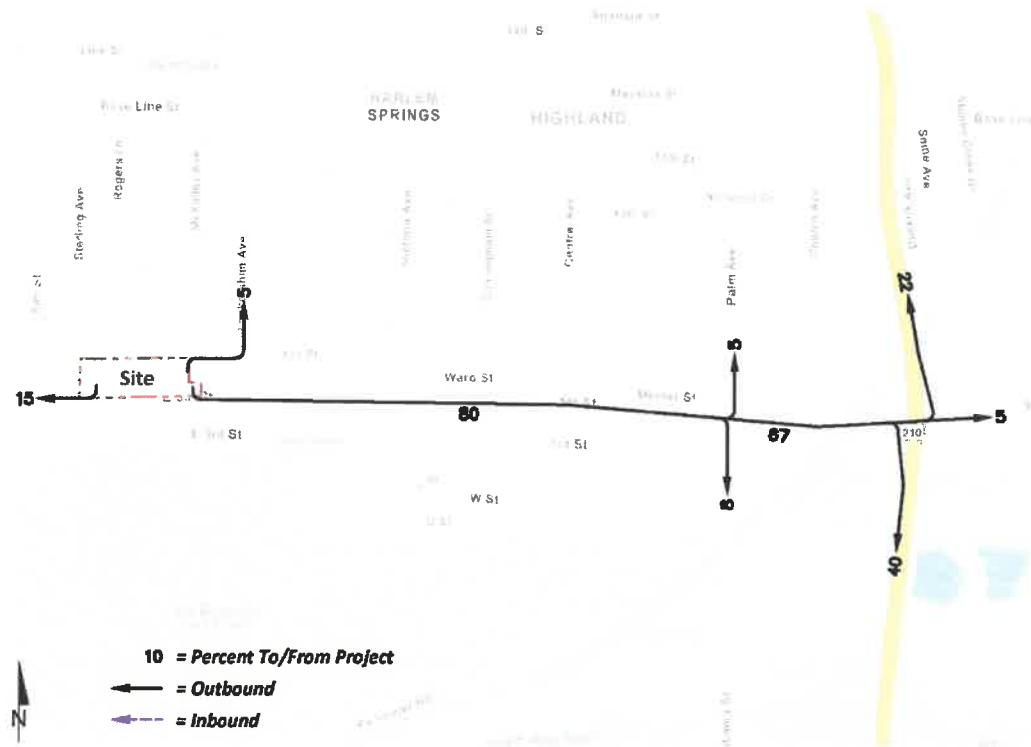
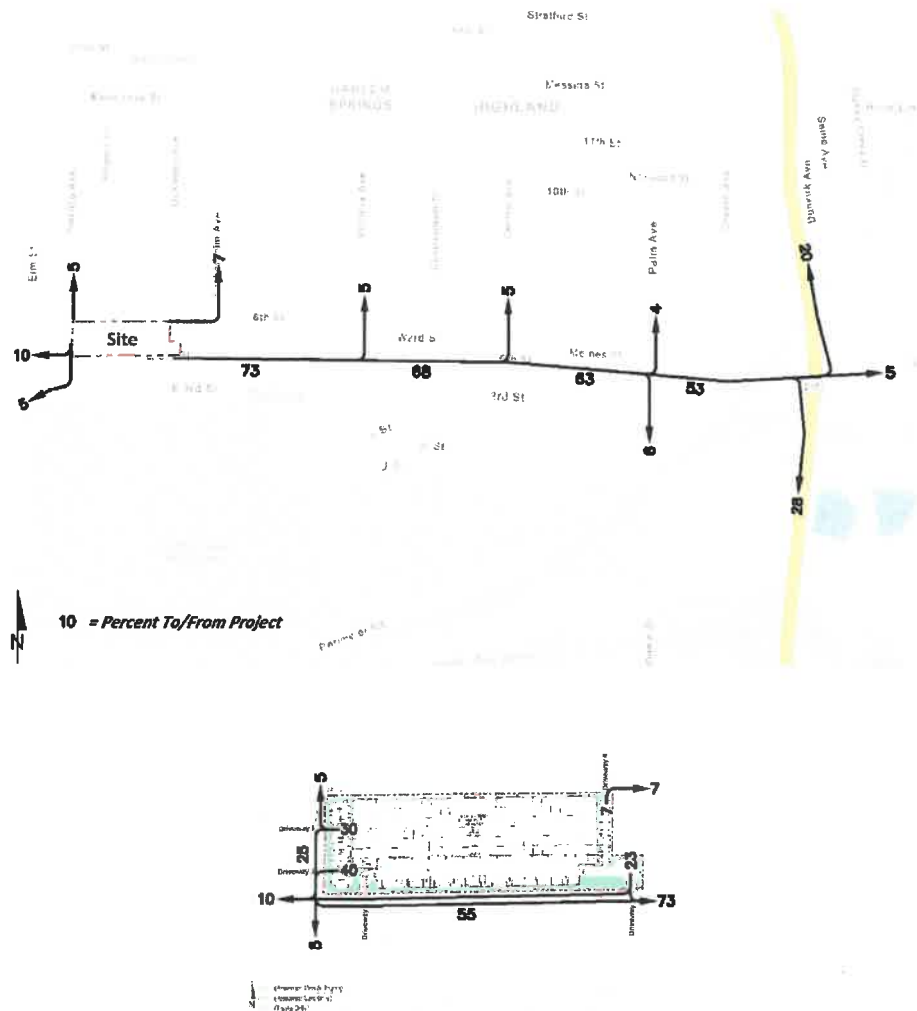


EXHIBIT 3: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION



ANALYSIS SCENARIOS

Consistent with the City's Guidelines, intersection analysis will be provided for the following analysis scenarios:

- Existing (2023) Conditions
- Existing plus Project (E+P)
- Existing plus Ambient Growth (EA) (2026) Conditions
- Existing plus Ambient Growth plus Project (EAP) (2026) Conditions
- Existing plus Ambient Growth plus Cumulative (EAC) (2026) Conditions
- Existing plus Ambient Growth plus Project plus Cumulative (EAPC) (2026) Conditions

All study area intersections will be analyzed using the HCM (6th Edition) methodology.

STUDY AREA

Based upon the Project trip generation and trip distribution patterns included as part of this letter, the proposed study area intersections are identified on Exhibit 4.

EXHIBIT 4: STUDY AREA



ID Intersection

- 1 Sterling Av. & 6th St.
- 2 Sterling Av. & Driveway 1
- 3 Sterling Av. & Driveway 2
- 4 Sterling Av. & 5th St.
- 5 Sterling Av. & 3rd St.
- 6 Driveway 3 & 5th St.
- 7 Driveway 4 & 6th St.
- 8 Driveway 5 & 5th St.

ID Intersection

- 9 Lankershim Av. & 6th St.
- 10 Lankershim Av. & 5th St.
- 11 Victoria Av. & 5th St.
- 12 Central Av. & 5th St.
- 13 Palm Av. & 5th St.
- 14 Church Av. & 5th St.
- 15 I-210 SB Ramps & 5th St.
- 16 I-210 NB Ramps & 5th St.

EXISTING COUNT DATA

Traffic counts (classified by vehicle type) will be conducted during a typical Tuesday, Wednesday, or Thursday when local schools are in session and operating on a typical bell schedule. Time periods to be counted will be from 7:00-9:00 AM and 4:00-6:00 PM and will include pedestrian and bicycle counts at each analysis location. No adjustments are proposed to the new traffic counts for the baseline traffic condition as traffic counts will be conducted while local schools are in session.

The last day of regularly scheduled classes for the 2022-2023 school year is May 25, 2023, for the surrounding schools. As such, traffic counts were collected on May 18, 2023 (Thursday) for the locations identified on Exhibit 4.

AMBIENT GROWTH

Pursuant to discussion with City staff and consistent with other studies performed in the area, an ambient growth rate of 3% per year is proposed for the study area intersection to approximate background growth not identified by nearby cumulative development projects. As such, the ambient growth used will be 9.27% (3% per year compounded over 3 years).

CUMULATIVE DEVELOPMENT PROJECTS

It is requested that the City provide a list of cumulative projects that need to be considered for the focused traffic analysis if there are projects that need to be included in conjunction with the ambient growth rate. Urban Crossroads will also reach out to the City of Highland to obtain a list of current cumulative projects within their City.

SPECIAL ISSUES

The following special issues will also be addressed as part of the focused traffic analysis:

- **Traffic Signal Warrant Analysis:** Traffic signal warrant analysis will be performed for all full-access unsignalized study area intersections utilizing the California MUTCD peak-hour warrants for existing intersections, and the Caltrans daily (Planning level) warrant for new intersections.
- **Site Access Evaluation/Queuing Analysis:** The turn pocket lengths will be determined through peak hour traffic simulations developed using Synchro and SimTraffic software in an effort to identify the required storage capacity for turn lanes at all Project driveways and the site adjacent intersections of Sterling Avenue at Sixth Street and Fifth Street.
- **Truck Access:** Prepare truck turn templates at the applicable Project driveways for the appropriate turning movements to ensure driveways are designed to accommodate the turning radius of heavy trucks.

If you have any questions or comments, I can be reached at cso@urbanxroads.com.

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APPENDIX 1.2: SITE ADJACENT QUEUES

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Intersection: 1: Sterling Av. & 6th St.

Movement	EB	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	L	T	TR
Maximum Queue (ft)	75	80	45	76	31	11	35	7	28
Average Queue (ft)	32	39	14	42	6	0	7	0	2
95th Queue (ft)	60	64	38	67	24	5	28	4	14
Link Distance (ft)	1224	1224	1462	1462		120	862	862	862
Upstream Blk Time (%)									
Queuing Penalty (veh)									
Storage Bay Dist (ft)					100				
Storage Blk Time (%)									
Queuing Penalty (veh)									

Intersection: 2: Sterling Av. & Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	30
Average Queue (ft)	2
95th Queue (ft)	13
Link Distance (ft)	294
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Sterling Av. & Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	23
Average Queue (ft)	2
95th Queue (ft)	12
Link Distance (ft)	332
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Sterling Av. & 5th St.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	LT	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	96	48	108	107	38	93	47	58	104	113
Average Queue (ft)	46	15	58	50	2	39	15	20	59	49
95th Queue (ft)	76	41	91	91	19	71	42	48	92	90
Link Distance (ft)	1282	1282	295	295		491	491		185	185
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)					55			60		
Storage Blk Time (%)						3		0	5	
Queuing Penalty (veh)						0		0	2	

Intersection: 6: 5th St. & Driveway 3

Movement	SB
Directions Served	R
Maximum Queue (ft)	22
Average Queue (ft)	2
95th Queue (ft)	13
Link Distance (ft)	155
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Driveway 4 & 6th St.

Movement	NB
Directions Served	LR
Maximum Queue (ft)	15
Average Queue (ft)	1
95th Queue (ft)	9
Link Distance (ft)	287
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 8: 5th St. & Driveway 5

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	20	31
Average Queue (ft)	1	10
95th Queue (ft)	9	34
Link Distance (ft)	277	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 3

Intersection: 1: Sterling Av. & 6th St.

Movement	EB	EB	WB	WB	NB	SB	SB
Directions Served	L	TR	L	TR	L	L	TR
Maximum Queue (ft)	59	92	41	102	31	36	15
Average Queue (ft)	26	42	13	40	5	8	1
95th Queue (ft)	51	74	37	72	22	29	7
Link Distance (ft)	1224	1224	1462	1462		862	862
Upstream Blk Time (%)							
Queuing Penalty (veh)							
Storage Bay Dist (ft)					100		
Storage Blk Time (%)							
Queuing Penalty (veh)							

Intersection: 2: Sterling Av. & Driveway 1

Movement	WB
Directions Served	LR
Maximum Queue (ft)	36
Average Queue (ft)	8
95th Queue (ft)	31
Link Distance (ft)	294
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 3: Sterling Av. & Driveway 2

Movement	WB
Directions Served	LR
Maximum Queue (ft)	31
Average Queue (ft)	13
95th Queue (ft)	38
Link Distance (ft)	332
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 4: Sterling Av. & 5th St.

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	TR	LT	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	194	149	106	88	59	177	148	99	93	82
Average Queue (ft)	99	52	49	39	6	87	40	43	51	38
95th Queue (ft)	161	107	87	74	33	144	93	81	86	69
Link Distance (ft)	1282	1282	295	295		491	491		185	185
Upstream Blk Time (%)										
Queuing Penalty (veh)										
Storage Bay Dist (ft)					55			60		
Storage Blk Time (%)						21		4	4	
Queuing Penalty (veh)						1		5	3	

Intersection: 6: 5th St. & Driveway 3

Movement	SB
Directions Served	R
Maximum Queue (ft)	30
Average Queue (ft)	2
95th Queue (ft)	16
Link Distance (ft)	155
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 7: Driveway 4 & 6th St.

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	13	31
Average Queue (ft)	0	2
95th Queue (ft)	6	14
Link Distance (ft)		287
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: 5th St. & Driveway 5

Movement	EB	SB
Directions Served	L	LR
Maximum Queue (ft)	15	36
Average Queue (ft)	0	10
95th Queue (ft)	7	34
Link Distance (ft)	277	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	100	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 9

APPENDIX 3.1: TRAFFIC COUNTS

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24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023

CITY: San Bernardino

JOB #: SC4019

LOCATION: ADT1 Sterling north of 5th

AM TIME	NB							PM Time	NB						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	11	1	0	0	0	0	12	12:00	65	3	1	0	0	0	69
0:15	25	1	0	0	0	0	26	12:15	51	3	0	0	0	0	54
0:30	9	0	1	1	0	0	11	12:30	54	2	0	0	0	0	56
0:45	15	0	0	0	0	0	15	12:45	62	1	0	3	0	0	66
1:00	12	0	0	0	0	0	12	13:00	65	5	4	1	0	0	75
1:15	15	0	0	0	0	0	15	13:15	41	4	0	0	0	0	45
1:30	8	0	0	0	0	0	8	13:30	55	5	3	0	0	0	63
1:45	8	0	0	0	0	0	8	13:45	71	9	0	0	0	0	80
2:00	4	0	0	0	0	0	4	14:00	68	7	0	0	0	1	76
2:15	3	0	0	0	0	0	3	14:15	78	2	1	0	0	1	82
2:30	5	0	0	0	0	0	5	14:30	86	2	1	1	0	1	91
2:45	3	0	0	0	0	0	3	14:45	89	6	1	0	0	0	96
3:00	6	0	0	0	0	0	6	15:00	99	0	0	3	0	1	103
3:15	2	0	0	0	0	0	2	15:15	107	0	2	0	0	0	109
3:30	5	1	0	0	0	0	6	15:30	115	2	0	0	0	0	117
3:45	3	0	0	0	0	0	3	15:45	119	2	1	0	0	1	123
4:00	9	0	0	0	0	0	9	16:00	85	2	0	2	0	1	90
4:15	6	1	0	0	0	0	7	16:15	94	2	0	0	0	0	96
4:30	14	0	0	0	0	0	14	16:30	106	8	0	0	0	0	114
4:45	15	0	0	0	0	0	15	16:45	103	3	1	0	0	0	107
5:00	10	0	0	0	0	0	10	17:00	105	5	1	1	0	1	113
5:15	10	0	0	0	0	0	10	17:15	117	4	0	1	0	0	122
5:30	15	0	1	0	0	0	16	17:30	110	3	2	1	0	0	116
5:45	17	1	0	0	0	0	18	17:45	96	3	0	0	0	0	99
6:00	11	1	0	1	0	0	13	18:00	77	1	0	2	0	0	80
6:15	11	1	0	0	0	0	12	18:15	83	2	0	0	0	0	85
6:30	17	2	1	0	0	1	21	18:30	52	2	0	1	0	0	55
6:45	30	0	1	0	0	2	33	18:45	52	0	0	0	0	0	52
7:00	34	1	1	0	0	2	38	19:00	48	2	0	1	0	0	51
7:15	37	3	1	0	0	1	42	19:15	50	2	0	0	0	0	52
7:30	27	6	0	0	0	0	33	19:30	50	1	0	0	0	0	51
7:45	40	3	2	0	0	0	45	19:45	55	2	0	0	0	0	57
8:00	59	4	0	0	0	0	63	20:00	48	1	0	0	0	0	49
8:15	39	4	0	1	0	2	46	20:15	43	3	1	0	0	0	47
8:30	41	5	0	0	0	0	46	20:30	46	0	0	0	0	0	46
8:45	39	2	0	2	0	0	43	20:45	55	1	0	0	0	0	56
9:00	45	5	1	1	0	0	52	21:00	49	1	0	0	0	0	50
9:15	33	3	0	0	0	0	36	21:15	51	0	0	0	0	0	51
9:30	30	2	0	0	0	0	32	21:30	49	0	0	0	0	0	49
9:45	27	3	1	0	0	0	31	21:45	29	1	0	1	0	0	31
10:00	27	1	1	1	0	0	30	22:00	19	0	0	0	0	0	19
10:15	36	4	0	1	0	0	41	22:15	32	0	0	1	0	0	33
10:30	32	5	1	0	0	0	38	22:30	28	2	0	0	0	0	30
10:45	41	1	2	1	0	0	45	22:45	19	2	0	0	0	0	21
11:00	51	2	1	0	0	0	54	23:00	31	0	0	0	0	0	31
11:15	41	3	0	1	0	0	45	23:15	20	0	0	0	0	0	20
11:30	43	0	0	1	0	1	45	23:30	20	0	0	1	0	0	21
11:45	46	2	2	0	0	0	50	23:45	19	0	0	0	0	0	19
TOTAL	1,067	68	17	11	0	9	1,172	TOTAL	3,066	106	19	20	0	7	3,218

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	200

AM PEAK HOUR	4:45 PM
AM PEAK VOLUME	458

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	4,133	174	36	31	0	16	4,390
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	94.1%	4.0%	0.8%	0.7%	0.0%	0.4%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	8,322	311	75	62	1	34	8,805
CLASS 6	Buses	% OF TOTAL	94.5%	3.5%	0.9%	0.7%	0.0%	0.4%	100.0%

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023
JOB #: SC4019

CITY: San Bernardino
LOCATION: ADT1 Sterling north of 5th

AM TIME	SB							PM Time	SB						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	8	0	0	0	0	0	8	12:00	46	4	3	0	0	0	53
0:15	8	0	0	0	0	0	8	12:15	52	3	2	1	0	0	58
0:30	2	0	0	0	0	0	2	12:30	39	4	0	0	0	1	44
0:45	7	0	1	0	0	0	8	12:45	54	1	1	0	0	1	57
1:00	6	0	0	0	0	0	6	13:00	62	0	0	1	0	0	63
1:15	3	0	0	0	0	0	3	13:15	54	0	0	2	0	0	56
1:30	4	0	0	0	0	0	4	13:30	73	3	0	1	0	0	77
1:45	6	0	0	0	0	0	6	13:45	70	4	0	0	0	0	74
2:00	5	0	1	1	1	0	8	14:00	52	4	0	2	0	0	58
2:15	3	1	0	1	0	0	5	14:15	67	4	1	0	0	0	72
2:30	9	0	0	0	0	0	9	14:30	74	5	0	0	0	0	79
2:45	10	0	0	0	0	0	10	14:45	71	2	2	0	0	1	76
3:00	5	0	0	0	0	0	5	15:00	73	5	1	1	0	2	82
3:15	11	1	0	0	0	0	12	15:15	68	1	2	0	0	0	71
3:30	29	0	0	0	0	0	29	15:30	99	1	2	1	0	2	105
3:45	23	0	0	0	0	0	23	15:45	83	2	0	0	0	1	86
4:00	17	1	0	0	0	0	18	16:00	59	5	0	1	0	2	67
4:15	24	0	0	0	0	0	24	16:15	57	3	1	0	0	1	62
4:30	37	0	0	0	0	0	37	16:30	81	2	0	1	0	0	84
4:45	43	1	0	0	0	0	44	16:45	83	0	0	0	0	0	83
5:00	24	1	0	0	0	0	25	17:00	56	1	0	0	0	0	57
5:15	34	1	0	0	0	0	35	17:15	60	4	0	0	0	0	64
5:30	60	1	0	0	0	0	61	17:30	65	2	0	1	0	0	68
5:45	57	1	0	0	0	0	58	17:45	56	1	0	1	0	0	58
6:00	39	2	2	0	0	0	43	18:00	56	2	2	0	0	0	60
6:15	39	0	1	0	0	0	40	18:15	51	1	1	0	0	0	53
6:30	62	0	1	1	0	0	64	18:30	49	0	0	0	0	0	49
6:45	97	0	1	0	0	0	98	18:45	51	3	0	1	0	0	55
7:00	75	4	0	0	0	0	79	19:00	43	0	0	0	0	0	43
7:15	99	2	0	1	0	0	102	19:15	47	0	0	1	0	0	48
7:30	108	3	1	0	0	3	115	19:30	39	2	0	0	0	0	41
7:45	135	3	0	3	0	0	141	19:45	41	0	0	1	0	0	42
8:00	98	3	0	0	0	0	101	20:00	33	3	0	0	0	0	36
8:15	77	2	1	1	0	1	82	20:15	24	0	0	0	0	0	24
8:30	52	2	0	0	0	1	55	20:30	33	2	0	0	0	0	35
8:45	72	1	0	0	0	0	73	20:45	28	0	0	0	0	0	28
9:00	56	1	0	0	0	2	59	21:00	26	0	0	0	0	0	26
9:15	52	5	1	0	0	0	58	21:15	23	1	0	0	0	0	24
9:30	48	1	0	1	0	0	50	21:30	17	1	0	0	0	0	18
9:45	55	4	1	0	0	0	60	21:45	27	0	0	0	0	0	27
10:00	38	1	2	1	0	0	42	22:00	12	0	0	0	0	0	12
10:15	53	5	0	0	0	0	58	22:15	10	1	0	0	0	0	11
10:30	48	2	2	1	0	0	53	22:30	11	0	0	0	0	0	11
10:45	35	2	1	0	0	0	38	22:45	14	1	1	1	0	0	17
11:00	51	0	1	0	0	0	52	23:00	10	0	0	0	0	0	10
11:15	37	2	0	0	0	0	39	23:15	12	0	1	0	0	0	13
11:30	47	3	0	0	0	0	50	23:30	15	1	1	0	0	0	17
11:45	47	2	1	2	0	0	52	23:45	8	0	0	1	0	0	9
TOTAL	1,955	58	18	13	1	7	2,052	TOTAL	2,234	79	21	18	0	11	2,363

AM PEAK HOUR 7:15 AM
AM PEAK VOLUME 459

AM PEAK HOUR 3:00 PM
AM PEAK VOLUME 344

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	4,189	137	39	31	1	18	4,415
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	94.9%	3.1%	0.9%	0.7%	0.0%	0.4%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023

CITY: San Bernardino

JOB #: SC4019

LOCATION: ADT1 Sterling north of 5th

AM TIME	COMBINED							PM Time	COMBINED						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	19	1	0	0	0	0	20	12:00	111	7	4	0	0	0	122
0:15	33	1	0	0	0	0	34	12:15	103	6	2	1	0	0	112
0:30	11	0	1	1	0	0	13	12:30	93	6	0	0	0	1	100
0:45	22	0	1	0	0	0	23	12:45	116	2	1	3	0	1	123
1:00	18	0	0	0	0	0	18	13:00	127	5	4	2	0	0	138
1:15	18	0	0	0	0	0	18	13:15	95	4	0	2	0	0	101
1:30	12	0	0	0	0	0	12	13:30	128	8	3	1	0	0	140
1:45	14	0	0	0	0	0	14	13:45	141	13	0	0	0	0	154
2:00	9	0	1	1	1	0	12	14:00	120	11	0	2	0	1	134
2:15	6	1	0	1	0	0	8	14:15	145	6	2	0	0	1	154
2:30	14	0	0	0	0	0	14	14:30	160	7	1	1	0	1	170
2:45	13	0	0	0	0	0	13	14:45	160	8	3	0	0	1	172
3:00	11	0	0	0	0	0	11	15:00	172	5	1	4	0	3	185
3:15	13	1	0	0	0	0	14	15:15	175	1	4	0	0	0	180
3:30	34	1	0	0	0	0	35	15:30	214	3	2	1	0	2	222
3:45	26	0	0	0	0	0	26	15:45	202	4	1	0	0	2	209
4:00	26	1	0	0	0	0	27	16:00	144	7	0	3	0	3	157
4:15	30	1	0	0	0	0	31	16:15	151	5	1	0	0	1	158
4:30	51	0	0	0	0	0	51	16:30	187	10	0	1	0	0	198
4:45	58	1	0	0	0	0	59	16:45	186	3	1	0	0	0	190
5:00	34	1	0	0	0	0	35	17:00	161	6	1	1	0	1	170
5:15	44	1	0	0	0	0	45	17:15	177	8	0	1	0	0	186
5:30	75	1	1	0	0	0	77	17:30	175	5	2	2	0	0	184
5:45	74	2	0	0	0	0	76	17:45	152	4	0	1	0	0	157
6:00	50	3	2	1	0	0	56	18:00	133	3	2	2	0	0	140
6:15	50	1	1	0	0	0	52	18:15	134	3	1	0	0	0	138
6:30	79	2	2	1	0	1	85	18:30	101	2	0	1	0	0	104
6:45	127	0	2	0	0	2	131	18:45	103	3	0	1	0	0	107
7:00	109	5	1	0	0	2	117	19:00	91	2	0	1	0	0	94
7:15	136	5	1	1	0	1	144	19:15	97	2	0	1	0	0	100
7:30	135	9	1	0	0	3	148	19:30	89	3	0	0	0	0	92
7:45	175	6	2	3	0	0	186	19:45	96	2	0	1	0	0	99
8:00	157	7	0	0	0	0	164	20:00	81	4	0	0	0	0	85
8:15	116	6	1	2	0	3	128	20:15	67	3	1	0	0	0	71
8:30	93	7	0	0	0	1	101	20:30	79	2	0	0	0	0	81
8:45	111	3	0	2	0	0	116	20:45	83	1	0	0	0	0	84
9:00	101	6	1	1	0	2	111	21:00	75	1	0	0	0	0	76
9:15	85	8	1	0	0	0	94	21:15	74	1	0	0	0	0	75
9:30	78	3	0	1	0	0	82	21:30	66	1	0	0	0	0	67
9:45	82	7	2	0	0	0	91	21:45	56	1	0	1	0	0	58
10:00	65	2	3	2	0	0	72	22:00	31	0	0	0	0	0	31
10:15	89	9	0	1	0	0	99	22:15	42	1	0	1	0	0	44
10:30	80	7	3	1	0	0	91	22:30	39	2	0	0	0	0	41
10:45	76	3	3	1	0	0	83	22:45	33	3	1	1	0	0	38
11:00	102	2	2	0	0	0	106	23:00	41	0	0	0	0	0	41
11:15	78	5	0	1	0	0	84	23:15	32	0	1	0	0	0	33
11:30	90	3	0	1	0	1	95	23:30	35	1	1	1	0	0	38
11:45	93	4	3	2	0	0	102	23:45	27	0	0	1	0	0	28
TOTAL	3,022	126	35	24	1	16	3,224	TOTAL	5,300	185	40	38	0	18	5,581
AM PEAK HOUR							7:15 AM	AM PEAK HOUR							3:00 PM
AM PEAK VOLUME							642	AM PEAK VOLUME							796

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	8,322	311	75	62	1	34	8,805
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	94.5%	3.5%	0.9%	0.7%	0.0%	0.4%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	Buses								

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023**CITY:** San Bernardino**JOB #:** SC4019**LOCATION:** ADT2 5th east of Sterling

AM TIME	EB							PM Time	EB						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	4	0	0	0	0	0	4	12:00	23	3	3	2	0	0	31
0:15	4	0	0	0	0	0	4	12:15	19	0	4	1	0	0	24
0:30	7	0	0	1	0	0	8	12:30	31	4	0	2	0	1	38
0:45	2	1	1	0	0	0	4	12:45	34	3	0	1	0	0	38
1:00	1	0	0	0	0	0	1	13:00	25	3	1	1	0	0	30
1:15	3	0	0	0	0	0	3	13:15	15	0	0	0	0	0	15
1:30	0	0	0	0	0	0	0	13:30	22	7	0	1	0	0	30
1:45	1	0	0	0	0	0	1	13:45	38	3	1	0	0	0	42
2:00	2	0	1	0	0	0	3	14:00	32	2	1	0	0	0	35
2:15	2	0	0	0	0	0	2	14:15	27	0	1	2	0	0	30
2:30	0	0	0	0	0	0	0	14:30	44	4	1	1	0	0	50
2:45	2	0	0	0	0	0	2	14:45	57	4	1	0	0	0	62
3:00	2	0	0	0	0	0	2	15:00	45	1	1	1	0	0	48
3:15	1	1	0	0	0	0	2	15:15	41	3	0	2	0	0	46
3:30	1	0	0	1	0	0	2	15:30	56	4	0	0	0	0	60
3:45	1	0	1	0	0	0	2	15:45	49	3	0	0	0	0	52
4:00	2	0	0	0	0	0	2	16:00	62	4	0	0	0	1	67
4:15	1	0	0	0	0	0	1	16:15	66	1	0	1	0	0	68
4:30	4	0	0	0	0	0	4	16:30	74	6	0	1	1	1	83
4:45	9	0	0	2	0	0	11	16:45	62	0	0	0	0	0	62
5:00	3	0	0	0	0	0	3	17:00	87	0	0	0	0	0	87
5:15	7	0	0	0	0	1	8	17:15	75	5	0	0	0	0	80
5:30	10	1	0	0	0	0	11	17:30	79	2	0	0	0	0	81
5:45	10	3	0	0	0	0	13	17:45	65	3	2	0	0	0	70
6:00	7	0	0	1	0	0	8	18:00	44	2	1	1	0	0	48
6:15	9	1	0	2	0	0	12	18:15	37	2	2	0	0	0	41
6:30	16	1	1	0	0	0	18	18:30	36	1	0	0	0	0	37
6:45	11	1	2	1	0	1	16	18:45	35	1	0	0	0	0	36
7:00	12	2	0	1	0	0	15	19:00	25	2	0	0	0	0	27
7:15	23	3	1	0	0	0	27	19:15	31	1	0	0	0	0	32
7:30	22	5	1	0	0	0	28	19:30	23	1	0	0	0	0	24
7:45	22	3	0	1	0	0	26	19:45	18	3	1	1	0	0	23
8:00	20	2	0	0	0	0	22	20:00	28	1	2	1	0	0	32
8:15	31	2	1	1	0	0	35	20:15	14	0	0	0	0	0	14
8:30	14	1	1	1	0	0	17	20:30	15	0	0	1	0	0	16
8:45	36	2	0	0	0	0	38	20:45	15	0	1	0	0	0	16
9:00	25	2	0	0	0	0	27	21:00	23	0	0	0	0	0	23
9:15	19	4	3	1	0	0	27	21:15	10	0	0	0	0	0	10
9:30	16	3	1	1	0	0	21	21:30	12	1	0	0	0	0	13
9:45	27	3	0	0	0	0	30	21:45	6	1	0	0	0	0	7
10:00	23	2	1	1	0	0	27	22:00	6	0	0	0	0	0	6
10:15	27	1	1	1	0	1	31	22:15	8	0	0	0	0	0	8
10:30	21	4	0	0	0	0	25	22:30	3	0	0	0	0	0	3
10:45	18	6	2	0	0	0	26	22:45	3	1	0	0	0	0	4
11:00	38	3	1	0	0	0	42	23:00	5	0	0	0	0	0	5
11:15	26	5	0	0	0	0	31	23:15	6	0	0	0	0	0	6
11:30	28	2	0	0	0	0	30	23:30	4	0	1	0	0	0	5
11:45	24	1	0	0	0	0	25	23:45	5	0	1	0	0	0	6
TOTAL	594	65	19	16	0	3	697	TOTAL	1,540	82	25	20	1	3	1,671

AM PEAK HOUR 10:45 AM
AM PEAK VOLUME 129

AM PEAK HOUR 5:00 PM
AM PEAK VOLUME 318

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	2,134	147	44	36	1	6	2,368
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	90.1%	6.2%	1.9%	1.5%	0.0%	0.3%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	4,472	312	99	73	1	15	4,972
CLASS 6	Buses	% OF TOTAL	89.9%	6.3%	2.0%	1.5%	0.0%	0.3%	100.0%

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023
JOB #: SC4019

CITY: San Bernardino
LOCATION: ADT2 5th east of Sterling

AM TIME	WB							PM Time	WB						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	2	1	0	0	0	0	3	12:00	40	4	0	0	0	0	44
0:15	5	1	0	0	0	0	6	12:15	34	2	0	0	0	1	37
0:30	2	0	0	0	0	0	2	12:30	34	1	5	0	0	0	40
0:45	6	0	0	0	0	0	6	12:45	31	1	0	2	0	0	34
1:00	3	0	0	0	0	0	3	13:00	33	6	1	1	0	1	42
1:15	6	0	0	0	0	0	6	13:15	21	13	4	1	0	0	39
1:30	8	0	0	0	0	0	8	13:30	29	7	0	1	0	0	37
1:45	3	0	0	0	0	0	3	13:45	33	2	2	1	0	0	38
2:00	3	0	0	0	0	0	3	14:00	25	5	3	0	0	0	33
2:15	2	0	0	1	0	0	3	14:15	40	3	2	0	0	0	45
2:30	0	1	0	0	0	0	1	14:30	43	2	0	0	0	0	45
2:45	2	0	0	0	0	0	2	14:45	42	5	1	0	0	1	49
3:00	4	0	0	0	0	0	4	15:00	47	0	1	1	0	1	50
3:15	3	0	0	0	0	0	3	15:15	38	5	0	1	0	0	44
3:30	3	0	0	0	0	0	3	15:30	45	2	1	1	0	1	50
3:45	3	0	0	0	0	0	3	15:45	64	5	0	3	0	1	73
4:00	5	0	0	0	0	0	5	16:00	55	3	2	0	0	0	60
4:15	4	1	0	0	0	0	5	16:15	38	2	0	1	0	0	41
4:30	4	0	0	0	0	0	4	16:30	34	3	3	0	0	0	40
4:45	8	0	0	0	0	0	8	16:45	38	2	0	0	0	0	40
5:00	4	0	0	0	0	0	4	17:00	44	3	1	0	0	0	48
5:15	6	1	0	0	0	0	7	17:15	39	4	0	0	0	0	43
5:30	9	2	0	0	0	0	11	17:30	34	1	0	0	0	0	35
5:45	9	1	0	1	0	0	11	17:45	34	3	0	1	0	0	38
6:00	10	0	0	1	0	0	11	18:00	33	4	0	0	0	0	37
6:15	12	0	1	1	0	0	14	18:15	28	3	2	0	0	0	33
6:30	24	2	0	0	0	0	26	18:30	25	0	2	0	0	0	27
6:45	38	1	1	1	0	0	41	18:45	28	1	0	0	0	0	29
7:00	64	0	0	0	0	1	65	19:00	19	1	0	0	0	0	20
7:15	62	3	1	2	0	0	68	19:15	14	1	0	0	0	0	15
7:30	70	3	2	0	0	0	75	19:30	15	1	0	0	0	0	16
7:45	77	6	1	1	0	0	85	19:45	24	1	0	0	0	0	25
8:00	58	0	0	0	0	2	60	20:00	26	0	0	2	0	0	28
8:15	47	3	0	1	0	0	51	20:15	25	1	0	0	0	0	26
8:30	39	2	1	0	0	0	42	20:30	22	1	0	0	0	0	23
8:45	52	3	1	1	0	0	57	20:45	17	0	1	1	0	0	19
9:00	28	3	0	0	0	0	31	21:00	15	0	0	0	0	0	15
9:15	33	4	0	0	0	0	37	21:15	9	0	0	0	0	0	9
9:30	29	2	1	0	0	0	32	21:30	24	0	0	0	0	0	24
9:45	25	2	0	1	0	0	28	21:45	16	0	0	0	0	0	16
10:00	25	0	2	1	0	0	28	22:00	7	0	0	2	0	0	9
10:15	29	1	1	0	0	0	31	22:15	15	0	0	0	0	0	15
10:30	23	5	4	2	0	0	34	22:30	7	0	0	0	0	0	7
10:45	40	4	2	0	0	0	46	22:45	11	1	0	0	0	0	12
11:00	31	3	2	1	0	0	37	23:00	10	0	0	0	0	0	10
11:15	31	5	1	1	0	0	38	23:15	9	1	0	0	0	0	10
11:30	27	1	1	1	0	0	30	23:30	8	0	0	0	0	0	8
11:45	31	4	2	0	0	0	37	23:45	7	0	0	1	0	0	8
TOTAL	1,009	65	24	17	0	3	1,118	TOTAL	1,329	100	31	20	0	6	1,486
AM PEAK HOUR							7:00 AM	AM PEAK HOUR							3:15 PM
AM PEAK VOLUME							293	AM PEAK VOLUME							227

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	2,338	165	55	37	0	9	2,604
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	89.8%	6.3%	2.1%	1.4%	0.0%	0.3%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023

CITY: San Bernardino

JOB #: SC4019

LOCATION: ADT2 5th east of Sterling

AM TIME	COMBINED							PM Time	COMBINED						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	6	1	0	0	0	0	7	12:00	63	7	3	2	0	0	75
0:15	9	1	0	0	0	0	10	12:15	53	2	4	1	0	1	61
0:30	9	0	0	1	0	0	10	12:30	65	5	5	2	0	1	78
0:45	8	1	1	0	0	0	10	12:45	65	4	0	3	0	0	72
1:00	4	0	0	0	0	0	4	13:00	58	9	2	2	0	1	72
1:15	9	0	0	0	0	0	9	13:15	36	13	4	1	0	0	54
1:30	8	0	0	0	0	0	8	13:30	51	14	0	2	0	0	67
1:45	4	0	0	0	0	0	4	13:45	71	5	3	1	0	0	80
2:00	5	0	1	0	0	0	6	14:00	57	7	4	0	0	0	68
2:15	4	0	0	1	0	0	5	14:15	67	3	3	2	0	0	75
2:30	0	1	0	0	0	0	1	14:30	87	6	1	1	0	0	95
2:45	4	0	0	0	0	0	4	14:45	99	9	2	0	0	1	111
3:00	6	0	0	0	0	0	6	15:00	92	1	2	2	0	1	98
3:15	4	1	0	0	0	0	5	15:15	79	8	0	3	0	0	90
3:30	4	0	0	1	0	0	5	15:30	101	6	1	1	0	1	110
3:45	4	0	1	0	0	0	5	15:45	113	8	0	3	0	1	125
4:00	7	0	0	0	0	0	7	16:00	117	7	2	0	0	1	127
4:15	5	1	0	0	0	0	6	16:15	104	3	0	2	0	0	109
4:30	8	0	0	0	0	0	8	16:30	108	9	3	1	1	1	123
4:45	17	0	0	2	0	0	19	16:45	100	2	0	0	0	0	102
5:00	7	0	0	0	0	0	7	17:00	131	3	1	0	0	0	135
5:15	13	1	0	0	0	1	15	17:15	114	9	0	0	0	0	123
5:30	19	3	0	0	0	0	22	17:30	113	3	0	0	0	0	116
5:45	19	4	0	1	0	0	24	17:45	99	6	2	1	0	0	108
6:00	17	0	0	2	0	0	19	18:00	77	6	1	1	0	0	85
6:15	21	1	1	3	0	0	26	18:15	65	5	4	0	0	0	74
6:30	40	3	1	0	0	0	44	18:30	61	1	2	0	0	0	64
6:45	49	2	3	2	0	1	57	18:45	63	2	0	0	0	0	65
7:00	76	2	0	1	0	1	80	19:00	44	3	0	0	0	0	47
7:15	85	6	2	2	0	0	95	19:15	45	2	0	0	0	0	47
7:30	92	8	3	0	0	0	103	19:30	38	2	0	0	0	0	40
7:45	99	9	1	2	0	0	111	19:45	42	4	1	1	0	0	48
8:00	78	2	0	0	0	2	82	20:00	54	1	2	3	0	0	60
8:15	78	5	1	2	0	0	86	20:15	39	1	0	0	0	0	40
8:30	53	3	2	1	0	0	59	20:30	37	1	0	1	0	0	39
8:45	88	5	1	1	0	0	95	20:45	32	0	2	1	0	0	35
9:00	53	5	0	0	0	0	58	21:00	38	0	0	0	0	0	38
9:15	52	8	3	1	0	0	64	21:15	19	0	0	0	0	0	19
9:30	45	5	2	1	0	0	53	21:30	36	1	0	0	0	0	37
9:45	52	5	0	1	0	0	58	21:45	22	1	0	0	0	0	23
10:00	48	2	3	2	0	0	55	22:00	13	0	0	2	0	0	15
10:15	56	2	2	1	0	1	62	22:15	23	0	0	0	0	0	23
10:30	44	9	4	2	0	0	59	22:30	10	0	0	0	0	0	10
10:45	58	10	4	0	0	0	72	22:45	14	2	0	0	0	0	16
11:00	69	6	3	1	0	0	79	23:00	15	0	0	0	0	0	15
11:15	57	10	1	1	0	0	69	23:15	15	1	0	0	0	0	16
11:30	55	3	1	1	0	0	60	23:30	12	0	1	0	0	0	13
11:45	55	5	2	0	0	0	62	23:45	12	0	1	1	0	0	14
TOTAL	1,603	130	43	33	0	6	1,815	TOTAL	2,869	182	56	40	1	9	3,157
AM PEAK HOUR							7:15 AM	AM PEAK HOUR							3:45 PM
AM PEAK VOLUME							391	AM PEAK VOLUME							484

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	4,472	312	99	73	1	15	4,972
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	89.9%	6.3%	2.0%	1.5%	0.0%	0.3%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	Buses								

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023

CITY: San Bernardino

JOB #: SC4019

LOCATION: ADT3 Palm south of 5th

AM TIME	NB							PM Time	NB						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	61	1	0	1	0	0	63	12:00	112	6	3	8	0	0	129
0:15	62	1	1	1	0	0	65	12:15	116	3	3	4	0	1	127
0:30	61	2	0	1	0	0	64	12:30	106	3	3	7	0	1	120
0:45	48	0	0	0	0	0	48	12:45	113	9	2	4	0	0	128
1:00	87	0	0	0	0	0	87	13:00	95	5	3	6	0	0	109
1:15	74	0	0	0	0	0	74	13:15	94	10	2	3	0	0	109
1:30	35	3	0	2	0	0	40	13:30	100	8	1	3	0	0	112
1:45	41	1	0	1	0	0	43	13:45	150	1	0	4	0	0	155
2:00	32	1	0	1	0	0	34	14:00	149	6	0	3	0	0	158
2:15	38	0	1	1	0	0	40	14:15	194	5	1	2	0	0	202
2:30	68	3	0	1	0	0	72	14:30	196	9	1	3	0	0	209
2:45	44	1	0	0	0	0	45	14:45	209	4	0	1	0	1	215
3:00	28	1	0	3	0	0	32	15:00	156	2	1	1	0	0	160
3:15	28	2	1	2	0	0	33	15:15	183	4	0	3	0	0	190
3:30	28	0	0	2	0	0	30	15:30	169	3	1	0	0	0	173
3:45	36	5	0	2	0	0	43	15:45	209	4	2	1	0	0	216
4:00	27	3	0	2	0	0	32	16:00	187	6	2	1	0	0	196
4:15	30	0	0	3	0	0	33	16:15	181	9	0	3	0	0	193
4:30	44	3	3	3	0	0	53	16:30	148	2	0	3	0	0	153
4:45	53	2	0	0	0	0	55	16:45	225	8	0	0	0	0	233
5:00	59	3	2	3	0	0	67	17:00	195	1	3	3	0	0	202
5:15	28	5	1	3	0	0	37	17:15	193	2	0	2	0	0	197
5:30	27	2	4	2	0	0	35	17:30	195	3	1	1	0	0	200
5:45	18	1	4	1	0	0	24	17:45	167	3	0	2	0	0	172
6:00	37	5	2	7	0	0	51	18:00	166	5	0	0	0	0	171
6:15	33	6	3	7	0	0	49	18:15	147	0	1	2	0	0	150
6:30	27	7	6	7	0	0	47	18:30	137	2	1	2	0	0	142
6:45	39	5	4	6	0	0	54	18:45	106	1	0	1	0	0	108
7:00	35	5	4	8	0	0	52	19:00	107	2	0	1	0	0	110
7:15	51	4	3	3	0	0	61	19:15	115	0	1	0	0	0	116
7:30	53	11	4	8	0	0	76	19:30	110	3	0	3	0	0	116
7:45	65	6	3	4	0	1	79	19:45	114	2	2	0	0	0	118
8:00	65	1	6	4	0	1	77	20:00	154	2	0	0	0	0	156
8:15	102	4	4	5	0	0	115	20:15	176	2	1	0	0	0	179
8:30	98	9	4	3	0	0	114	20:30	206	1	1	0	0	0	208
8:45	76	3	1	3	0	0	83	20:45	214	0	1	0	0	0	215
9:00	74	3	2	6	0	0	85	21:00	204	0	2	3	0	0	209
9:15	57	5	1	9	0	0	72	21:15	194	9	2	2	0	0	207
9:30	59	7	2	7	0	0	75	21:30	191	2	1	1	0	0	195
9:45	67	7	3	3	0	0	80	21:45	165	5	0	3	0	0	173
10:00	85	5	1	3	0	0	94	22:00	140	2	0	0	0	0	142
10:15	85	10	1	3	0	0	99	22:15	130	3	1	0	0	0	134
10:30	81	4	1	6	0	0	92	22:30	145	0	0	1	0	0	146
10:45	91	4	5	8	0	0	108	22:45	117	0	0	1	0	0	118
11:00	86	7	2	12	0	0	107	23:00	117	1	1	2	0	0	121
11:15	94	11	1	6	0	0	112	23:15	84	2	0	1	0	0	87
11:30	109	7	2	8	0	0	126	23:30	95	1	0	1	0	0	97
11:45	107	6	2	7	0	0	122	23:45	71	0	0	0	0	0	71
TOTAL	2,733	182	84	178	0	2	3,179	TOTAL	7,247	161	44	92	0	3	7,547

AM PEAK HOUR 11:00 AM
AM PEAK VOLUME 467

AM PEAK HOUR 8:30 PM
AM PEAK VOLUME 839

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	9,980	343	128	270	0	5	10,726
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	93.0%	3.2%	1.2%	2.5%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	16,799	636	283	484	0	9	18,211
CLASS 6	Buses	% OF TOTAL	92.2%	3.5%	1.6%	2.7%	0.0%	0.0%	100.0%

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023
JOB #: SC4019

CITY: San Bernardino
LOCATION: ADT3 Palm south of 5th

AM TIME	SB							PM Time	SB						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	15	2	0	1	0	0	18	12:00	49	2	3	5	0	0	59
0:15	15	1	0	0	0	0	16	12:15	81	4	1	4	0	0	90
0:30	10	0	0	2	0	0	12	12:30	91	2	6	2	0	1	102
0:45	7	0	1	0	0	0	8	12:45	62	2	5	5	0	0	74
1:00	14	2	0	0	0	0	16	13:00	74	8	4	3	0	0	89
1:15	17	0	0	0	0	0	17	13:15	87	7	3	7	0	0	104
1:30	6	0	0	2	0	0	8	13:30	101	5	6	1	0	0	113
1:45	4	0	1	0	0	0	5	13:45	109	8	1	3	0	0	121
2:00	16	0	0	0	0	0	16	14:00	113	6	4	2	0	0	125
2:15	14	1	0	3	0	0	18	14:15	118	8	5	6	0	0	137
2:30	16	2	1	1	0	0	20	14:30	101	0	1	3	0	0	105
2:45	17	0	1	7	0	0	25	14:45	90	2	4	1	0	0	97
3:00	10	2	0	2	0	0	14	15:00	97	4	4	4	0	0	109
3:15	26	0	1	4	0	0	31	15:15	106	5	4	0	0	0	115
3:30	68	3	0	1	0	0	72	15:30	141	8	1	2	0	0	152
3:45	73	1	1	1	0	0	76	15:45	148	8	1	4	0	1	162
4:00	30	0	0	2	0	0	32	16:00	94	5	1	5	0	0	105
4:15	31	1	1	3	0	0	36	16:15	124	6	1	3	0	1	135
4:30	77	0	1	1	0	0	79	16:30	150	4	1	4	0	0	159
4:45	94	0	2	3	0	0	99	16:45	125	5	0	1	0	0	131
5:00	31	2	0	1	0	0	34	17:00	106	0	1	1	0	0	108
5:15	45	5	5	2	0	0	57	17:15	139	0	0	2	0	0	141
5:30	91	4	0	1	0	0	96	17:30	110	4	1	2	0	0	117
5:45	77	7	1	3	0	0	88	17:45	86	0	2	1	0	0	89
6:00	42	4	3	2	0	0	51	18:00	91	0	0	1	0	0	92
6:15	73	6	1	4	0	0	84	18:15	82	2	0	1	0	0	85
6:30	67	4	1	2	0	0	74	18:30	55	0	1	0	0	0	56
6:45	81	3	4	2	0	0	90	18:45	66	0	0	2	0	0	68
7:00	81	5	5	4	0	1	96	19:00	59	1	0	1	0	0	61
7:15	99	5	3	2	0	0	109	19:15	57	2	0	0	0	0	59
7:30	134	6	3	2	0	0	145	19:30	61	3	0	0	0	0	64
7:45	177	8	2	3	0	0	190	19:45	60	2	0	0	0	0	62
8:00	180	6	1	4	0	0	191	20:00	55	1	0	0	0	0	56
8:15	166	6	2	2	0	0	176	20:15	74	1	0	2	0	0	77
8:30	102	8	2	6	0	0	118	20:30	80	1	1	0	0	0	82
8:45	99	4	3	1	0	0	107	20:45	74	1	1	0	0	0	76
9:00	66	7	3	4	0	0	80	21:00	63	1	1	0	0	0	65
9:15	51	1	5	3	0	0	60	21:15	53	3	1	2	0	0	59
9:30	90	4	3	2	0	0	99	21:30	87	5	0	2	0	0	94
9:45	92	5	0	3	0	0	100	21:45	36	2	0	0	0	0	38
10:00	83	5	3	5	0	0	96	22:00	46	0	0	0	0	0	46
10:15	77	8	1	4	0	0	90	22:15	41	1	0	0	0	0	42
10:30	64	9	5	6	0	0	84	22:30	38	2	1	0	0	0	41
10:45	74	3	9	5	0	0	91	22:45	43	1	0	0	0	0	44
11:00	67	5	4	4	0	0	80	23:00	38	1	0	1	0	0	40
11:15	59	9	3	6	0	0	77	23:15	30	0	0	1	0	0	31
11:30	73	2	2	6	0	0	83	23:30	25	0	0	1	0	0	26
11:45	70	3	5	3	0	0	81	23:45	32	1	0	4	0	0	37
TOTAL	2,971	159	89	125	0	1	3,345	TOTAL	3,848	134	66	89	0	3	4,140
AM PEAK HOUR							7:30 AM	AM PEAK HOUR							3:45 PM
AM PEAK VOLUME							702	AM PEAK VOLUME							561

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	6,819	293	155	214	0	4	7,485
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	91.1%	3.9%	2.1%	2.9%	0.0%	0.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023

CITY: San Bernardino

JOB #: SC4019

LOCATION: ADT3 Palm south of 5th

AM TIME	COMBINED							PM Time	COMBINED						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	76	3	0	2	0	0	81	12:00	161	8	6	13	0	0	188
0:15	77	2	1	1	0	0	81	12:15	197	7	4	8	0	1	217
0:30	71	2	0	3	0	0	76	12:30	197	5	9	9	0	2	222
0:45	55	0	1	0	0	0	56	12:45	175	11	7	9	0	0	202
1:00	101	2	0	0	0	0	103	13:00	169	13	7	9	0	0	198
1:15	91	0	0	0	0	0	91	13:15	181	17	5	10	0	0	213
1:30	41	3	0	4	0	0	48	13:30	201	13	7	4	0	0	225
1:45	45	1	1	1	0	0	48	13:45	259	9	1	7	0	0	276
2:00	48	1	0	1	0	0	50	14:00	262	12	4	5	0	0	283
2:15	52	1	1	4	0	0	58	14:15	312	13	6	8	0	0	339
2:30	84	5	1	2	0	0	92	14:30	297	9	2	6	0	0	314
2:45	61	1	1	7	0	0	70	14:45	299	6	4	2	0	1	312
3:00	38	3	0	5	0	0	46	15:00	253	6	5	5	0	0	269
3:15	54	2	2	6	0	0	64	15:15	289	9	4	3	0	0	305
3:30	96	3	0	3	0	0	102	15:30	310	11	2	2	0	0	325
3:45	109	6	1	3	0	0	119	15:45	357	12	3	5	0	1	378
4:00	57	3	0	4	0	0	64	16:00	281	11	3	6	0	0	301
4:15	61	1	1	6	0	0	69	16:15	305	15	1	6	0	1	328
4:30	121	3	4	4	0	0	132	16:30	298	6	1	7	0	0	312
4:45	147	2	2	3	0	0	154	16:45	350	13	0	1	0	0	364
5:00	90	5	2	4	0	0	101	17:00	301	1	4	4	0	0	310
5:15	73	10	6	5	0	0	94	17:15	332	2	0	4	0	0	338
5:30	118	6	4	3	0	0	131	17:30	305	7	2	3	0	0	317
5:45	95	8	5	4	0	0	112	17:45	253	3	2	3	0	0	261
6:00	79	9	5	9	0	0	102	18:00	257	5	0	1	0	0	263
6:15	106	12	4	11	0	0	133	18:15	229	2	1	3	0	0	235
6:30	94	11	7	9	0	0	121	18:30	192	2	2	2	0	0	198
6:45	120	8	8	8	0	0	144	18:45	172	1	0	3	0	0	176
7:00	116	10	9	12	0	1	148	19:00	166	3	0	2	0	0	171
7:15	150	9	6	5	0	0	170	19:15	172	2	1	0	0	0	175
7:30	187	17	7	10	0	0	221	19:30	171	6	0	3	0	0	180
7:45	242	14	5	7	0	1	269	19:45	174	4	2	0	0	0	180
8:00	245	7	7	8	0	1	268	20:00	209	3	0	0	0	0	212
8:15	268	10	6	7	0	0	291	20:15	250	3	1	2	0	0	256
8:30	200	17	6	9	0	0	232	20:30	286	2	2	0	0	0	290
8:45	175	7	4	4	0	0	190	20:45	288	1	2	0	0	0	291
9:00	140	10	5	10	0	0	165	21:00	267	1	3	3	0	0	274
9:15	108	6	6	12	0	0	132	21:15	247	12	3	4	0	0	266
9:30	149	11	5	9	0	0	174	21:30	278	7	1	3	0	0	289
9:45	159	12	3	6	0	0	180	21:45	201	7	0	3	0	0	211
10:00	168	10	4	8	0	0	190	22:00	186	2	0	0	0	0	188
10:15	162	18	2	7	0	0	189	22:15	171	4	1	0	0	0	176
10:30	145	13	6	12	0	0	176	22:30	183	2	1	1	0	0	187
10:45	165	7	14	13	0	0	199	22:45	160	1	0	1	0	0	162
11:00	153	12	6	16	0	0	187	23:00	155	2	1	3	0	0	161
11:15	153	20	4	12	0	0	189	23:15	114	2	0	2	0	0	118
11:30	182	9	4	14	0	0	209	23:30	120	1	0	2	0	0	123
11:45	177	9	7	10	0	0	203	23:45	103	1	0	4	0	0	108
TOTAL	5,704	341	173	303	0	3	6,524	TOTAL	11,095	295	110	181	0	6	11,687
AM PEAK HOUR							7:45 AM	AM PEAK HOUR							3:30 PM
AM PEAK VOLUME							1,060	AM PEAK VOLUME							1,332

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	16,799	636	283	484	0	9	18,211
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	92.2%	3.5%	1.6%	2.7%	0.0%	0.0%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	Buses								

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023**CITY:** San Bernardino**JOB #:** SC4019**LOCATION:** ADT4 5th east of Palm

AM TIME	EB							PM Time	EB						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	34	0	0	1	0	0	35	12:00	109	2	1	7	0	0	119
0:15	28	0	0	0	0	0	28	12:15	102	9	4	5	0	1	121
0:30	32	2	0	1	0	0	35	12:30	97	4	1	9	0	1	112
0:45	21	0	0	0	0	0	21	12:45	115	12	2	7	0	0	136
1:00	17	0	0	1	0	0	18	13:00	106	6	2	9	0	1	124
1:15	25	1	0	0	0	0	26	13:15	92	8	2	4	0	0	106
1:30	11	2	0	2	0	0	15	13:30	113	12	0	5	0	0	130
1:45	17	0	0	2	0	0	19	13:45	117	4	1	5	0	1	128
2:00	17	0	0	1	0	0	18	14:00	126	4	0	4	0	0	134
2:15	12	0	0	0	0	0	12	14:15	140	7	2	3	0	0	152
2:30	27	0	0	1	0	0	28	14:30	166	9	2	3	0	0	180
2:45	20	0	0	0	0	0	20	14:45	148	4	1	2	0	1	156
3:00	14	1	0	3	0	0	18	15:00	141	9	2	2	0	1	155
3:15	12	1	1	2	0	0	16	15:15	127	6	2	3	0	0	138
3:30	22	0	0	2	0	0	24	15:30	179	5	1	2	0	0	187
3:45	29	0	1	2	0	0	32	15:45	167	6	2	0	0	1	176
4:00	23	5	0	3	0	0	31	16:00	153	6	2	2	0	0	163
4:15	22	1	0	3	0	0	26	16:15	173	6	0	4	2	1	186
4:30	32	1	3	3	0	0	39	16:30	164	2	0	3	0	0	169
4:45	53	3	0	1	0	0	57	16:45	182	7	0	1	0	0	190
5:00	51	2	2	2	0	0	57	17:00	164	2	2	2	0	0	170
5:15	39	5	1	3	0	0	48	17:15	194	3	0	2	0	0	199
5:30	59	5	5	2	0	1	72	17:30	143	3	0	2	0	1	149
5:45	39	8	4	4	0	0	55	17:45	157	4	1	3	0	0	165
6:00	49	11	3	9	0	0	72	18:00	139	2	0	0	0	0	141
6:15	64	9	3	9	0	0	85	18:15	103	2	0	3	0	0	108
6:30	60	8	5	10	0	1	84	18:30	108	4	1	1	0	0	114
6:45	71	12	5	9	0	0	97	18:45	110	1	0	2	0	0	113
7:00	56	7	4	10	0	0	77	19:00	102	0	0	0	0	0	102
7:15	61	2	3	6	0	0	72	19:15	89	2	0	1	0	0	92
7:30	79	12	3	8	0	0	102	19:30	90	0	0	3	0	0	93
7:45	90	7	3	5	0	0	105	19:45	85	3	2	0	0	0	90
8:00	97	7	6	8	0	0	118	20:00	109	5	0	1	0	0	115
8:15	98	7	5	7	0	0	117	20:15	105	0	1	0	0	0	106
8:30	96	10	5	4	0	0	115	20:30	115	2	0	0	0	0	117
8:45	99	5	1	3	0	0	108	20:45	112	3	0	0	0	0	115
9:00	89	6	4	10	0	0	109	21:00	85	0	1	3	1	0	90
9:15	75	15	2	10	0	0	102	21:15	103	4	2	2	0	0	111
9:30	65	7	1	10	0	0	83	21:30	89	2	0	2	0	0	93
9:45	71	6	2	6	0	0	85	21:45	73	2	2	2	0	0	79
10:00	87	9	1	5	0	0	102	22:00	75	0	0	0	0	0	75
10:15	90	6	0	6	0	0	102	22:15	74	1	1	0	0	0	76
10:30	77	7	1	8	0	1	94	22:30	48	0	0	2	0	0	50
10:45	96	5	2	10	0	0	113	22:45	45	0	1	1	0	0	47
11:00	96	10	2	9	0	0	117	23:00	52	1	0	2	0	0	55
11:15	95	8	0	8	0	0	111	23:15	42	2	0	1	0	0	45
11:30	108	10	1	8	0	0	127	23:30	38	1	1	1	0	0	41
11:45	89	3	2	8	0	0	102	23:45	32	0	0	0	0	0	32
TOTAL	2,614	226	81	225	0	3	3,149	TOTAL	5,398	177	42	116	3	9	5,745

AM PEAK HOUR 10:45 AM
AM PEAK VOLUME 468

AM PEAK HOUR 4:30 PM
AM PEAK VOLUME 728

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	8,012	403	123	341	3	12	8,894
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	90.1%	4.5%	1.4%	3.8%	0.0%	0.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV	TOTAL: ALL	15,815	826	304	625	4	23	17,597
CLASS 6	Buses	% OF TOTAL	89.9%	4.7%	1.7%	3.6%	0.0%	0.1%	100.0%

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023
JOB #: SC4019CITY: San Bernardino
LOCATION: ADT4 5th east of Palm

AM TIME	WB							PM Time	WB						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	21	3	0	1	0	0	25	12:00	111	10	4	8	0	1	134
0:15	12	0	0	0	0	0	12	12:15	96	9	3	4	0	0	112
0:30	13	0	0	2	0	0	15	12:30	111	6	5	3	0	1	126
0:45	9	0	0	0	0	0	9	12:45	86	9	5	8	0	1	109
1:00	10	2	0	0	0	0	12	13:00	88	7	4	5	0	0	104
1:15	14	0	0	0	0	0	14	13:15	109	11	1	13	0	0	134
1:30	12	0	0	2	0	0	14	13:30	120	11	4	4	0	0	139
1:45	4	0	0	0	0	0	4	13:45	127	10	2	5	0	0	144
2:00	11	0	0	0	0	0	11	14:00	115	15	4	3	0	0	137
2:15	5	1	0	3	0	0	9	14:15	108	7	5	6	0	0	126
2:30	7	1	1	1	0	0	10	14:30	128	4	0	4	0	0	136
2:45	10	0	1	7	0	0	18	14:45	141	8	5	2	0	1	157
3:00	7	2	0	2	0	0	11	15:00	138	10	5	5	0	0	158
3:15	9	0	1	4	0	0	14	15:15	124	7	5	2	0	0	138
3:30	27	1	0	1	0	0	29	15:30	178	9	4	4	0	0	195
3:45	33	2	1	0	0	0	36	15:45	148	11	4	6	0	0	169
4:00	14	1	0	3	0	0	18	16:00	131	6	2	6	0	0	145
4:15	20	1	1	2	0	1	25	16:15	144	4	3	4	0	0	155
4:30	32	1	1	1	0	0	35	16:30	130	6	1	4	0	1	142
4:45	58	1	2	3	0	0	64	16:45	133	5	1	1	0	0	140
5:00	21	0	0	1	0	0	22	17:00	130	5	4	2	0	0	141
5:15	38	5	4	3	0	0	50	17:15	129	4	0	3	0	0	136
5:30	59	7	0	2	0	0	68	17:30	103	5	0	2	0	0	110
5:45	91	6	2	3	0	0	102	17:45	108	3	1	2	0	0	114
6:00	64	7	4	3	0	1	79	18:00	109	5	1	2	0	0	117
6:15	79	6	0	4	0	0	89	18:15	102	3	0	0	0	0	105
6:30	106	8	2	4	1	0	121	18:30	78	3	0	0	0	0	81
6:45	141	4	4	2	0	0	151	18:45	77	3	1	3	0	0	84
7:00	136	4	4	3	0	0	147	19:00	99	2	0	1	0	0	102
7:15	142	10	3	5	0	0	160	19:15	87	3	0	0	0	0	90
7:30	172	4	5	4	0	2	187	19:30	73	1	1	2	0	0	77
7:45	216	7	3	5	0	0	231	19:45	74	2	0	0	0	0	76
8:00	185	8	2	6	0	0	201	20:00	79	2	0	1	0	0	82
8:15	164	6	4	2	0	1	177	20:15	103	0	1	2	0	0	106
8:30	117	9	4	4	0	0	134	20:30	100	1	1	0	0	0	102
8:45	116	12	3	5	0	0	136	20:45	74	1	1	2	0	0	78
9:00	85	8	3	3	0	1	100	21:00	61	0	0	0	0	0	61
9:15	78	5	5	1	0	0	89	21:15	64	2	1	2	0	0	69
9:30	72	3	4	4	0	0	83	21:30	89	4	0	2	0	0	95
9:45	93	5	1	3	0	0	102	21:45	53	0	0	0	0	0	53
10:00	85	5	4	4	0	0	98	22:00	55	1	0	0	0	0	56
10:15	87	8	2	4	0	0	101	22:15	51	1	0	0	0	0	52
10:30	94	11	4	12	0	0	121	22:30	43	0	0	0	0	0	43
10:45	91	6	10	8	0	0	115	22:45	42	1	0	1	0	0	44
11:00	74	12	7	5	0	0	98	23:00	40	3	0	0	0	0	43
11:15	82	5	4	10	0	0	101	23:15	29	0	0	1	0	0	30
11:30	112	7	2	6	0	0	127	23:30	31	0	0	1	0	0	32
11:45	85	8	4	5	0	0	102	23:45	41	1	0	5	0	0	47
TOTAL	3,213	202	102	153	1	6	3,677	TOTAL	4,590	221	79	131	0	5	5,026
AM PEAK HOUR							7:30 AM	AM PEAK HOUR							3:30 PM
AM PEAK VOLUME							796	AM PEAK VOLUME							664

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	7,803	423	181	284	1	11	8,703
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	89.7%	4.9%	2.1%	3.3%	0.0%	0.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	BUS								

A13123

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

Prepared by AimTD LLC tel. 714 253 7888 cs@aimtd.com

DATE: Thursday, May 18, 2023

CITY: San Bernardino

JOB #: SC4019

LOCATION: ADT4 5th east of Palm

AM TIME	COMBINED							PM Time	COMBINED						
	1	2	3	4	5	6	TOTAL		1	2	3	4	5	6	TOTAL
0:00	55	3	0	2	0	0	60	12:00	220	12	5	15	0	1	253
0:15	40	0	0	0	0	0	40	12:15	198	18	7	9	0	1	233
0:30	45	2	0	3	0	0	50	12:30	208	10	6	12	0	2	238
0:45	30	0	0	0	0	0	30	12:45	201	21	7	15	0	1	245
1:00	27	2	0	1	0	0	30	13:00	194	13	6	14	0	1	228
1:15	39	1	0	0	0	0	40	13:15	201	19	3	17	0	0	240
1:30	23	2	0	4	0	0	29	13:30	233	23	4	9	0	0	269
1:45	21	0	0	2	0	0	23	13:45	244	14	3	10	0	1	272
2:00	28	0	0	1	0	0	29	14:00	241	19	4	7	0	0	271
2:15	17	1	0	3	0	0	21	14:15	248	14	7	9	0	0	278
2:30	34	1	1	2	0	0	38	14:30	294	13	2	7	0	0	316
2:45	30	0	1	7	0	0	38	14:45	289	12	6	4	0	2	313
3:00	21	3	0	5	0	0	29	15:00	279	19	7	7	0	1	313
3:15	21	1	2	6	0	0	30	15:15	251	13	7	5	0	0	276
3:30	49	1	0	3	0	0	53	15:30	357	14	5	6	0	0	382
3:45	62	2	2	2	0	0	68	15:45	315	17	6	6	0	1	345
4:00	37	6	0	6	0	0	49	16:00	284	12	4	8	0	0	308
4:15	42	2	1	5	0	1	51	16:15	317	10	3	8	2	1	341
4:30	64	2	4	4	0	0	74	16:30	294	8	1	7	0	1	311
4:45	111	4	2	4	0	0	121	16:45	315	12	1	2	0	0	330
5:00	72	2	2	3	0	0	79	17:00	294	7	6	4	0	0	311
5:15	77	10	5	6	0	0	98	17:15	323	7	0	5	0	0	335
5:30	118	12	5	4	0	1	140	17:30	246	8	0	4	0	1	259
5:45	130	14	6	7	0	0	157	17:45	265	7	2	5	0	0	279
6:00	113	18	7	12	0	1	151	18:00	248	7	1	2	0	0	258
6:15	143	15	3	13	0	0	174	18:15	205	5	0	3	0	0	213
6:30	166	16	7	14	1	1	205	18:30	186	7	1	1	0	0	195
6:45	212	16	9	11	0	0	248	18:45	187	4	1	5	0	0	197
7:00	192	11	8	13	0	0	224	19:00	201	2	0	1	0	0	204
7:15	203	12	6	11	0	0	232	19:15	176	5	0	1	0	0	182
7:30	251	16	8	12	0	2	289	19:30	163	1	1	5	0	0	170
7:45	306	14	6	10	0	0	336	19:45	159	5	2	0	0	0	166
8:00	282	15	8	14	0	0	319	20:00	188	7	0	2	0	0	197
8:15	262	13	9	9	0	1	294	20:15	208	0	2	2	0	0	212
8:30	213	19	9	8	0	0	249	20:30	215	3	1	0	0	0	219
8:45	215	17	4	8	0	0	244	20:45	186	4	1	2	0	0	193
9:00	174	14	7	13	0	1	209	21:00	146	0	1	3	1	0	151
9:15	153	20	7	11	0	0	191	21:15	167	6	3	4	0	0	180
9:30	137	10	5	14	0	0	166	21:30	178	6	0	4	0	0	188
9:45	164	11	3	9	0	0	187	21:45	126	2	2	2	0	0	132
10:00	172	14	5	9	0	0	200	22:00	130	1	0	0	0	0	131
10:15	177	14	2	10	0	0	203	22:15	125	2	1	0	0	0	128
10:30	171	18	5	20	0	1	215	22:30	91	0	0	2	0	0	93
10:45	187	11	12	18	0	0	228	22:45	87	1	1	2	0	0	91
11:00	170	22	9	14	0	0	215	23:00	92	4	0	2	0	0	98
11:15	177	13	4	18	0	0	212	23:15	71	2	0	2	0	0	75
11:30	220	17	3	14	0	0	254	23:30	69	1	1	2	0	0	73
11:45	174	11	6	13	0	0	204	23:45	73	1	0	5	0	0	79
TOTAL	5,827	428	183	378	1	9	6,826	TOTAL	9,988	398	121	247	3	14	10,771
AM PEAK HOUR							7:30 AM	AM PEAK HOUR							3:30 PM
AM PEAK VOLUME							1,238	AM PEAK VOLUME							1,376

CLASS 1	PASSENGER VEHICLES	TOTAL: AM+PM	15,815	826	304	625	4	23	17,597
CLASS 2	2-AXLE TRUCKS	% OF TOTAL	89.9%	4.7%	1.7%	3.6%	0.0%	0.1%	100.0%
CLASS 3	3-AXLE TRUCKS								
CLASS 4	4 OR MORE AXLE TRUCKS								
CLASS 5	RV								
CLASS 6	Buses								

T050223

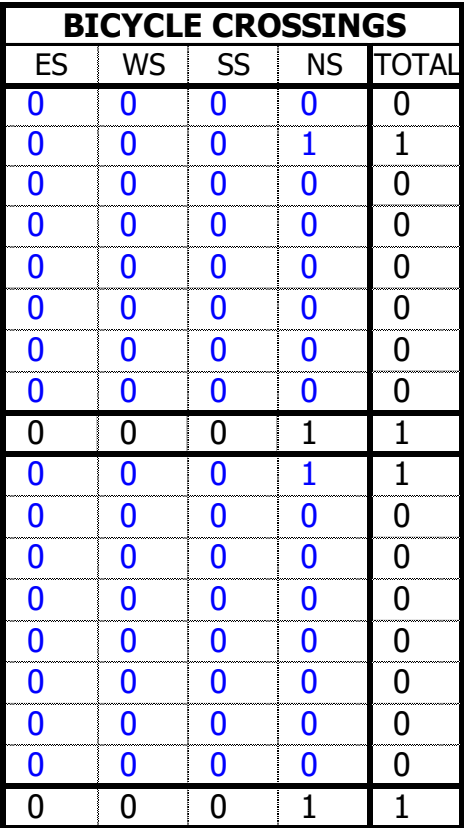
PROJECT #: SC4019
LOCATION #: 1
CONTROL: STOP E/W

PROJECT #:
LOCATION #:
CONTROL:

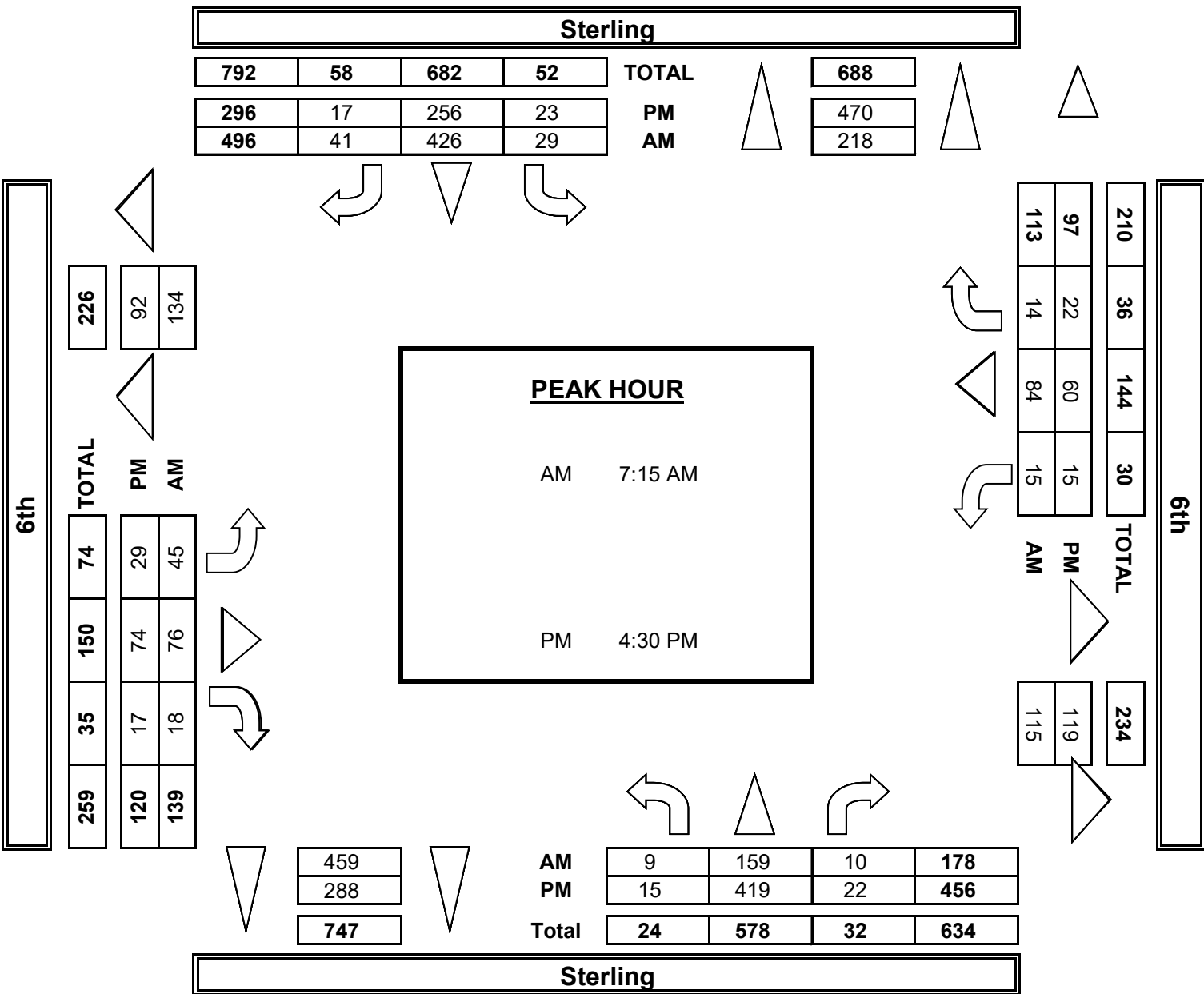
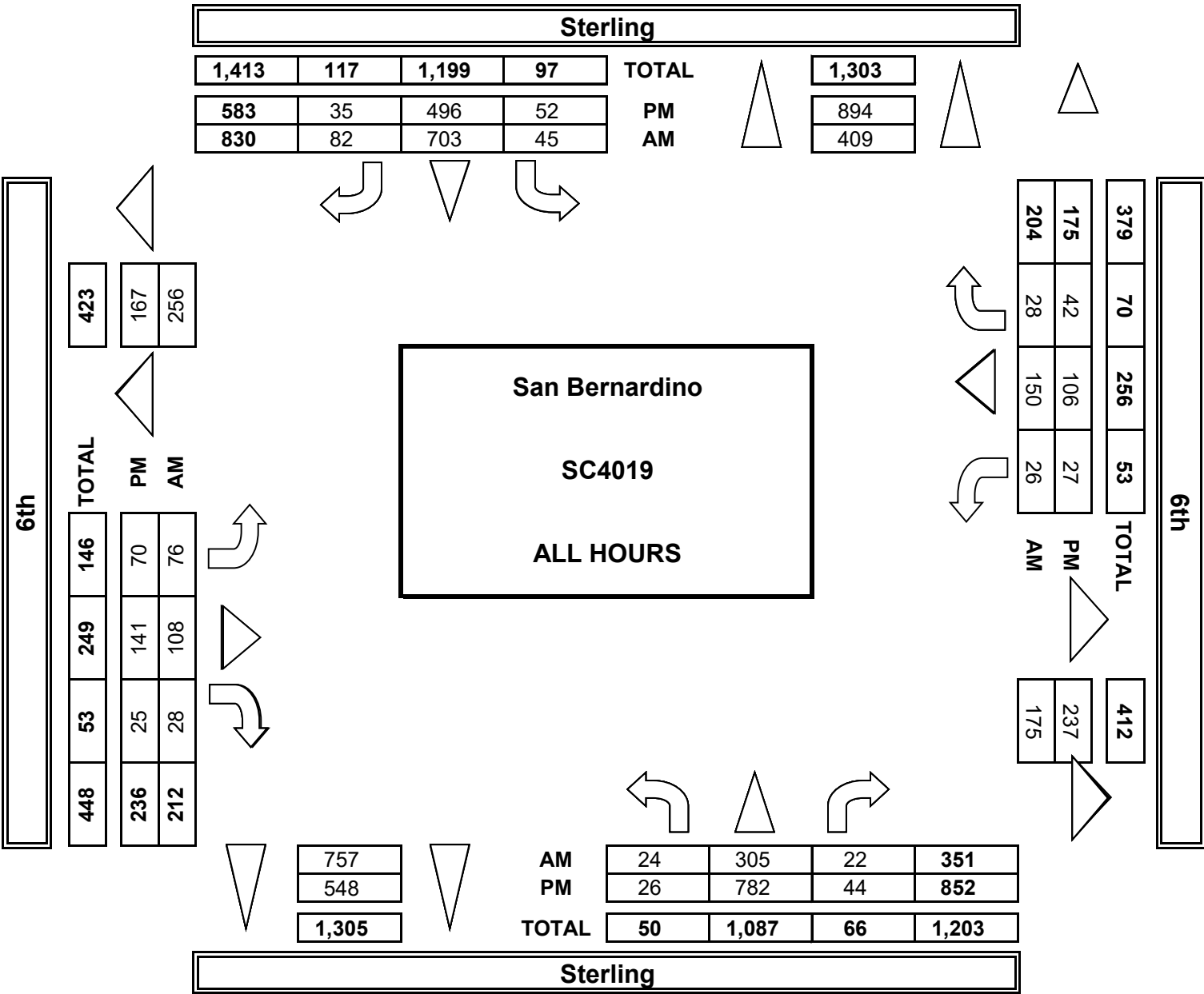
AM		▲	
PM		N	
MD	◀ W		E ▶
OTHER		S	
OTHER		▼	

RTOR			
NRR X	SRR X	ERR X	WRR X

0	0	0	0
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AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
6th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	Sterling			Sterling	
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2

AM	7:00 AM	8	32	2	4	75
	7:15 AM	7	36	3	10	96
	7:30 AM	1	33	2	7	118
	7:45 AM	1	42	6	5	137
	8:00 AM	1	57	3	9	91
	8:15 AM	3	44	6	2	81
	8:30 AM	3	44	2	5	63
	8:45 AM	1	44	4	6	68
	VOLUMES	25	329	26	47	727
	APPROACH %	7%	87%	7%	5%	84%
	APP/DEPART	380	/	444	863	/
	BEGIN PEAK HR	7:15 AM				
PM	VOLUMES	10	167	13	30	441
	APPROACH %	5%	88%	7%	6%	85%
	PEAK HR FACTOR	0.792			0.867	
	APP/DEPART	190	/	229	517	/
	4:00 PM	3	90	4	8	67
	4:15 PM	2	90	6	5	62
	4:30 PM	3	111	4	7	79
	4:45 PM	1	104	5	9	74
	5:00 PM	6	107	7	2	51
	5:15 PM	5	114	7	5	58
	5:30 PM	3	103	11	6	64
	5:45 PM	3	92	6	12	57
	VOLUMES	26	809	49	53	509
	APPROACH %	3%	92%	5%	9%	85%

APP/DEPART	883	/	929	598	/
BEGIN PEAK HR	4:30 PM				
VOLUMES	15	436	23	23	261
APPROACH %	3%	92%	5%	8%	86%
PEAK HR FACTOR	0.938			0.839	
APP/DEPART	473	/	489	302	/

6th

WEST SIDE

569	250	/	251	191	/	173	0
18	31	77	18	15	63	22	1,000
6%	25%	61%	14%	15%	63%	22%	
		0.884			0.843		0.956
294	126	/	123	100	/	96	0

Sterling

NORTH SIDE

EAST SIDE

6th

SOUTH SIDE

Sterling

U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
1
STOP E/W

CLASS 1:
PASSENGER
VEHICLES

NOTES:

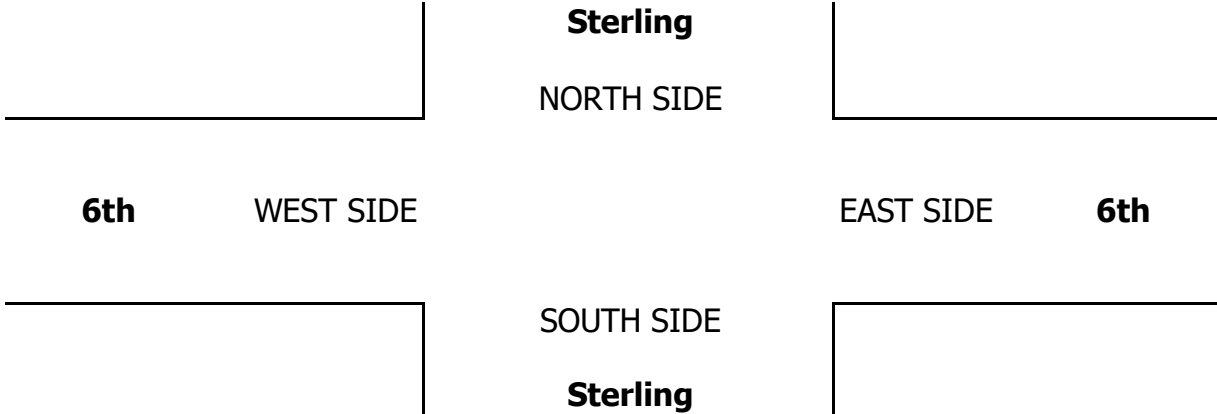
AM
PM
MD
OTHER
OTHER

▲
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◀ W
E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			6th			6th			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL

AM	7:00 AM	8	24	2	4	69	15	6	10	4	2	27	2	173
	7:15 AM	5	31	1	8	90	15	17	27	6	3	32	3	238
	7:30 AM	1	24	2	5	105	9	13	22	1	2	15	2	201
	7:45 AM	1	37	2	5	126	4	4	9	5	4	12	3	212
	8:00 AM	1	52	1	9	89	7	8	17	6	3	21	3	217
	8:15 AM	3	32	4	2	71	9	10	6	3	2	13	6	161
	8:30 AM	3	36	2	3	58	12	6	9	0	3	10	3	145
	8:45 AM	1	36	2	6	66	3	1	2	3	3	11	2	136
	VOLUMES	23	272	16	42	674	74	65	102	28	22	141	24	1,483
	APPROACH %	7%	87%	5%	5%	85%	9%	33%	52%	14%	12%	75%	13%	
PM	APP/DEPART	311	/	361	790	/	724	195	/	160	187	/	238	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	8	144	6	27	410	35	42	75	18	12	80	11	868
	APPROACH %	5%	91%	4%	6%	87%	7%	31%	56%	13%	12%	78%	11%	
	PEAK HR FACTOR	0.731			0.874			0.675			0.678			0.912
	APP/DEPART	158	/	197	472	/	440	135	/	108	103	/	123	0
	4:00 PM	3	80	2	8	55	7	8	16	2	2	13	3	199
	4:15 PM	2	88	4	5	56	6	8	15	0	1	9	4	198
	4:30 PM	3	99	4	7	73	4	6	19	4	4	14	5	242
	4:45 PM	1	97	5	9	74	3	5	12	5	4	17	7	239
	5:00 PM	6	94	5	2	49	4	6	17	5	2	11	6	207
	5:15 PM	5	105	7	5	53	5	9	23	2	5	13	4	236
	5:30 PM	3	95	7	4	62	2	8	11	2	1	12	5	212
	5:45 PM	3	90	3	10	55	3	15	16	3	3	9	3	213
	VOLUMES	26	748	37	50	477	34	65	129	23	22	98	37	1,746
	APPROACH %	3%	92%	5%	9%	85%	6%	30%	59%	11%	14%	62%	24%	
	APP/DEPART	811	/	850	561	/	522	217	/	216	157	/	158	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	15	395	21	23	249	16	26	71	16	15	55	22	924
	APPROACH %	3%	92%	5%	8%	86%	6%	23%	63%	14%	16%	60%	24%	
	PEAK HR FACTOR	0.921			0.837			0.831			0.821			0.955
	APP/DEPART	431	/	443	288	/	280	113	/	115	92	/	86	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
---	---	---	---

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
1
STOP E/W

CLASS 2:
2-AXLE
WORK
VEHICLES/
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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N
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E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	0	1	0	0	1	0	

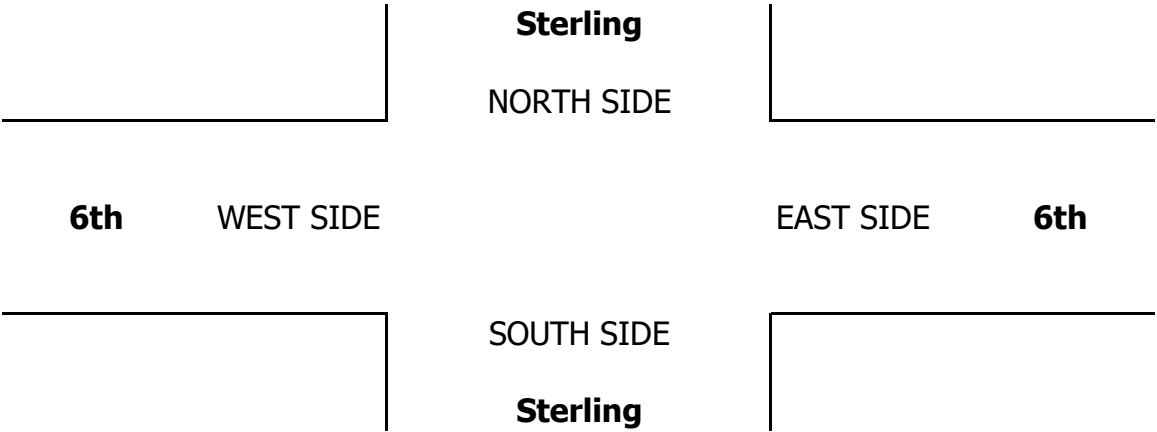
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	0	1	0	0	4	0	0	0	0	0	0	5	
	7:15 AM	0	3	0	1	2	1	0	0	0	0	0	7	
	7:30 AM	0	6	0	1	3	0	2	0	0	0	1	14	
	7:45 AM	0	2	1	0	3	1	0	1	0	0	2	12	
	8:00 AM	0	3	1	0	1	0	1	0	0	2	0	8	
	8:15 AM	0	3	1	0	3	0	0	1	0	0	2	10	
	8:30 AM	0	5	0	1	2	0	1	0	0	0	1	11	
	8:45 AM	0	1	1	0	1	0	0	0	0	0	1	0	4
	VOLUMES	0	24	4	3	19	2	4	2	0	2	7	4	71
	APPROACH %	0%	86%	14%	13%	79%	8%	67%	33%	0%	15%	54%	31%	
APP/DEPART	28	/	32	24	/	21	6	/	9	13	/	9	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	14	2	2	9	2	3	1	0	2	3	3	41	
APPROACH %	0%	88%	13%	15%	69%	15%	75%	25%	0%	25%	38%	38%		
PEAK HR FACTOR	0.667			0.813			0.500			0.500			0.732	
APP/DEPART	16	/	20	13	/	11	4	/	5	8	/	5	0	
PM	4:00 PM	0	1	1	0	5	0	0	1	0	0	0	1	9
	4:15 PM	0	1	1	0	1	0	0	3	1	1	2	1	11
	4:30 PM	0	8	0	0	2	0	1	0	0	0	0	0	11
	4:45 PM	0	3	0	0	0	0	1	0	0	0	1	0	5
	5:00 PM	0	4	1	0	1	0	0	2	0	0	4	0	12
	5:15 PM	0	4	0	0	3	0	0	0	1	0	0	0	8
	5:30 PM	0	3	0	1	1	0	0	1	0	1	0	2	9
	5:45 PM	0	1	2	1	1	0	0	2	0	0	0	0	7
	VOLUMES	0	25	5	2	14	0	2	9	2	2	7	4	72
	APPROACH %	0%	83%	17%	13%	88%	0%	15%	69%	15%	15%	54%	31%	
APP/DEPART	30	/	31	16	/	18	13	/	16	13	/	7	0	
BEGIN PEAK HR	4:30 PM													
VOLUMES	0	19	1	0	6	0	2	2	1	0	5	0	36	
APPROACH %	0%	95%	5%	0%	100%	0%	40%	40%	20%	0%	100%	0%		
PEAK HR FACTOR	0.625			0.500			0.625			0.313			0.750	
APP/DEPART	20	/	21	6	/	7	5	/	3	5	/	5	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
1
STOP E/W

CLASS 3:
3-AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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N
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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	0	1	0	0	1	0	

AM	7:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
	7:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
	7:30 AM	0	0	0	0	1	0	0	0	0	1	0	0	2
	7:45 AM	0	1	1	0	0	1	0	0	0	0	0	0	3
	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	1	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
	VOLUMES	0	2	2	0	1	1	0	0	0	1	1	0	8
	APPROACH %	0%	50%	50%	0%	50%	50%	0%	0%	0%	50%	50%	0%	
PM	APP/DEPART	4	/	2	2	/	2	0	/	2	2	/	2	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	1	2	0	1	1	0	0	0	0	1	0	6
	APPROACH %	0%	33%	67%	0%	50%	50%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.375			0.500			0.000			0.250			0.500
	APP/DEPART	3	/	1	2	/	1	0	/	2	1	/	2	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	1	0	0	0	0	1	0	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	2
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	2	2	0	1	1	0	0	0	0	1	0	7
	APPROACH %	0%	50%	50%	0%	50%	50%	0%	0%	0%	0%	100%	0%	
	APP/DEPART	4	/	2	2	/	1	0	/	2	1	/	2	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	2	0	0	0	1	0	0	0	0	0	0	3
	APPROACH %	0%	100%	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.500			0.250			0.000			0.000			0.375
	APP/DEPART	2	/	2	1	/	0	0	/	0	0	/	1	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X

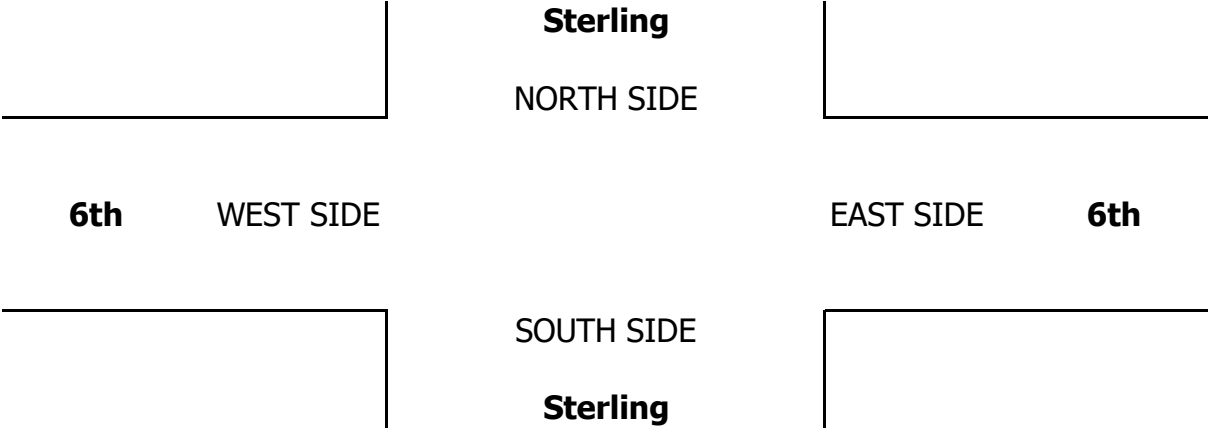
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
---	---	---	---



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
1
STOP E/W

CLASS 4:
4 OR MORE
AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	0	1	0	0	1	0	

AM	7:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
	7:15 AM	0	0	0	0	1	0	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	2	0	0	0	0	1	0	0	3
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	1	0	0	1	0	0	1	0	0	0	0	3
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	2
	VOLUMES	0	3	0	0	4	1	0	1	0	1	0	0	10
	APPROACH %	0%	100%	0%	0%	80%	20%	0%	100%	0%	100%	0%	0%	
PM	APP/DEPART	3	/	3	5	/	5	1	/	1	1	/	1	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	0	0	0	3	0	0	0	0	1	0	0	4
	APPROACH %	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	
	PEAK HR FACTOR	0.000			0.375			0.000			0.250			0.333
	APP/DEPART	0	/	0	3	/	4	0	/	0	1	/	0	0
	4:00 PM	0	2	0	0	0	0	0	0	0	1	0	1	4
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
	4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:30 PM	0	1	0	0	0	0	0	0	0	1	0	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
	VOLUMES	0	5	0	0	1	0	0	1	0	3	0	1	11
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	100%	0%	75%	0%	25%	
	APP/DEPART	5	/	6	1	/	4	1	/	1	4	/	0	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	2	0	0	1	0	0	1	0	0	0	0	4
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.500			0.250			0.250			0.000			1.000
	APP/DEPART	2	/	2	1	/	1	1	/	1	0	/	0	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

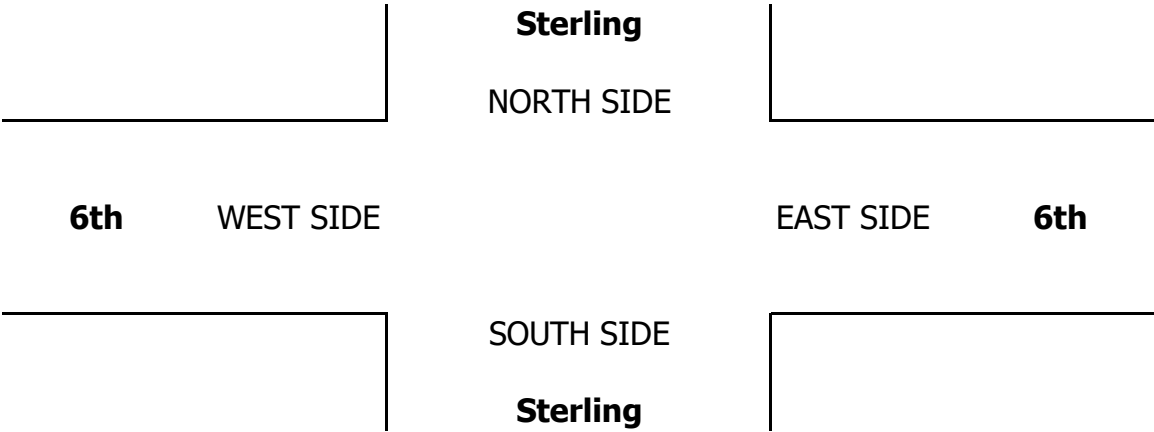
RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
1
STOP E/W

CLASS 5:
RV

NOTES:

AM
PM
MD
OTHER
OTHER

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E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	0	1	0	0	1	0	

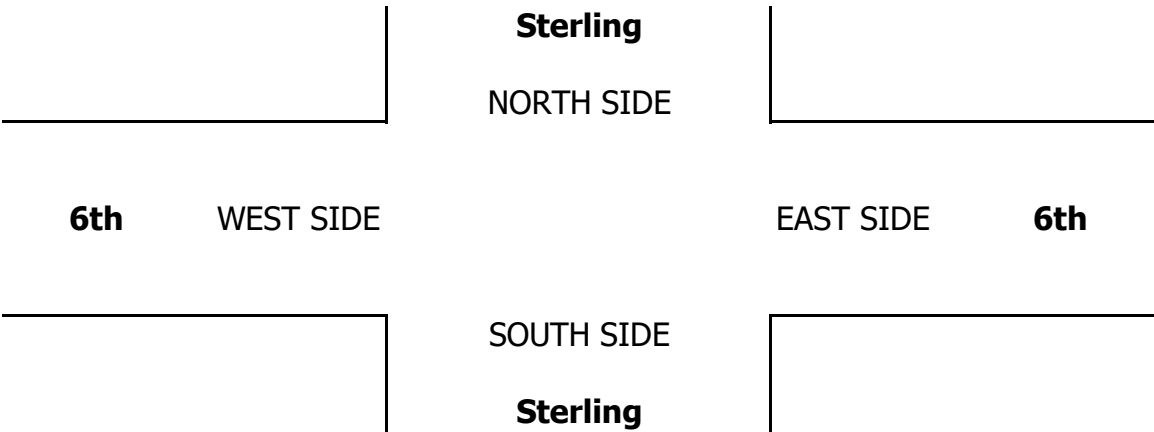
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	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
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0
0	0	0	0	0
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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
1
STOP E/W

CLASS 6:

NOTES:

AM
PM
MD
OTHER
OTHER

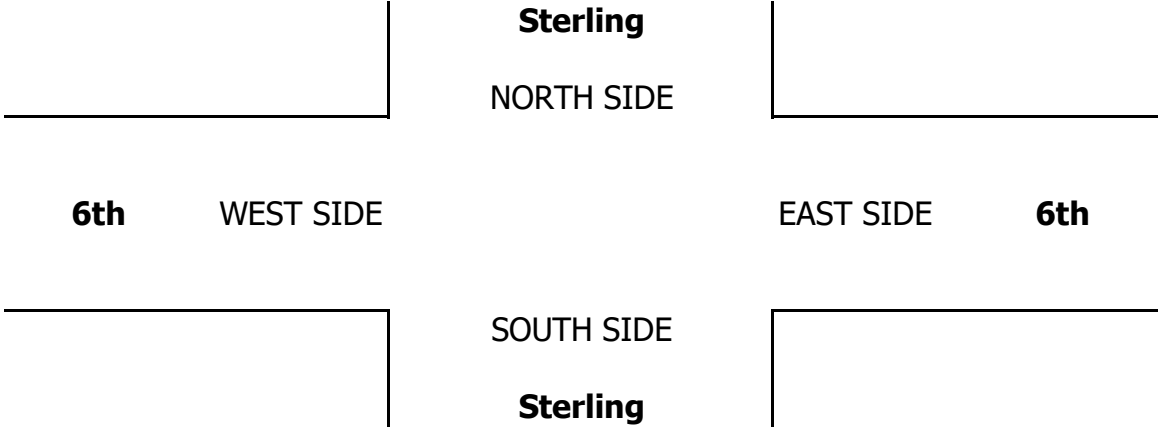
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BUSES

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	0	1	0	0	1	0	

AM	7:00 AM	0	2	0	0	0	1	1	1	0	0	1	0	6
	7:15 AM	1	0	0	0	0	0	0	0	0	0	0	0	1
	7:30 AM	0	0	0	0	0	3	0	0	0	0	0	0	3
	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	3
	8:15 AM	0	2	0	0	0	1	0	6	2	0	0	0	11
	8:30 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	1	4	0	0	5	4	7	3	0	0	1	0	25
	APPROACH %	20%	80%	0%	0%	56%	44%	70%	30%	0%	0%	100%	0%	
PM	APP/DEPART	5	/	11	9	/	5	10	/	3	1	/	6	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	1	0	0	0	3	3	0	0	0	0	0	0	7
	APPROACH %	100%	0%	0%	0%	50%	50%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.250			0.500			0.000			0.000			0.583
	APP/DEPART	1	/	0	6	/	3	0	/	0	0	/	4	0
	4:00 PM	0	1	0	0	2	0	2	2	0	0	0	0	7
	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	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	1	0	0	0	0	0	1	0	0	0	0	2
	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
	VOLUMES	0	2	0	0	3	0	3	2	0	0	0	0	10
	APPROACH %	0%	100%	0%	0%	100%	0%	60%	40%	0%	0%	0%	0%	
	APP/DEPART	2	/	5	3	/	3	5	/	2	0	/	0	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	1	0	0	0	0	1	0	0	0	0	0	2
	APPROACH %	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.250			0.000			0.250			0.000			0.250
	APP/DEPART	1	/	2	0	/	0	1	/	0	0	/	0	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, May 18, 23

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
2
SIGNAL

NOTES:

AM
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MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	0	2	0	0	2	0	

AM	7:00 AM	1	21	2	2	63	14	5	11	3	4	49	12	187
	7:15 AM	0	32	1	4	83	15	4	22	3	5	57	6	232
	7:30 AM	0	23	2	6	93	16	6	20	3	7	64	4	244
	7:45 AM	1	32	1	5	113	23	5	20	4	9	68	8	289
	8:00 AM	1	56	1	5	80	16	5	16	1	9	49	2	241
	8:15 AM	2	31	1	4	69	9	10	30	4	4	42	5	211
	8:30 AM	4	29	4	2	42	11	7	11	1	1	31	10	153
	8:45 AM	0	20	5	7	54	12	17	26	2	5	46	6	200
	VOLUMES	9	244	17	35	597	116	59	156	21	44	406	53	1,757
	APPROACH %	3%	90%	6%	5%	80%	16%	25%	66%	9%	9%	81%	11%	
APP/DEPART		270	/	356	748	/	662	236	/	208	503	/	531	0
PM	BEGIN PEAK HR	7:15 AM												
	VOLUMES	2	143	5	20	369	70	20	78	11	30	238	20	1,006
	APPROACH %	1%	95%	3%	4%	80%	15%	18%	72%	10%	10%	83%	7%	
	PEAK HR FACTOR	0.647			0.814			0.940			0.847			0.870
	APP/DEPART	150	/	183	459	/	410	109	/	103	288	/	310	0
	4:00 PM	3	75	3	4	55	8	11	60	11	7	49	4	290
	4:15 PM	3	74	3	2	49	11	16	63	13	4	31	6	275
	4:30 PM	2	90	6	6	70	8	20	71	15	7	29	4	328
	4:45 PM	2	86	1	4	67	12	18	57	11	3	34	3	298
	5:00 PM	0	77	11	4	44	9	26	72	23	2	36	10	314
	5:15 PM	1	97	6	3	50	11	22	71	11	4	36	3	315
	5:30 PM	5	92	7	4	54	10	18	70	7	1	28	6	302
	5:45 PM	2	79	3	2	44	12	12	65	6	2	28	8	263
	VOLUMES	18	670	40	29	433	81	143	529	97	30	271	44	2,385
	APPROACH %	2%	92%	5%	5%	80%	15%	19%	69%	13%	9%	79%	13%	
	APP/DEPART	728	/	857	543	/	560	769	/	598	345	/	370	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	5	350	24	17	231	40	86	271	60	16	135	20	1,255
	APPROACH %	1%	92%	6%	6%	80%	14%	21%	65%	14%	9%	79%	12%	
	PEAK HR FACTOR	0.911			0.857			0.862			0.891			0.957
APP/DEPART		379	/	456	288	/	307	417	/	312	171	/	180	0



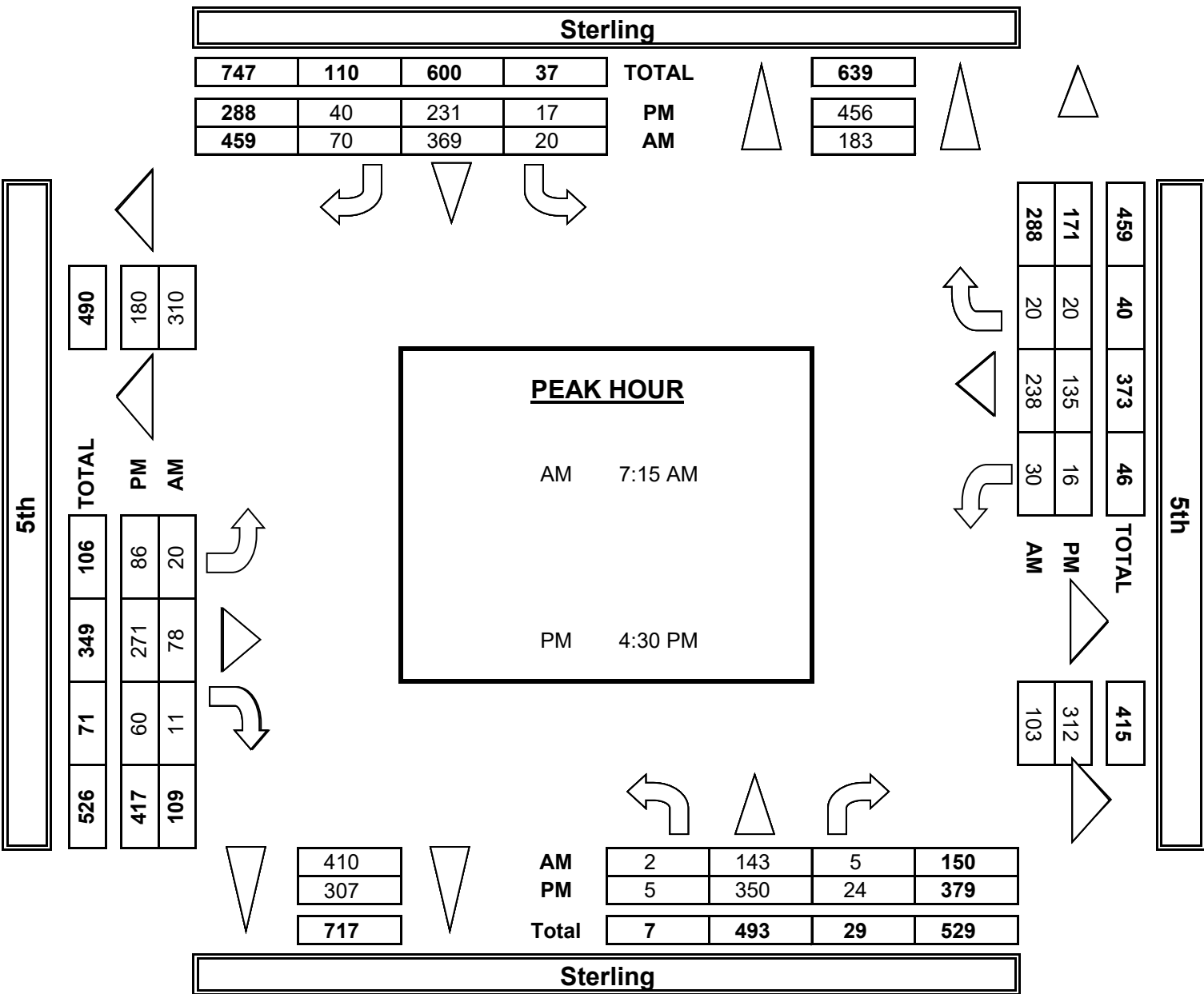
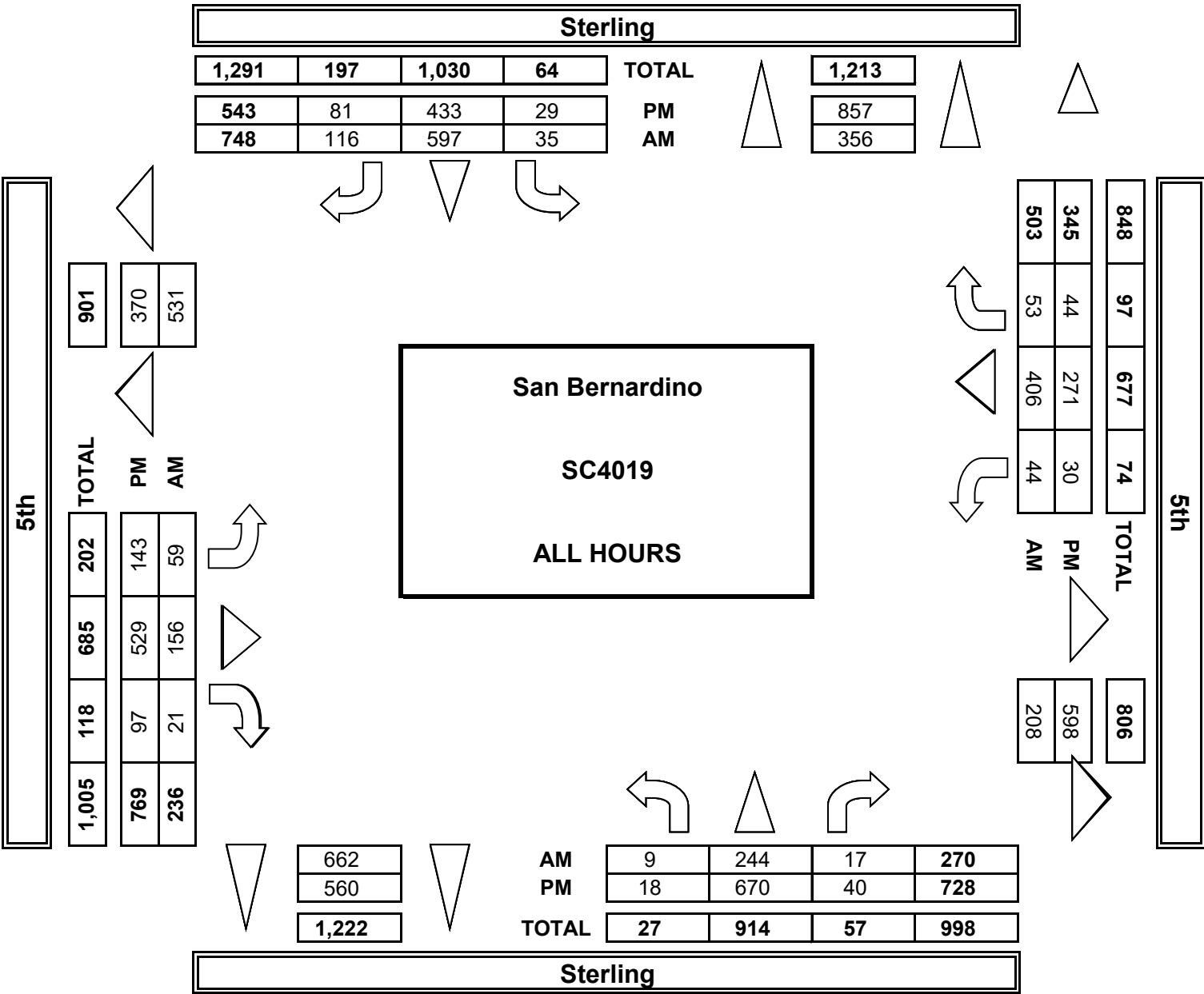
AM	7:00 AM	
	7:15 AM	
	7:30 AM	
	7:45 AM	
	8:00 AM	
	8:15 AM	
	8:30 AM	
	8:45 AM	
TOTAL		
PM	4:00 PM	
	4:15 PM	
	4:30 PM	
	4:45 PM	
	5:00 PM	
	5:15 PM	
	5:30 PM	
	5:45 PM	
TOTAL		

ALL PED AND BIKE				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	1	1
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	1	0	0	1
0	0	1	1	2
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	3	2	1	6

PEDESTRIAN CROSSINGS				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1
0	2	1	0	3

BICYCLE CROSSINGS				
ES	WS	SS	NS	TOTAL
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	1	1	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	1	1	3

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE: 5/18/23 THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
5th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	Sterling			Sterling	
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2

AM	7:00 AM	1	24	4	2	65
	7:15 AM	0	34	1	4	86
	7:30 AM	0	26	3	7	97
	7:45 AM	1	34	1	5	119
	8:00 AM	1	58	2	6	81
	8:15 AM	2	32	1	4	74
	8:30 AM	6	31	6	2	43
	8:45 AM	0	21	5	8	54
	VOLUMES	11	259	23	37	618
	APPROACH %	4%	89%	8%	5%	80%
	APP/DEPART	292	/	385	775	/
	BEGIN PEAK HR	7:15 AM				
	VOLUMES	2	152	7	21	382
	APPROACH %	1%	95%	4%	4%	80%
	PEAK HR FACTOR	0.661			0.802	
	APP/DEPART	160	/	195	477	/
PM	4:00 PM	4	80	3	5	60
	4:15 PM	3	75	3	2	50
	4:30 PM	2	92	8	6	73
	4:45 PM	2	89	1	4	67
	5:00 PM	0	81	11	4	45
	5:15 PM	1	99	7	3	52
	5:30 PM	7	97	7	4	57
	5:45 PM	2	80	3	2	47
	VOLUMES	21	692	43	30	449
	APPROACH %	3%	92%	6%	5%	80%

APP/DEPART	755	/	888	564	/
BEGIN PEAK HR	4:30 PM				
VOLUMES	5	360	27	17	237
APPROACH %	1%	92%	7%	6%	81%
PEAK HR FACTOR	0.919			0.843	
APP/DEPART	392	/	473	294	/

5th

WEST SIDE

U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
2
SIGNAL

CLASS 1:
PASSENGER
VEHICLES

NOTES:

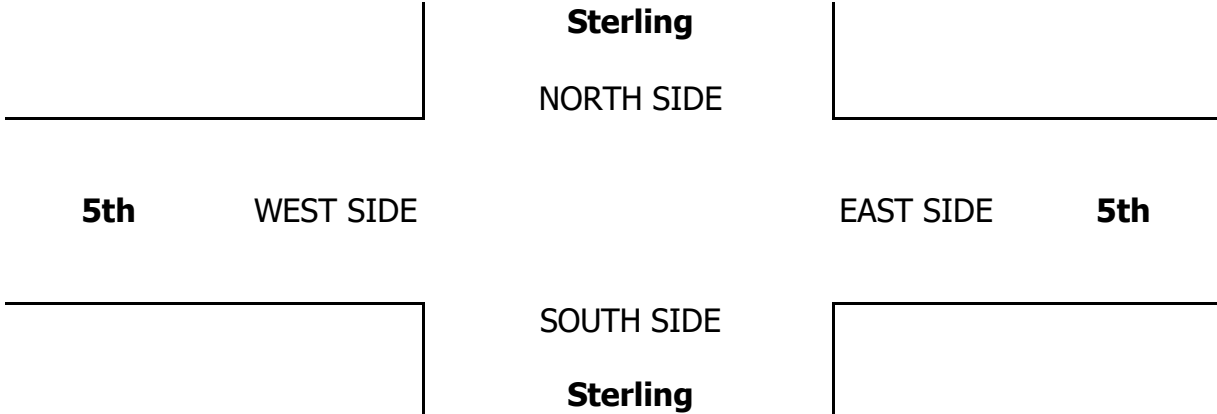
AM
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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	0	2	0	0	2	0	

AM	7:00 AM	1	18	1	2	59	14	4	9	2	4	48	12	174
	7:15 AM	0	29	1	4	80	15	3	18	2	4	53	5	214
	7:30 AM	0	18	1	5	89	14	6	16	3	7	60	3	222
	7:45 AM	1	29	1	5	108	22	4	16	4	8	62	7	267
	8:00 AM	1	52	0	4	78	16	5	16	1	7	49	2	231
	8:15 AM	2	29	1	4	64	9	7	26	3	4	40	3	192
	8:30 AM	2	25	3	2	41	9	7	9	1	1	29	9	138
	8:45 AM	0	19	5	6	54	12	14	25	2	5	41	6	189
	VOLUMES	7	219	13	32	573	111	50	135	18	40	382	47	1,627
	APPROACH %	3%	92%	5%	4%	80%	16%	25%	67%	9%	9%	81%	10%	
PM	APP/DEPART	239	/	316	716	/	631	203	/	180	469	/	500	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	2	128	3	18	355	67	18	66	10	26	224	17	934
	APPROACH %	2%	96%	2%	4%	81%	15%	19%	70%	11%	10%	84%	6%	
	PEAK HR FACTOR	0.627			0.815			0.940			0.867			0.875
	APP/DEPART	133	/	163	440	/	391	94	/	87	267	/	293	0
	4:00 PM	2	71	3	3	50	6	10	56	11	7	44	4	267
	4:15 PM	3	73	3	2	47	8	15	61	13	4	28	6	263
	4:30 PM	2	86	5	6	67	8	16	63	15	6	24	4	302
	4:45 PM	2	82	1	4	67	12	18	57	11	2	33	3	292
	5:00 PM	0	73	11	4	43	9	24	72	23	2	34	8	303
	5:15 PM	1	93	5	3	46	11	21	67	11	3	33	3	297
	5:30 PM	4	87	7	4	52	9	17	68	7	1	27	6	289
	5:45 PM	2	77	3	2	42	12	12	60	6	2	25	7	250
	VOLUMES	16	642	38	28	414	75	133	504	97	27	248	41	2,263
	APPROACH %	2%	92%	5%	5%	80%	15%	18%	69%	13%	9%	78%	13%	
	APP/DEPART	696	/	816	517	/	538	734	/	570	316	/	339	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	5	334	22	17	223	40	79	259	60	13	124	18	1,194
	APPROACH %	1%	93%	6%	6%	80%	14%	20%	65%	15%	8%	80%	12%	
	PEAK HR FACTOR	0.912			0.843			0.836			0.881			0.985
	APP/DEPART	361	/	431	280	/	296	398	/	298	155	/	169	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	2	1	3
0	1	0	2
0	2	2	3
1	4	1	1
0	6	0	1
0	0	0	0
1	3	1	4
1	8	1	1
3	26	6	15

1	13	3	7
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	1	6	0
0	2	5	2
0	3	3	2
0	6	4	2
3	5	10	2
0	2	5	1
1	5	4	3
1	4	2	0
5	28	39	12

3	16	22	7
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Sterling 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 2 SIGNAL
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CLASS 2:	NOTES:	AM		▲	
2-AXLE		PM		N	
WORK		MD	◄ W		E ►
VEHICLES/ TRUCKS		OTHER		S	
		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	0	2	0	0	2	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

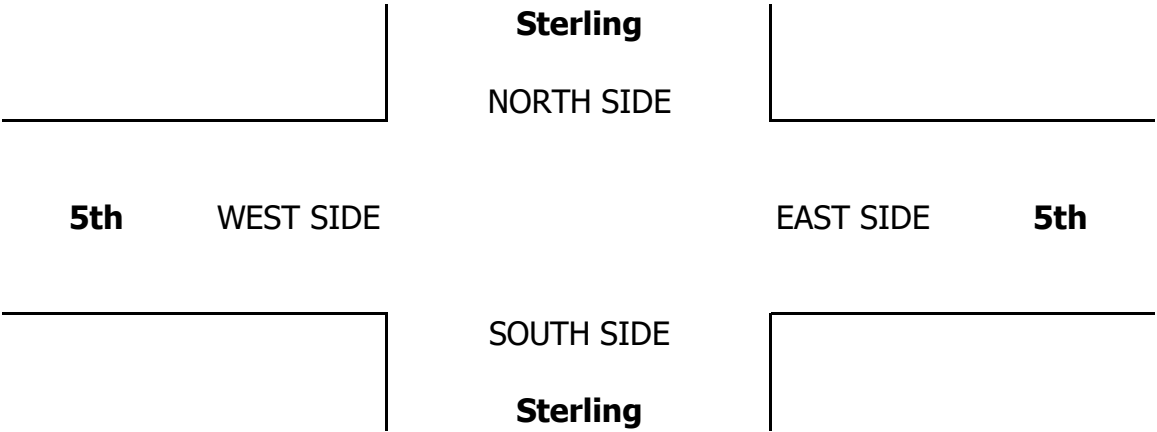
RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	1
0	0	0	0
0	1	0	3

AM	7:00 AM	0	1	0	0	4	0	0	2	1	0	0	0	8
	7:15 AM	0	2	0	0	2	0	0	3	0	0	2	1	10
	7:30 AM	0	5	0	1	1	1	0	4	0	0	2	1	15
	7:45 AM	0	2	0	0	3	0	0	3	0	1	4	1	14
	8:00 AM	0	4	1	1	2	0	0	0	0	0	0	0	8
	8:15 AM	0	2	0	0	2	0	1	2	0	0	2	1	10
	8:30 AM	1	4	0	0	1	1	0	1	0	0	1	1	10
	8:45 AM	0	1	0	1	0	0	1	1	0	0	3	0	7
	VOLUMES	1	21	1	3	15	2	2	16	1	1	14	5	82
	APPROACH %	4%	91%	4%	15%	75%	10%	11%	84%	5%	5%	70%	25%	
PM	APP/DEPART	23	/	28	20	/	17	19	/	20	20	/	17	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	13	1	2	8	1	0	10	0	1	8	3	47
	APPROACH %	0%	93%	7%	18%	73%	9%	0%	100%	0%	8%	67%	25%	
	PEAK HR FACTOR	0.700			0.917			0.625			0.500			0.783
	APP/DEPART	14	/	16	11	/	9	10	/	13	12	/	9	0
	4:00 PM	0	2	0	1	3	1	0	3	0	0	3	0	13
	4:15 PM	0	1	0	0	2	1	1	1	0	0	2	0	8
	4:30 PM	0	4	0	0	2	0	4	6	0	1	2	0	19
	4:45 PM	0	3	0	0	0	0	0	0	0	1	1	0	5
	5:00 PM	0	3	0	0	1	0	1	0	0	0	2	1	8
	5:15 PM	0	4	1	0	4	0	0	4	0	1	3	0	17
	5:30 PM	0	2	0	0	1	1	1	2	0	0	1	0	8
	5:45 PM	0	2	0	0	1	0	0	3	0	0	2	1	9
	VOLUMES	0	21	1	1	14	3	7	19	0	3	16	2	87
	APPROACH %	0%	95%	5%	6%	78%	17%	27%	73%	0%	14%	76%	10%	
	APP/DEPART	22	/	30	18	/	17	26	/	21	21	/	19	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	14	1	0	7	0	5	10	0	3	8	1	49
	APPROACH %	0%	93%	7%	0%	100%	0%	33%	67%	0%	25%	67%	8%	
	PEAK HR FACTOR	0.750			0.438			0.375			0.750			0.645
	APP/DEPART	15	/	20	7	/	10	15	/	11	12	/	8	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	1

0	0	0	1
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
2
SIGNAL

CLASS 3:
3-AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	0	2	0	0	2	0	

AM	7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	1
	7:15 AM	0	0	0	0	0	0	1	1	1	0	1	0	4
	7:30 AM	0	0	1	0	1	0	0	0	0	2	0	0	4
	7:45 AM	0	1	0	0	0	0	1	0	0	0	1	0	3
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	1	0	0	1	1	0	0	0	3
	8:30 AM	1	0	0	0	0	0	0	1	0	0	1	0	3
	8:45 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
	VOLUMES	1	1	1	0	2	0	3	3	2	0	6	0	19
	APPROACH %	33%	33%	33%	0%	100%	0%	38%	38%	25%	0%	100%	0%	
PM	APP/DEPART	3	/	4	2	/	4	8	/	4	6	/	7	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	1	1	0	1	0	2	1	1	0	4	0	11
	APPROACH %	0%	50%	50%	0%	100%	0%	50%	25%	25%	0%	100%	0%	
	PEAK HR FACTOR	0.500			0.250			0.333			0.500			0.688
	APP/DEPART	2	/	3	1	/	2	4	/	2	4	/	4	0
	4:00 PM	1	0	0	0	0	0	0	0	0	0	2	0	3
	4:15 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
	4:45 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	2
	5:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	2
	VOLUMES	1	3	0	0	0	1	0	2	0	0	5	1	13
	APPROACH %	25%	75%	0%	0%	0%	100%	0%	100%	0%	0%	83%	17%	
	APP/DEPART	4	/	4	1	/	0	2	/	2	6	/	7	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	1	0	0	0	0	0	0	0	0	3	1	5
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	0%	75%	25%	
	PEAK HR FACTOR	0.250			0.000			0.000			0.333			0.417
	APP/DEPART	1	/	2	0	/	0	0	/	0	4	/	3	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

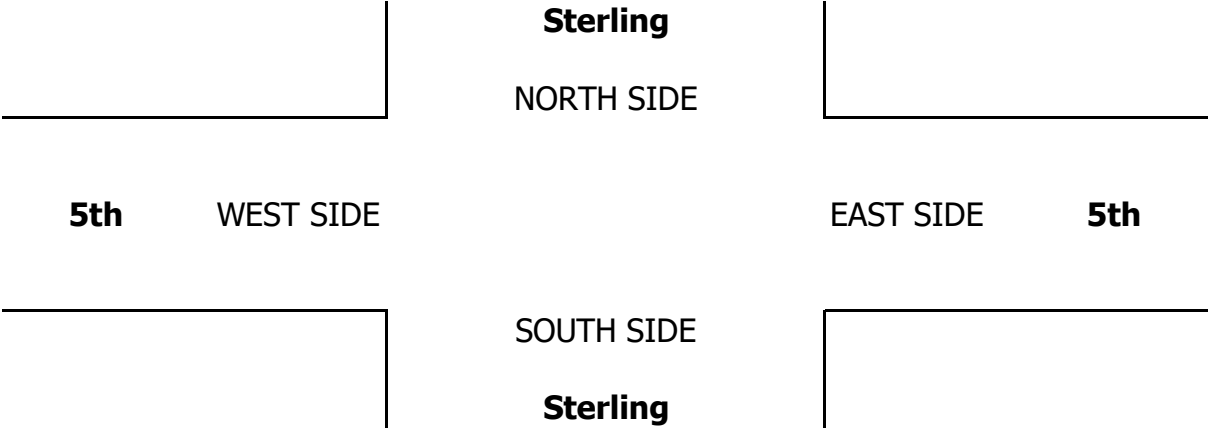
RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0

1	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	1

0	0	0	1
---	---	---	---



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
2
SIGNAL

CLASS 4:
4 OR MORE
AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	0	2	0	0	2	0	

AM	7:00 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
	7:15 AM	0	0	0	0	1	0	0	0	0	1	1	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	2	1	0	1	0	1	0	0	5
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	1	0	0	1	0	0	0	1	3
	8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	2	0	0	0	1	0	3
	VOLUMES	0	0	2	0	4	1	2	2	0	1	3	1	16
	APPROACH %	0%	0%	100%	0%	80%	20%	50%	50%	0%	20%	60%	20%	
PM	APP/DEPART	2	/	3	5	/	5	4	/	4	5	/	4	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	0	0	0	3	1	0	1	0	1	2	0	8
	APPROACH %	0%	0%	0%	0%	75%	25%	0%	100%	0%	33%	67%	0%	
	PEAK HR FACTOR	0.000			0.333			0.250			0.375			0.400
	APP/DEPART	0	/	0	4	/	4	1	/	1	3	/	3	0
	4:00 PM	0	2	0	0	1	0	0	0	0	0	0	0	3
	4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
	4:30 PM	0	0	1	0	1	0	0	0	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	1	0	0	0	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
	5:30 PM	1	1	0	0	1	0	0	0	0	0	0	0	3
	5:45 PM	0	0	0	0	1	0	0	0	0	0	1	0	2
	VOLUMES	1	4	1	0	4	0	1	1	0	0	2	0	14
	APPROACH %	17%	67%	17%	0%	100%	0%	50%	50%	0%	0%	100%	0%	
	APP/DEPART	6	/	5	4	/	4	2	/	2	2	/	3	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	1	1	0	1	0	1	0	0	0	0	0	4
	APPROACH %	0%	50%	50%	0%	100%	0%	100%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.500			0.250			0.250			0.000			0.500
	APP/DEPART	2	/	2	1	/	1	1	/	1	0	/	0	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

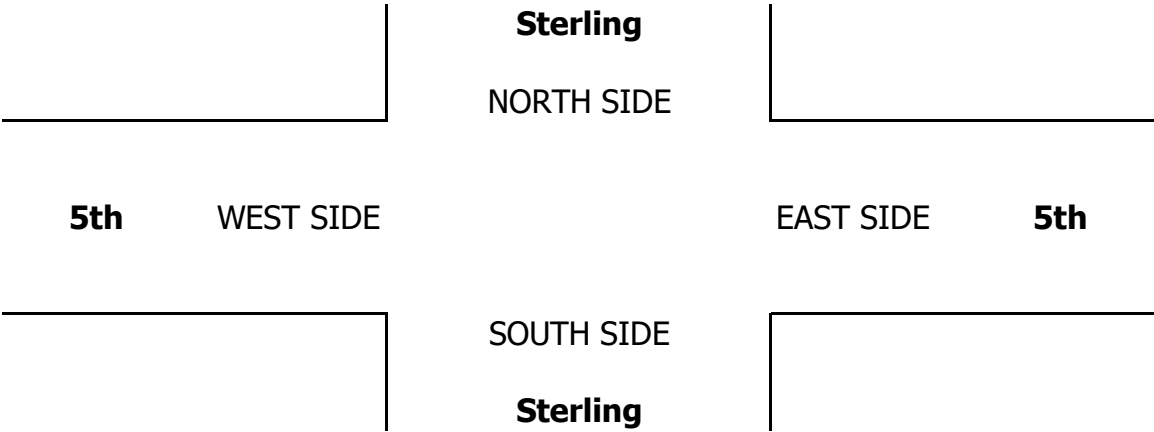
RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Sterling 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 2 SIGNAL
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CLASS 5:	NOTES:	AM		▲	
RV		PM		N	
		MD	◄ W		E ►
		OTHER		S	
		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	0	2	0	0	2	0	

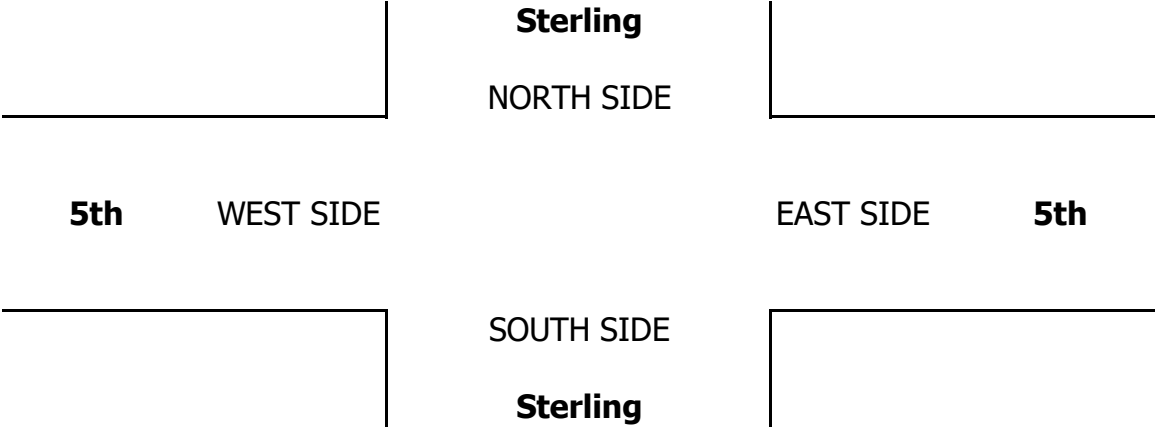
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	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
	4:30 PM	0	0	0	0	0	0	1	0	0	0	0	1
	4:45 PM	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
	5:15 PM	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
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	1	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	1	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.250			0.000		
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Sterling 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 2 SIGNAL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER		▲ N S ▼	
BUSES			◀ W		E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			5th			5th			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 0	ET 2	ER 0	WL 0	WT 2	WR 0	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

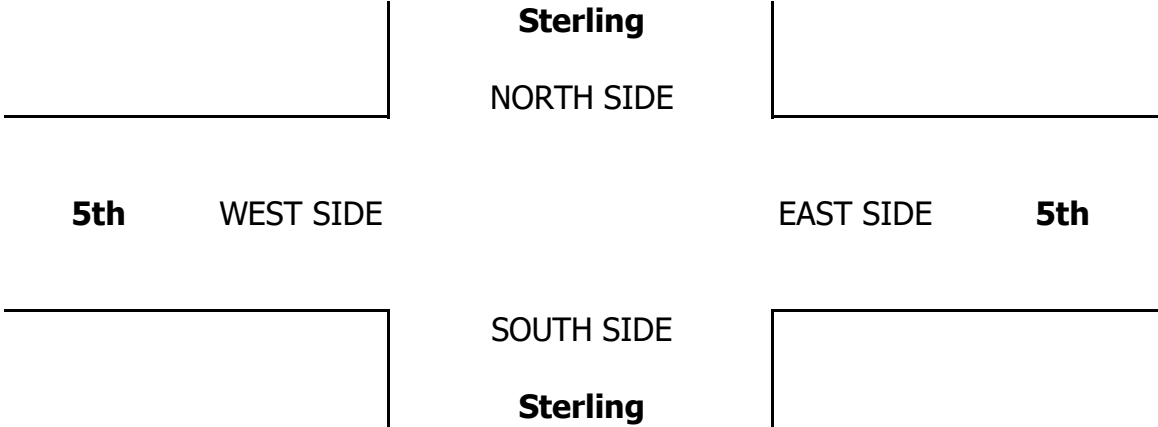
RTOR			
NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0

AM	7:00 AM	0	2	0	0	0	0	0	0	0	1	0	3	
	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	1	
	7:30 AM	0	0	0	0	2	1	0	0	0	0	0	3	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 AM	0	0	0	0	0	0	0	0	2	0	0	2	
	8:15 AM	0	0	0	0	1	0	2	0	0	0	0	3	
	8:30 AM	0	0	0	0	0	1	0	0	0	0	0	1	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	3	0	0	3	2	2	0	0	2	1	0	13
	APPROACH %	0%	100%	0%	0%	60%	40%	100%	0%	0%	67%	33%	0%	
APP/DEPART	3	/	5	5	/	5	2	/	0	3	/	3	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	1	0	0	2	1	0	0	0	2	0	0	6	
APPROACH %	0%	100%	0%	0%	67%	33%	0%	0%	0%	100%	0%	0%		
PEAK HR FACTOR	0.250			0.250			0.000			0.250			0.500	
APP/DEPART	1	/	1	3	/	4	0	/	0	2	/	1	0	
PM	4:00 PM	0	0	0	0	1	1	1	1	0	0	0	4	
	4:15 PM	0	0	0	0	0	1	0	0	0	0	0	1	
	4:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	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	
	5:30 PM	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	
	VOLUMES	0	0	0	0	1	2	2	2	0	0	0	0	7
	APPROACH %	0%	0%	0%	0%	33%	67%	50%	50%	0%	0%	0%	0%	
	APP/DEPART	0	/	2	3	/	1	4	/	2	0	/	2	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	0	0	0	1	1	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.000			0.500			0.000			0.500	
APP/DEPART	0	/	1	0	/	0	2	/	1	0	/	0	0	

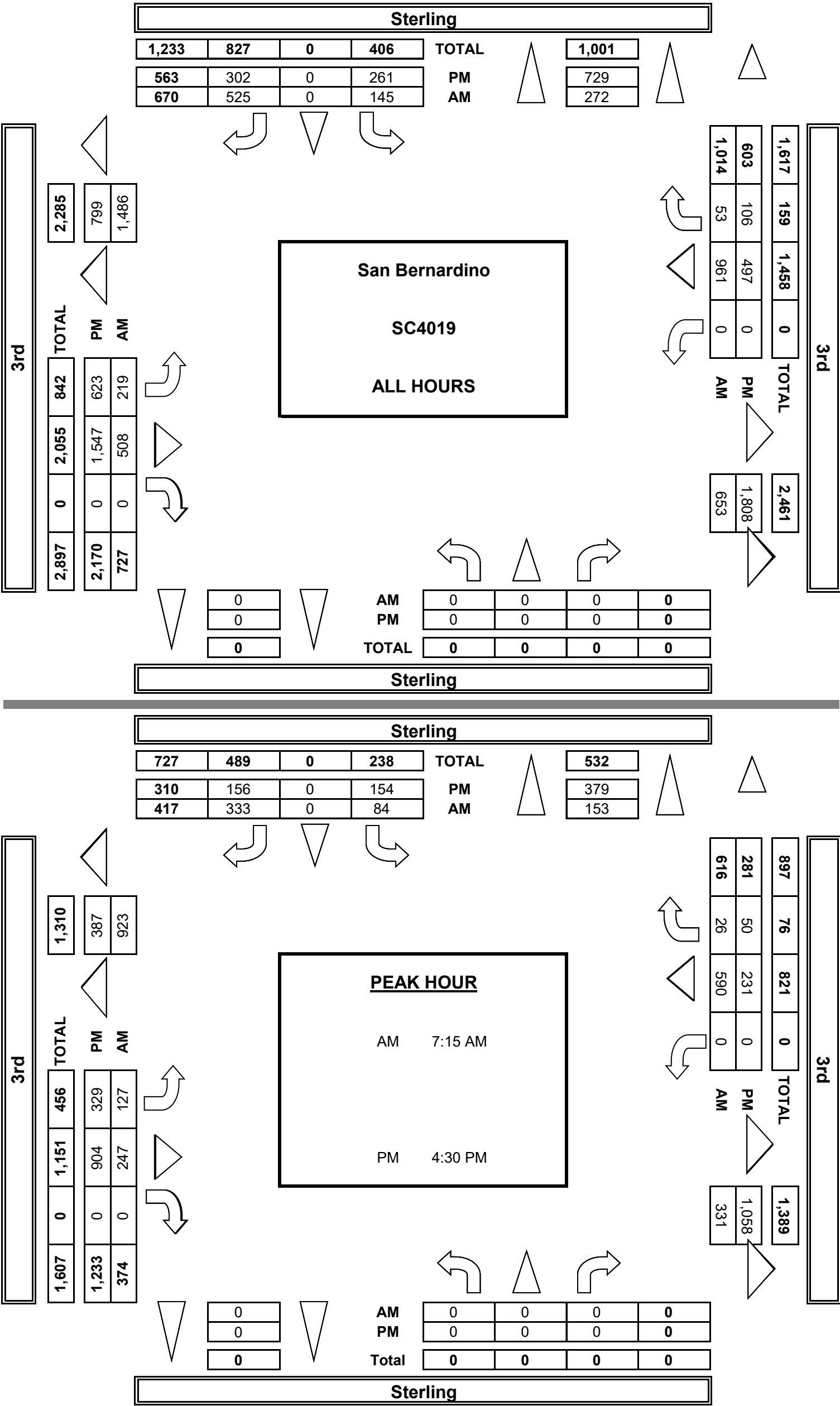
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0

0	0	0	0
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AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
3rd

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	Sterling			Sterling	
LANES:	NL X	NT X	NR X	SL 1	ST X

AM	7:00 AM	0	0	0	22	0
	7:15 AM	0	0	0	23	0
	7:30 AM	0	0	0	16	0
	7:45 AM	0	0	0	33	0
	8:00 AM	0	0	0	17	0
	8:15 AM	0	0	0	17	0
	8:30 AM	0	0	0	10	0
	8:45 AM	0	0	0	14	0
	VOLUMES	0	0	0	152	0
	APPROACH %	0%	0%	0%	22%	0%
PM	APP/DEPART	0	/	294	698	/
	BEGIN PEAK HR	7:15 AM				
	VOLUMES	0	0	0	89	0
	APPROACH %	0%	0%	0%	20%	0%
	PEAK HR FACTOR	0.000			0.738	
	APP/DEPART	0	/	163	436	/
	4:00 PM	0	0	0	39	0
	4:15 PM	0	0	0	26	0
	4:30 PM	0	0	0	43	0
	4:45 PM	0	0	0	39	0
	5:00 PM	0	0	0	45	0
	5:15 PM	0	0	0	28	0
	5:30 PM	0	0	0	24	0
	5:45 PM	0	0	0	20	0
	VOLUMES	0	0	0	263	0
	APPROACH %	0%	0%	0%	45%	0%

APP/DEPART	0	/	756	581	/
BEGIN PEAK HR	4:30 PM				
VOLUMES	0	0	0	155	0
APPROACH %	0%	0%	0%	49%	0%
PEAK HR FACTOR	0.000			0.857	
APP/DEPART	0	/	392	317	/

3rd

WEST SIDE

######

U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
3rd

PROJECT #:
LOCATION #:
CONTROL:

SC4019
3
SIGNAL

CLASS 1:
PASSENGER
VEHICLES

NOTES:

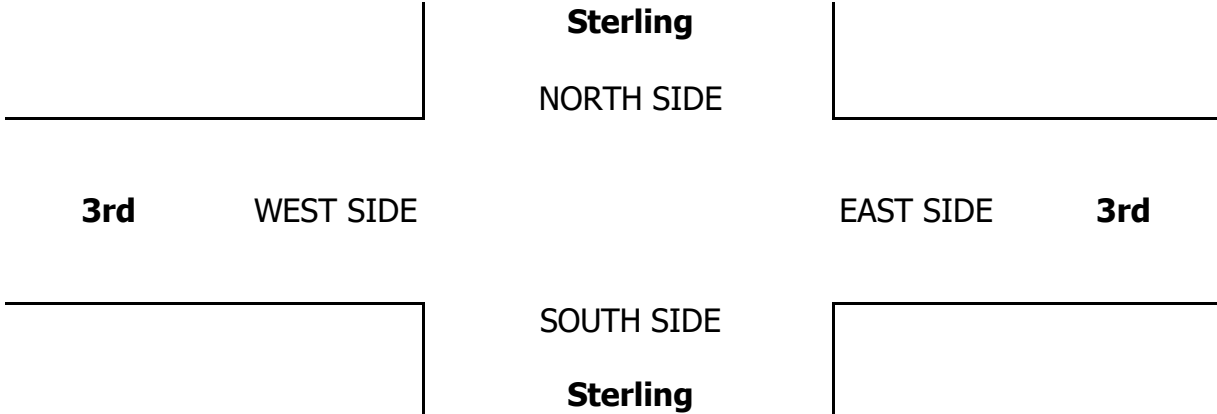
AM
PM
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OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			3rd			3rd			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 2	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL

AM	7:00 AM	0	0	0	22	0	44	12	46	0	0	103	7	234
	7:15 AM	0	0	0	18	0	68	21	34	0	0	125	7	273
	7:30 AM	0	0	0	16	0	73	19	37	0	0	137	1	283
	7:45 AM	0	0	0	27	0	110	29	63	0	0	166	4	399
	8:00 AM	0	0	0	17	0	69	45	70	0	0	130	10	341
	8:15 AM	0	0	0	15	0	60	29	65	0	0	95	3	267
	8:30 AM	0	0	0	10	0	31	22	57	0	0	65	10	195
	8:45 AM	0	0	0	12	0	47	19	47	0	0	72	3	200
	VOLUMES	0	0	0	137	0	502	196	419	0	0	893	45	2,192
	APPROACH %	0%	0%	0%	21%	0%	79%	32%	68%	0%	0%	95%	5%	
PM	APP/DEPART	0	/	241	639	/	0	615	/	556	938	/	1,395	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	0	0	78	0	320	114	204	0	0	558	22	1,296
	APPROACH %	0%	0%	0%	20%	0%	80%	36%	64%	0%	0%	96%	4%	
	PEAK HR FACTOR	0.000			0.726			0.691			0.853			0.812
	APP/DEPART	0	/	136	398	/	0	318	/	282	580	/	878	0
	4:00 PM	0	0	0	37	0	35	65	160	0	0	51	12	360
	4:15 PM	0	0	0	24	0	35	62	153	0	0	45	13	332
	4:30 PM	0	0	0	43	0	45	81	194	0	0	47	9	419
	4:45 PM	0	0	0	39	0	42	76	198	0	0	52	10	417
	5:00 PM	0	0	0	45	0	29	76	250	0	0	51	14	465
	5:15 PM	0	0	0	26	0	30	81	222	0	0	55	14	428
	5:30 PM	0	0	0	24	0	34	84	159	0	0	93	17	411
	5:45 PM	0	0	0	20	0	33	72	125	0	0	42	11	303
	VOLUMES	0	0	0	258	0	283	597	1,461	0	0	436	100	3,135
	APPROACH %	0%	0%	0%	48%	0%	52%	29%	71%	0%	0%	81%	19%	
	APP/DEPART	0	/	697	541	/	0	2,058	/	1,719	536	/	719	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	153	0	146	314	864	0	0	205	47	1,729
	APPROACH %	0%	0%	0%	51%	0%	49%	27%	73%	0%	0%	81%	19%	
	PEAK HR FACTOR	0.000			0.849			0.903			0.913			0.930
	APP/DEPART	0	/	361	299	/	0	1,178	/	1,017	252	/	351	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR X	SRR 0	ERR X	WRR 0
0	28	0	2
0	48	0	0
0	60	0	0
0	63	0	0
0	57	0	0
0	46	0	0
0	18	0	2
0	23	0	1
0	343	0	5

0	228	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	25	0	5
0	23	0	3
0	34	0	2
0	28	0	6
0	21	0	5
0	18	0	2
0	15	0	4
0	23	0	2
0	187	0	29

0	101	0	15
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Sterling 3rd	PROJECT #: LOCATION #: CONTROL:	SC4019 3 SIGNAL
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CLASS 2:	NOTES:	AM		▲	
2-AXLE		PM		N	
WORK		MD	◄ W		E ►
VEHICLES/ TRUCKS		OTHER		S	
		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			3rd			3rd			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	1	X	2	1	2	X	X	2	0	

AM	7:00 AM	0	0	0	0	0	4	2	5	0	0	4	0	15
	7:15 AM	0	0	0	2	0	3	2	5	0	0	4	1	17
	7:30 AM	0	0	0	0	0	0	2	4	0	0	1	2	9
	7:45 AM	0	0	0	2	0	1	2	3	0	0	3	1	12
	8:00 AM	0	0	0	0	0	1	4	6	0	0	8	0	19
	8:15 AM	0	0	0	0	0	1	0	7	0	0	3	1	12
	8:30 AM	0	0	0	0	0	2	2	10	0	0	4	2	20
	8:45 AM	0	0	0	1	0	0	2	4	0	0	4	0	11
	VOLUMES	0	0	0	5	0	12	16	44	0	0	31	7	115
	APPROACH %	0%	0%	0%	29%	0%	71%	27%	73%	0%	0%	82%	18%	
PM	APP/DEPART	0	/	23	17	/	0	60	/	49	38	/	43	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	0	0	4	0	5	10	18	0	0	16	4	57
	APPROACH %	0%	0%	0%	44%	0%	56%	36%	64%	0%	0%	80%	20%	
	PEAK HR FACTOR	0.000			0.450			0.700			0.625			0.750
	APP/DEPART	0	/	14	9	/	0	28	/	22	20	/	21	0
	4:00 PM	0	0	0	1	0	2	2	4	0	0	2	0	11
	4:15 PM	0	0	0	1	0	2	2	8	0	0	5	1	19
	4:30 PM	0	0	0	0	0	1	3	7	0	0	3	1	15
	4:45 PM	0	0	0	0	0	1	2	7	0	0	1	0	11
	5:00 PM	0	0	0	0	0	0	3	6	0	0	3	0	12
	5:15 PM	0	0	0	1	0	7	5	4	0	0	1	1	19
	5:30 PM	0	0	0	0	0	1	1	2	0	0	2	0	6
	5:45 PM	0	0	0	0	0	0	1	2	0	0	1	0	4
	VOLUMES	0	0	0	3	0	14	19	40	0	0	18	3	97
	APPROACH %	0%	0%	0%	18%	0%	82%	32%	68%	0%	0%	86%	14%	
	APP/DEPART	0	/	22	17	/	0	59	/	43	21	/	32	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	1	0	9	13	24	0	0	8	2	57
	APPROACH %	0%	0%	0%	10%	0%	90%	35%	65%	0%	0%	80%	20%	
	PEAK HR FACTOR	0.000			0.313			0.925			0.625			0.750
	APP/DEPART	0	/	15	10	/	0	37	/	25	10	/	17	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

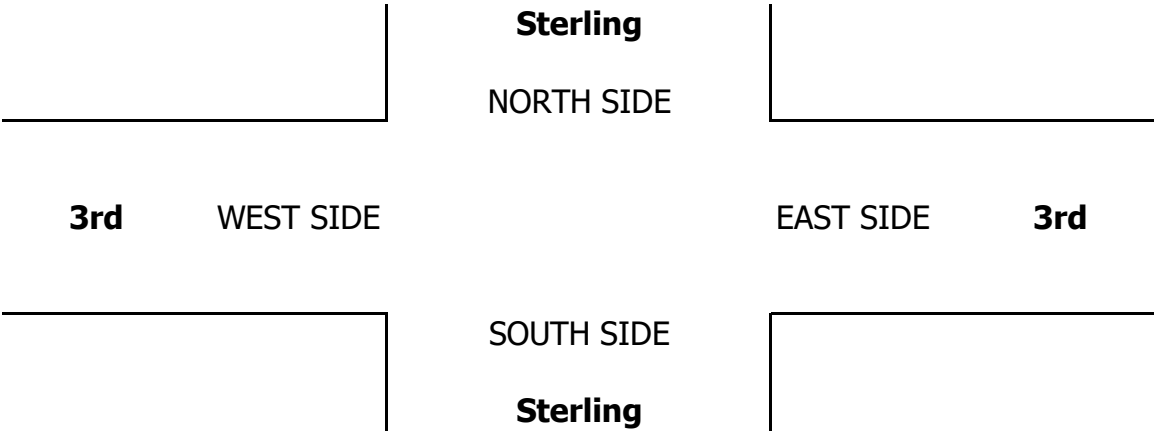
RTOR			
NRR	SRR	ERR	WRR
X	0	X	0
0	4	0	0
0	2	0	0
0	0	0	0
0	1	0	0
0	1	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	9	0	0

0	4	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	2	0	0
0	1	0	0
0	1	0	1
0	1	0	0
0	0	0	0
0	0	0	0
0	6	0	0
0	1	0	0
0	0	0	0
0	12	0	1

0	8	0	1
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
3rd

PROJECT #:
LOCATION #:
CONTROL:

SC4019
3
SIGNAL

CLASS 3:
3-AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			3rd			3rd			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 2	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL

AM	7:00 AM	0	0	0	0	0	0	1	0	0	2	0	3	
	7:15 AM	0	0	0	1	0	0	2	0	0	2	0	5	
	7:30 AM	0	0	0	0	0	1	6	0	0	2	0	10	
	7:45 AM	0	0	0	0	0	0	6	0	0	0	0	7	
	8:00 AM	0	0	0	0	0	0	1	0	0	0	0	1	
	8:15 AM	0	0	0	1	0	1	2	0	0	2	0	6	
	8:30 AM	0	0	0	0	0	0	4	0	0	1	1	6	
	8:45 AM	0	0	0	0	0	0	2	0	0	1	0	3	
	VOLUMES	0	0	0	2	0	2	24	0	0	10	1	41	
	APPROACH %	0%	0%	0%	50%	0%	50%	8%	92%	0%	0%	91%	9%	
APP/DEPART	0	/	3	4	/	0	26	/	26	11	/	12	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	1	0	1	2	15	0	0	4	0	23	
APPROACH %	0%	0%	0%	50%	0%	50%	12%	88%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.500			0.607			0.500			0.575	
APP/DEPART	0	/	2	2	/	0	17	/	16	4	/	5	0	
PM	4:00 PM	0	0	0	0	0	0	0	0	0	10	1	11	
	4:15 PM	0	0	0	0	0	0	3	0	0	1	0	4	
	4:30 PM	0	0	0	0	0	0	3	0	0	1	0	4	
	4:45 PM	0	0	0	0	0	0	6	0	0	3	0	10	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:15 PM	0	0	0	0	0	0	1	0	0	0	0	1	
	5:30 PM	0	0	0	0	0	0	4	0	0	2	0	8	
	5:45 PM	0	0	0	0	0	0	5	0	0	1	0	6	
	VOLUMES	0	0	0	0	0	0	3	22	0	0	18	1	44
	APPROACH %	0%	0%	0%	0%	0%	0%	12%	88%	0%	0%	95%	5%	
	APP/DEPART	0	/	4	0	/	0	25	/	22	19	/	18	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	0	0	0	1	10	0	0	4	0	15
APPROACH %	0%	0%	0%	0%	0%	0%	9%	91%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.000			0.393			0.333			0.375	
APP/DEPART	0	/	1	0	/	0	11	/	10	4	/	4	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

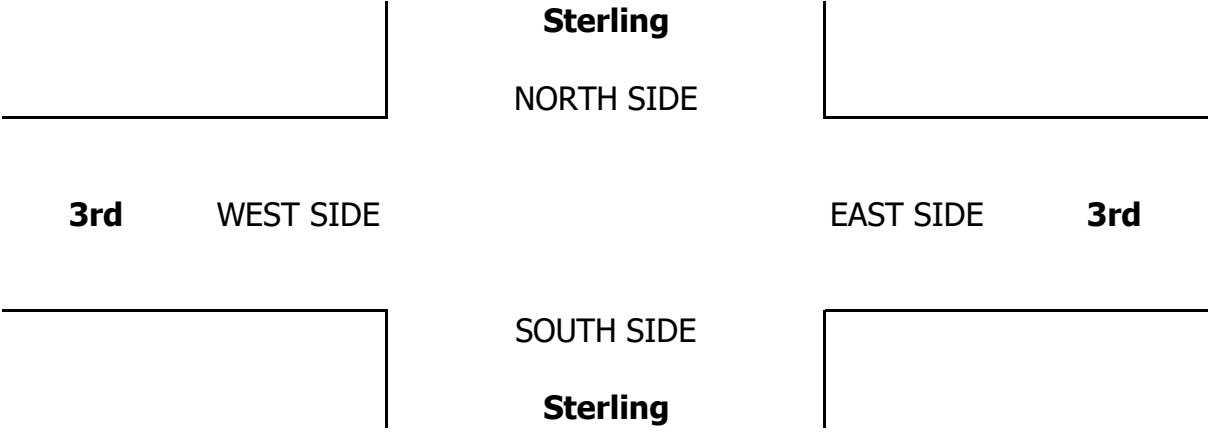
RTOR			
NRR X	SRR 0	ERR X	WRR 0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0

0	1	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	1

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
3rd

PROJECT #:
LOCATION #:
CONTROL:

SC4019
3
SIGNAL

CLASS 4:
4 OR MORE
AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			3rd			3rd			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	1	X	2	1	2	X	X	2	0	

AM	7:00 AM	0	0	0	0	0	0	2	0	0	4	0	7
	7:15 AM	0	0	0	0	0	0	1	0	0	1	0	4
	7:30 AM	0	0	0	0	0	0	4	0	0	2	0	6
	7:45 AM	0	0	0	1	0	0	0	0	0	2	0	4
	8:00 AM	0	0	0	0	0	0	3	0	0	5	0	8
	8:15 AM	0	0	0	0	0	0	1	0	0	4	0	6
	8:30 AM	0	0	0	0	0	0	4	0	0	1	0	6
	8:45 AM	0	0	0	0	0	0	2	0	0	1	0	3
	VOLUMES	0	0	0	1	0	4	2	17	0	20	0	44
	APPROACH %	0%	0%	0%	20%	0%	80%	11%	89%	0%	0%	100%	0%
PM	APP/DEPART	0	/	2	5	/	0	19	/	18	20	/	24
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	1	0	3	0	8	0	10	0	22
	APPROACH %	0%	0%	0%	25%	0%	75%	0%	100%	0%	0%	100%	0%
	PEAK HR FACTOR	0.000			0.500			0.500			0.500		
	APP/DEPART	0	/	0	4	/	0	8	/	9	10	/	13
	4:00 PM	0	0	0	0	0	1	2	8	0	0	3	0
	4:15 PM	0	0	0	0	0	0	0	4	0	0	1	0
	4:30 PM	0	0	0	0	0	1	0	0	0	0	4	1
	4:45 PM	0	0	0	0	0	0	0	1	0	0	2	0
	5:00 PM	0	0	0	0	0	0	1	1	0	0	4	0
	5:15 PM	0	0	0	0	0	0	0	4	0	0	3	0
	5:30 PM	0	0	0	0	0	1	1	4	0	0	2	1
	5:45 PM	0	0	0	0	0	1	0	2	0	0	5	0
	VOLUMES	0	0	0	0	0	4	4	24	0	0	24	2
	APPROACH %	0%	0%	0%	0%	0%	100%	14%	86%	0%	0%	92%	8%
	APP/DEPART	0	/	6	4	/	0	28	/	24	26	/	28
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	1	1	6	0	0	13	1
	APPROACH %	0%	0%	0%	0%	0%	100%	14%	86%	0%	0%	93%	7%
	PEAK HR FACTOR	0.000			0.250			0.438			0.700		
	APP/DEPART	0	/	2	1	/	0	7	/	6	14	/	14

Sterling

NORTH SIDE

3rd

WEST SIDE

EAST SIDE

3rd

Sterling

SOUTH SIDE

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	0	X	0
0	0	0	0
0	1	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	2	0	0

0	2	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	1	0	0
0	0	0	0
0	0	0	1
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	1

0	0	0	1
---	---	---	---

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Sterling
3rd

PROJECT #:
LOCATION #:
CONTROL:

SC4019
3
SIGNAL

CLASS 5:

RV

NOTES:

AM

PM

MD

OTHER

OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			3rd			3rd			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	1	X	2	1	2	X	X	2	0	

AM	7:00 AM	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
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	1	/	1	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.250		
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	0
	4:00 PM	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
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

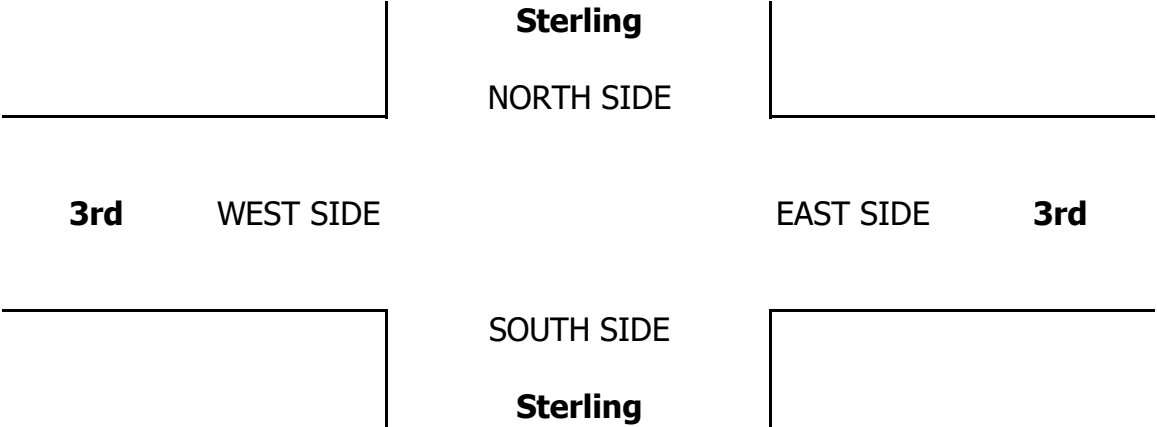
RTOR			
NRR	SRR	ERR	WRR
X	0	X	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
---	---	---	---

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Sterling 3rd	PROJECT #: LOCATION #: CONTROL:	SC4019 3 SIGNAL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER		▲ N S ▼	
BUSES			◀ W		E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Sterling			Sterling			3rd			3rd			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 2	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL

AM	7:00 AM	0	0	0	0	0	0	2	2	0	0	1	0	5
	7:15 AM	0	0	0	0	0	0	1	1	0	0	0	0	2
	7:30 AM	0	0	0	0	0	2	0	1	0	0	1	0	4
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	2	0	0	0	0	0	0	2
	8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	3	0	3
	8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	VOLUMES	0	0	0	0	0	5	3	4	0	0	6	0	18
	APPROACH %	0%	0%	0%	0%	0%	100%	43%	57%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	3	5	/	0	7	/	4	6	/	11	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	0	0	0	0	4	1	2	0	0	1	0	8
	APPROACH %	0%	0%	0%	0%	0%	100%	33%	67%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.500			0.375			0.250			0.500
	APP/DEPART	0	/	1	4	/	0	3	/	2	1	/	5	0
	4:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	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
	VOLUMES	0	0	0	0	0	1	0	0	0	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	1	/	0	0	/	0	1	/	2	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.250			0.250
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0

U-TURNS				
NB	SB	EB	WB	TTL

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR

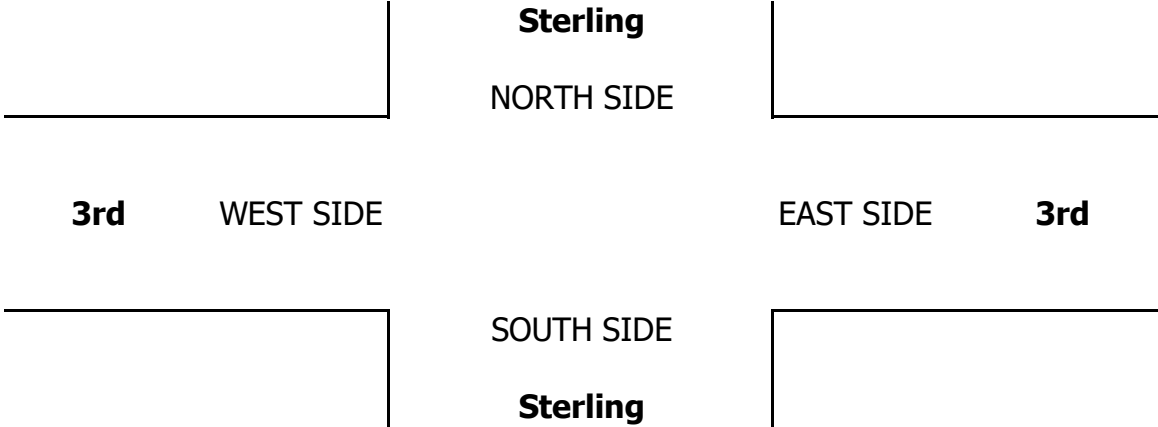
X	0	X	0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	2	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	4	0	0

0	3	0	0
---	---	---	---

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, May 18, 23

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
4
STOP N/S

NOTES:

AM
PM
MD
OTHER
OTHER

◀ W

▲ N

S ▼

E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

AM	7:00 AM	0	1	0	1	8	6	3	13	1	0	28	0	61	
	7:15 AM	2	4	0	1	3	7	5	26	0	0	25	0	73	
	7:30 AM	2	0	1	1	8	2	7	22	2	2	15	1	63	
	7:45 AM	0	7	0	0	7	5	1	13	1	1	20	0	55	
	8:00 AM	1	3	1	4	13	6	3	18	1	5	19	0	74	
	8:15 AM	0	4	1	0	10	8	3	11	2	0	15	2	56	
	8:30 AM	0	4	1	5	8	4	2	12	1	0	12	3	52	
	8:45 AM	0	8	0	5	10	7	2	7	0	1	12	1	53	
	VOLUMES	5	31	4	17	67	45	26	122	8	9	146	7	487	
	APPROACH %	13%	78%	10%	13%	52%	35%	17%	78%	5%	6%	90%	4%		
APP/DEPART	40	/	65	129	/	84	156	/	142	162	/	196	0		
BEGIN PEAK HR															
VOLUMES	5	14	2	6	31	20	16	79	4	8	79	1	265		
APPROACH %	24%	67%	10%	11%	54%	35%	16%	80%	4%	9%	90%	1%			
PEAK HR FACTOR	0.750			0.620			0.798			0.880			0.895		
APP/DEPART	21	/	31	57	/	43	99	/	87	88	/	104	0		
PM	4:00 PM	0	16	0	0	3	4	3	24	2	1	13	0	66	
	4:15 PM	0	13	1	2	6	1	5	26	1	2	14	2	73	
	4:30 PM	0	3	5	1	3	2	9	22	1	1	24	5	76	
	4:45 PM	1	5	2	2	7	3	7	16	2	1	21	2	69	
	5:00 PM	2	9	2	0	4	5	7	23	1	0	21	3	77	
	5:15 PM	0	12	2	2	11	1	10	23	1	0	15	5	82	
	5:30 PM	0	7	3	3	4	2	8	12	2	1	17	1	60	
	5:45 PM	1	8	2	2	4	3	7	29	0	3	11	0	70	
	VOLUMES	4	73	17	12	42	21	56	175	10	9	137	18	574	
	APPROACH %	4%	78%	18%	16%	56%	28%	23%	73%	4%	5%	84%	11%		
	APP/DEPART	94	/	147	75	/	60	241	/	204	164	/	163	0	
	BEGIN PEAK HR														
	VOLUMES	3	29	11	5	25	11	33	84	5	2	81	15	304	
	APPROACH %	7%	67%	26%	12%	61%	27%	27%	69%	4%	2%	83%	15%		
	PEAK HR FACTOR	0.768			0.732			0.897			0.817			0.927	
APP/DEPART	43	/	76	41	/	32	122	/	100	98	/	96	0		



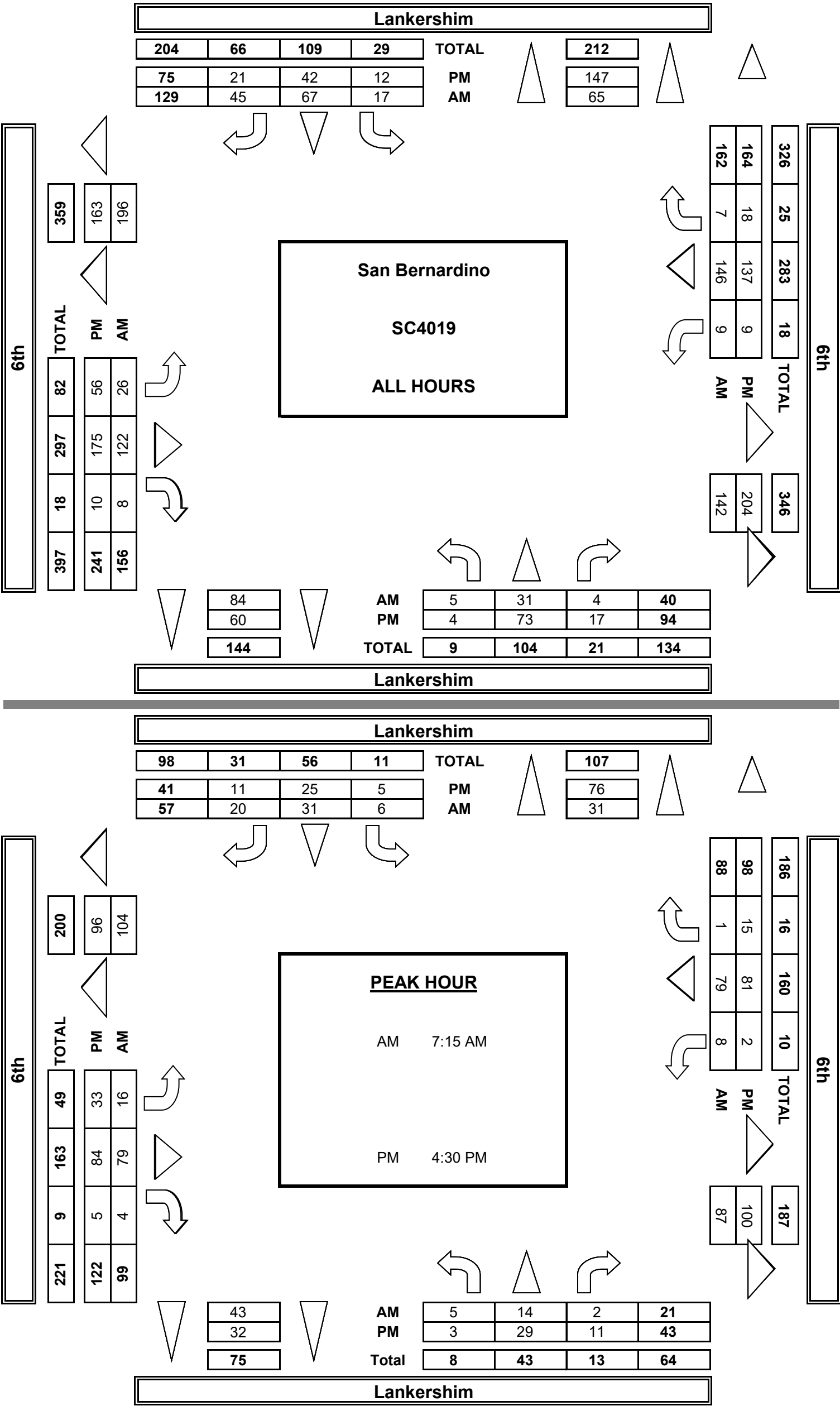
AM	7:00 AM	
	7:15 AM	
	7:30 AM	
	7:45 AM	
	8:00 AM	
	8:15 AM	
	8:30 AM	
	8:45 AM	
TOTAL		
PM	4:00 PM	
	4:15 PM	
	4:30 PM	
	4:45 PM	
	5:00 PM	
	5:15 PM	
	5:30 PM	
	5:45 PM	
TOTAL		

ALL PED AND BIKE				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	1	1
0	0	0	0	0
0	0	0	2	2
0	0	0	0	0
0	0	0	0	0
0	1	0	1	2
0	0	0	1	1
0	0	0	0	0
0	1	0	5	6
0	0	1	0	1
0	0	0	0	0
0	0	0	2	2
0	1	1	0	2
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	3	2	2	7

PEDESTRIAN CROSSINGS				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	2	2
0	0	0	0	0
0	0	0	0	0
0	1	0	1	2
0	0	0	1	1
0	0	0	0	0
0	1	0	4	5
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	1	2

BICYCLE CROSSINGS				
ES	WS	SS	NS	TOTAL
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	2	0	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	2	2	1	5

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
6th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	Lankershim			Lankershim	
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1

AM	7:00 AM	0	1	0	1	8
	7:15 AM	2	5	0	1	3
	7:30 AM	2	0	1	1	8
	7:45 AM	0	7	0	0	7
	8:00 AM	1	3	1	4	14
	8:15 AM	0	5	1	0	11
	8:30 AM	0	4	1	5	9
	8:45 AM	0	9	0	5	10
	VOLUMES	5	33	4	17	70
	APPROACH %	12%	79%	10%	13%	52%
	APP/DEPART	42	/	67	133	/
	BEGIN PEAK HR	7:15 AM				
	VOLUMES	5	15	2	6	32
	APPROACH %	23%	68%	9%	10%	55%
	PEAK HR FACTOR	0.786			0.597	
	APP/DEPART	22	/	32	59	/
PM	4:00 PM	0	18	0	0	3
	4:15 PM	0	13	1	2	6
	4:30 PM	0	3	5	1	4
	4:45 PM	1	5	2	2	7
	5:00 PM	2	10	2	0	4
	5:15 PM	0	13	3	2	12
	5:30 PM	0	7	3	3	4
	5:45 PM	1	8	2	2	4
	VOLUMES	4	76	18	12	43
	APPROACH %	4%	78%	18%	16%	56%

APP/DEPART	98	/	152	77	/
BEGIN PEAK HR	4:30 PM				
VOLUMES	3	30	12	5	26
APPROACH %	7%	67%	26%	12%	61%
PEAK HR FACTOR	0.742			0.733	
APP/DEPART	45	/	78	43	/

--	--

6th

WEST SIDE

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######

65	253	/	213	176	/	174	0
12	33	86	5	2	83	15	311
27%	27%	69%	4%	2%	83%	15%	
		0.908			0.833		0.930
33	124	/	102	100	/	98	0

Lankershim

NORTH SIDE

EAST SIDE

6th

SOUTH SIDE

Lankershim

U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
4
STOP N/S

CLASS 1:
PASSENGER
VEHICLES

NOTES:

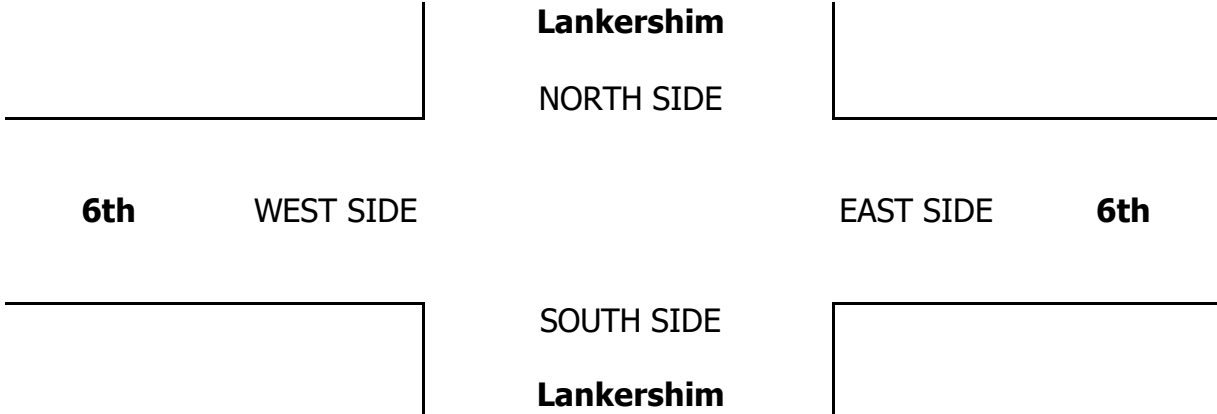
AM
PM
MD
OTHER
OTHER

▲
N
S
▼

◀ W
E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			6th			6th			
LANES:	NL 0	NT 1	NR 0	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL

AM	7:00 AM	0	1	0	1	8	5	2	13	1	0	28	0	59
	7:15 AM	2	3	0	1	3	7	5	26	0	0	25	0	72
	7:30 AM	2	0	1	1	8	2	7	20	2	2	12	1	58
	7:45 AM	0	7	0	0	7	5	1	12	1	1	18	0	52
	8:00 AM	1	3	1	4	12	5	3	17	1	5	18	0	70
	8:15 AM	0	3	1	0	9	8	3	6	1	0	13	2	46
	8:30 AM	0	4	1	5	7	4	2	12	1	0	11	3	50
	8:45 AM	0	7	0	5	10	7	2	7	0	1	12	1	52
	VOLUMES	5	28	4	17	64	43	25	113	7	9	137	7	459
	APPROACH %	14%	76%	11%	14%	52%	35%	17%	78%	5%	6%	90%	5%	
PM	APP/DEPART	37	/	61	124	/	80	145	/	133	153	/	185	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	5	13	2	6	30	19	16	75	4	8	73	1	252
	APPROACH %	25%	65%	10%	11%	55%	35%	17%	79%	4%	10%	89%	1%	
	PEAK HR FACTOR	0.714			0.655			0.766			0.820			0.875
	APP/DEPART	20	/	30	55	/	42	95	/	83	82	/	97	0
	4:00 PM	0	13	0	0	3	4	2	21	1	0	11	0	55
	4:15 PM	0	13	1	2	6	1	5	23	1	2	13	2	69
	4:30 PM	0	3	5	1	2	2	9	21	1	1	24	5	74
	4:45 PM	1	5	2	2	7	3	7	16	2	1	19	2	67
	5:00 PM	2	8	2	0	4	4	7	21	1	0	19	3	71
	5:15 PM	0	11	1	2	10	1	10	23	1	0	15	5	79
	5:30 PM	0	7	3	3	4	2	8	10	2	1	14	1	55
	5:45 PM	1	8	2	2	4	3	5	27	0	3	10	0	65
	VOLUMES	4	68	16	12	40	20	53	162	9	8	125	18	535
	APPROACH %	5%	77%	18%	17%	56%	28%	24%	72%	4%	5%	83%	12%	
	APP/DEPART	88	/	139	72	/	56	224	/	190	151	/	150	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	3	27	10	5	23	10	32	81	5	2	77	15	291
	APPROACH %	8%	68%	25%	13%	61%	26%	27%	68%	4%	2%	82%	16%	
	PEAK HR FACTOR	0.833			0.731			0.875			0.783			0.921
	APP/DEPART	40	/	74	38	/	30	119	/	96	94	/	91	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	1	0	0	1

RTOR			
NRR X	SRR X	ERR X	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	1	1
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	1	1	1	3

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
4
STOP N/S

CLASS 2:
2-AXLE
WORK
VEHICLES/
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

AM	7:00 AM	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
	7:30 AM	0	0	0	0	0	0	1	0	0	2	0	3
	7:45 AM	0	0	0	0	0	0	1	0	0	1	0	2
	8:00 AM	0	0	0	0	0	1	1	0	0	1	0	3
	8:15 AM	0	1	0	0	1	0	2	1	0	2	0	7
	8:30 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:45 AM	0	1	0	0	0	0	0	0	0	0	0	1
	VOLUMES	0	2	0	0	1	1	5	1	0	7	0	17
	APPROACH %	0%	100%	0%	0%	50%	50%	0%	83%	17%	0%	100%	0%
PM	APP/DEPART	2	/	2	2	/	2	6	/	5	7	/	8
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	1	0	3	0	0	4	0
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	100%	0%	0%	100%	0%
	PEAK HR FACTOR	0.000			0.250			0.750			0.500		
	APP/DEPART	0	/	0	1	/	0	3	/	3	4	/	5
	4:00 PM	0	2	0	0	0	0	0	2	0	1	0	0
	4:15 PM	0	0	0	0	0	0	0	3	0	0	1	0
	4:30 PM	0	0	0	0	1	0	0	1	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	2	0
	5:00 PM	0	1	0	0	0	1	0	2	0	0	2	0
	5:15 PM	0	1	1	0	1	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	1	0	0	2	0
	5:45 PM	0	0	0	0	0	0	2	1	0	0	1	0
	VOLUMES	0	4	1	0	2	1	2	10	0	1	8	0
	APPROACH %	0%	80%	20%	0%	67%	33%	17%	83%	0%	11%	89%	0%
	APP/DEPART	5	/	6	3	/	3	12	/	11	9	/	9
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	2	1	0	2	1	0	3	0	0	4	0
	APPROACH %	0%	67%	33%	0%	67%	33%	0%	100%	0%	0%	100%	0%
	PEAK HR FACTOR	0.375			0.750			0.375			0.500		
	APP/DEPART	3	/	2	3	/	2	3	/	4	4	/	5

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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Lankershim

NORTH SIDE

6th

WEST SIDE

EAST SIDE

6th

SOUTH SIDE

Lankershim

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
4
STOP N/S

CLASS 3:
3-AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

AM	7:00 AM	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
	7:30 AM	0	0	0	0	0	0	1	0	0	1	0	2
	7:45 AM	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
	8:15 AM	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
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	2	0	0	1	0	3
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	0
	BEGIN PEAK HR	7:15 AM											
PM	VOLUMES	0	0	0	0	0	0	1	0	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.250			0.250		
	APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	0
	4:00 PM	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
	4:30 PM	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
	5:00 PM	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
	5:30 PM	0	0	0	0	0	0	1	0	0	0	0	1
	5:45 PM	0	0	0	0	0	0	1	0	0	0	0	1
	VOLUMES	0	0	0	0	0	0	2	0	0	1	0	3
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	2	/	2	1	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
4
STOP N/S

CLASS 4:
4 OR MORE
AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

AM	7:00 AM	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
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	1	/	1	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.250		
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1
	4:00 PM	0	0	0	0	0	0	0	1	0	2	0	3
	4:15 PM	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
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
PM	5:00 PM	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
	5:30 PM	0	0	0	0	0	0	0	0	0	1	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	1	0	3	0	4
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	1	1	/	0	3	/	3
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

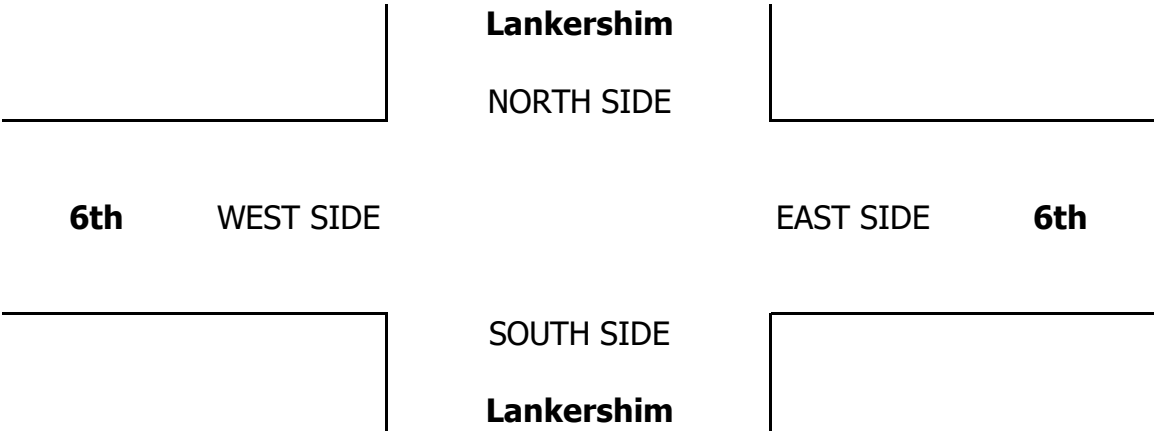
RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
4
STOP N/S

CLASS 5:
RV

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

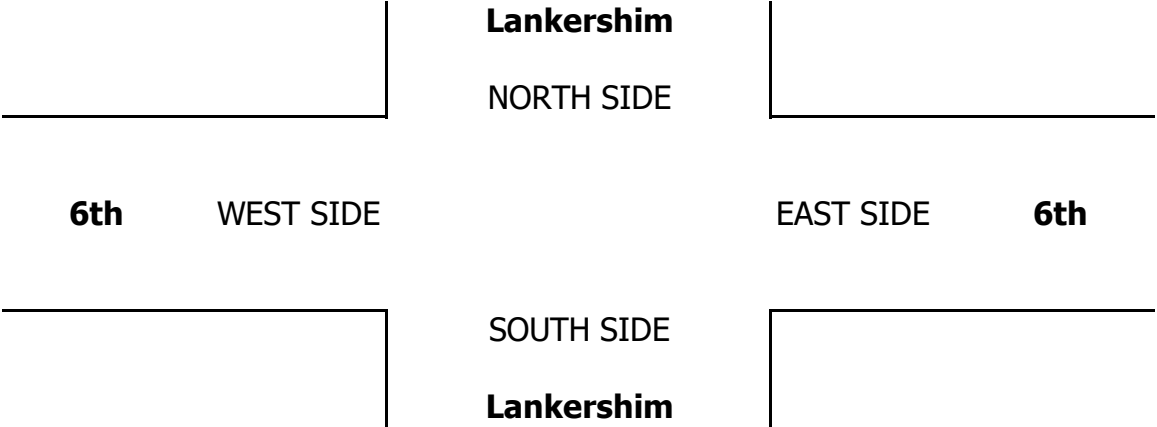
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	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
	4:30 PM	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
PM	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	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
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
PM	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	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
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
6th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
4
STOP N/S

CLASS 6:

NOTES:

BUSES

AM
PM
MD
OTHER
OTHER

▲
N
◀ W
S
▼

E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			6th			6th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	1	0	0	1	0	

AM	7:00 AM	0	0	0	0	0	1	1	0	0	0	0	0	2
	7:15 AM	0	1	0	0	0	0	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	1	0	0	0	0	0	0	0	1
	8:15 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
	8:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	2	1	1	2	0	0	0	0	7
	APPROACH %	0%	100%	0%	0%	67%	33%	33%	67%	0%	0%	0%	0%	
PM	APP/DEPART	1	/	2	3	/	2	3	/	2	0	/	1	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	1	0	0	1	0	0	0	0	0	0	0	2
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.250			0.250			0.000			0.000			0.500
	APP/DEPART	1	/	1	1	/	1	0	/	0	0	/	0	0
	4:00 PM	0	1	0	0	0	0	1	1	0	0	0	0	3
	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
	VOLUMES	0	1	0	0	0	0	1	1	0	0	0	0	3
	APPROACH %	0%	100%	0%	0%	0%	0%	50%	50%	0%	0%	0%	0%	
	APP/DEPART	1	/	2	0	/	0	2	/	1	0	/	0	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

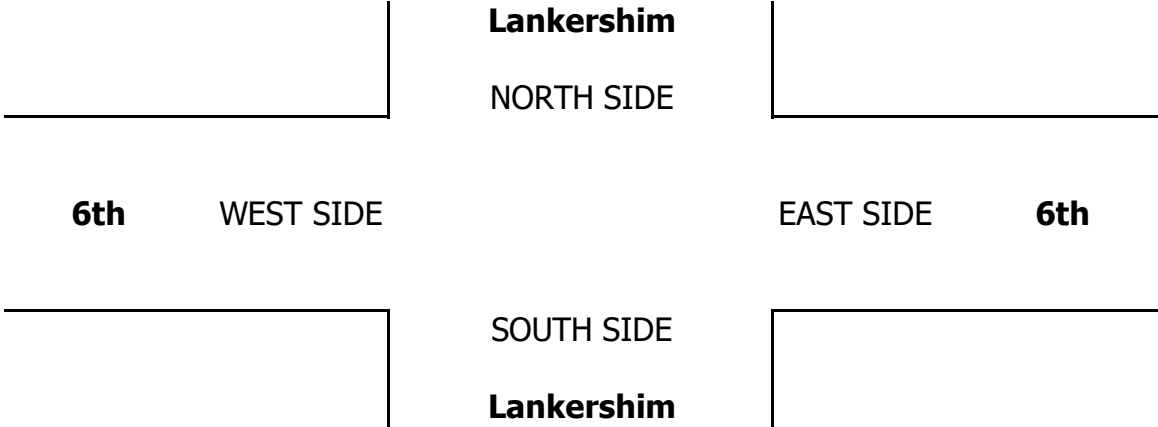
RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
---	---	---	---



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, May 18, 23

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
5th

PROJECT #: SC4019
LOCATION #: 5
CONTROL: STOP N/S

NOTES:	AM		▲	
	PM		N	
	MD	◀ W		E ▶
	OTHER		S	
	OTHER		▼	

	NORTHBOUND Lankershim			SOUTHBOUND Lankershim			EASTBOUND 5th			WESTBOUND 5th			
LANES:	NL 0	NT 1	NR 1	SL 0	ST 1	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL

AM	7:00 AM	0	1	2	2	3	4	0	13	0	1	60	0	86
	7:15 AM	0	3	1	0	1	4	2	23	0	0	69	0	103
	7:30 AM	0	0	0	4	3	3	1	29	0	1	70	1	112
	7:45 AM	0	3	1	3	4	5	1	25	0	1	87	3	133
	8:00 AM	0	3	0	2	9	5	0	19	0	0	48	0	86
	8:15 AM	1	3	0	1	3	3	6	26	1	0	53	0	97
	8:30 AM	1	2	0	2	3	1	2	18	1	0	36	1	67
	8:45 AM	1	5	0	1	7	2	3	31	4	0	52	0	106
	VOLUMES	3	20	4	15	33	27	15	184	6	3	475	5	790
	APPROACH %	11%	74%	15%	20%	44%	36%	7%	90%	3%	1%	98%	1%	
APP/DEPART 27 / 39 75 / 42 205 / 203 483 / 506 0														
PM	BEGIN PEAK HR	7:00 AM												
	VOLUMES	0	9	2	9	17	17	4	96	0	2	274	4	434
	APPROACH %	0%	82%	18%	21%	40%	40%	4%	96%	0%	1%	98%	1%	
	PEAK HR FACTOR	0.688			0.672			0.833			0.769			0.816
	APP/DEPART	11	/	17	43	/	19	100	/	107	280	/	291	0
	4:00 PM	0	9	3	1	0	2	4	63	1	0	57	3	143
	4:15 PM	0	7	1	5	1	3	4	66	2	0	39	3	131
	4:30 PM	1	4	2	0	3	2	2	71	4	2	36	2	129
	4:45 PM	2	6	2	3	5	2	2	61	1	0	43	1	128
	5:00 PM	1	7	1	0	3	3	2	83	0	0	43	0	143
	5:15 PM	2	10	1	3	5	2	3	81	2	0	34	1	144
	5:30 PM	0	4	2	0	4	1	5	66	0	1	34	0	117
	5:45 PM	0	7	1	2	5	1	5	69	0	2	37	0	129
	VOLUMES	6	54	13	14	26	16	27	560	10	5	323	10	1,064
	APPROACH %	8%	74%	18%	25%	46%	29%	5%	94%	2%	1%	96%	3%	
	APP/DEPART	73	/	91	56	/	41	597	/	587	338	/	345	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	6	27	6	6	16	9	9	296	7	2	156	4	544
	APPROACH %	15%	69%	15%	19%	52%	29%	3%	95%	2%	1%	96%	2%	
	PEAK HR FACTOR	0.750			0.775			0.907			0.920			0.944
	APP/DEPART	39	/	40	31	/	25	312	/	308	162	/	171	0



U-TURNS					
NB	SB	EB	WB	TTL	
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	1	0	1	1
0	0	0	0	0	0
0	0	1	0	1	1

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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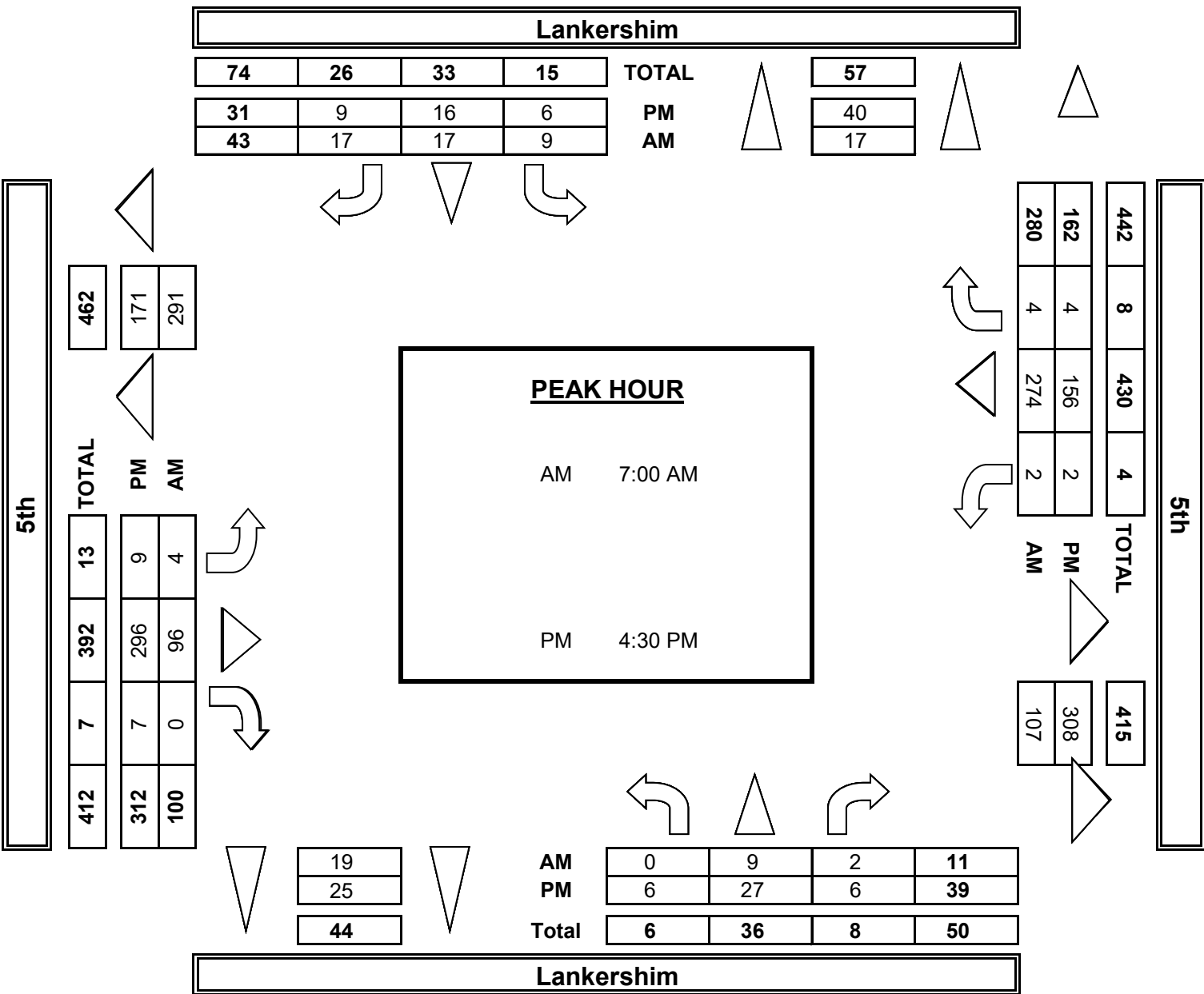
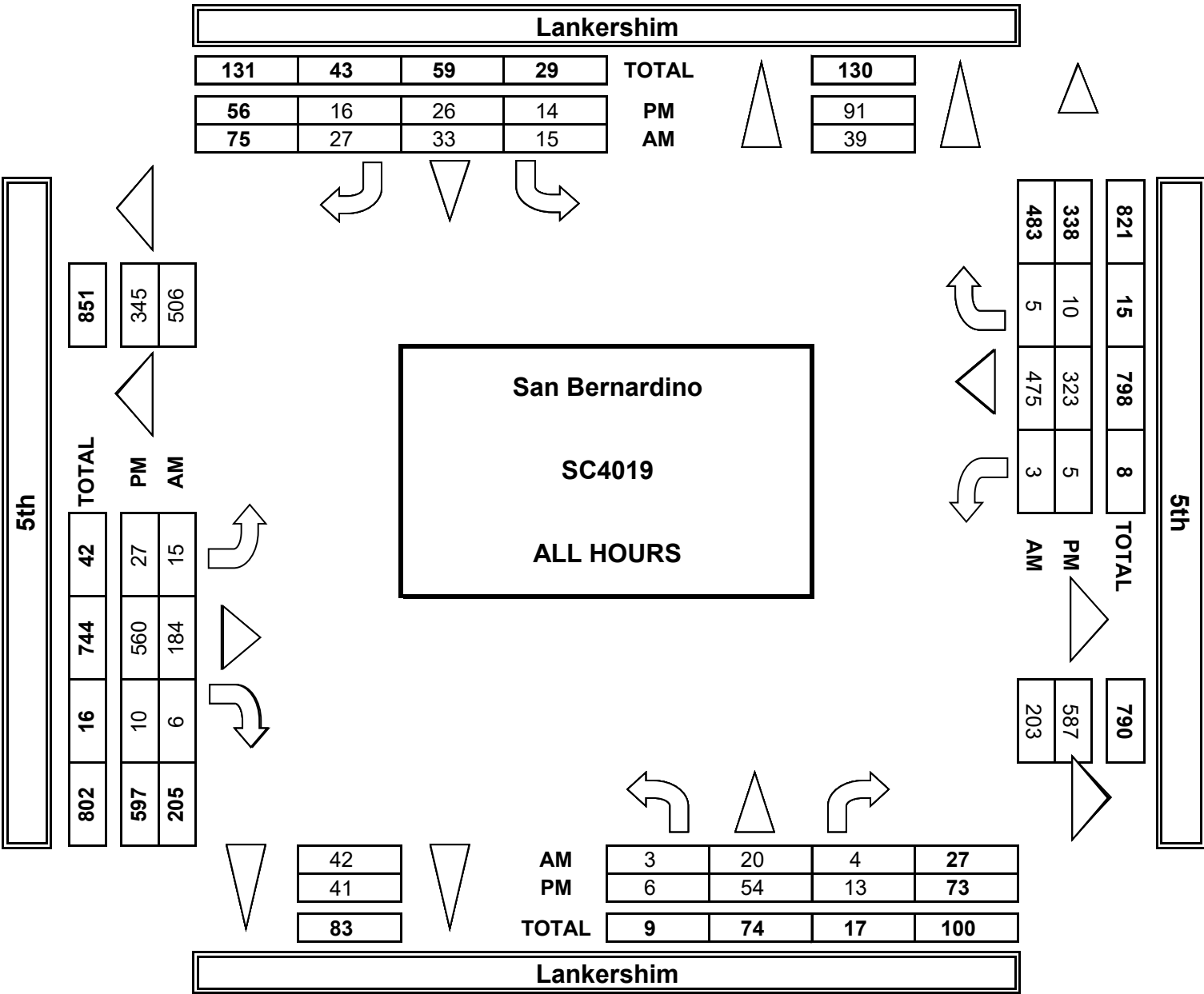
AM	7:00 AM	
	7:15 AM	
	7:30 AM	
	7:45 AM	
	8:00 AM	
	8:15 AM	
	8:30 AM	
	8:45 AM	
PM	TOTAL	
	4:00 PM	
	4:15 PM	
	4:30 PM	
	4:45 PM	
	5:00 PM	
	5:15 PM	
	5:30 PM	
	5:45 PM	
	TOTAL	

ALL PED AND BIKE					
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	2	0	0	2	2
0	1	0	0	1	1
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	3	0	0	3	3
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	1	0	0	1	1
0	1	0	1	2	2
0	0	0	0	0	0
2	0	0	0	2	2
0	0	0	0	0	0
2	2	0	1	5	5

PEDESTRIAN CROSSINGS					
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	1	0	0	1	1
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	1	0	0	1	1
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	1	0	0	1	1

BICYCLE CROSSINGS					
ES	WS	SS	NS	TOTAL	
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	2	0	0	2	2
0	0	0	0	0	0
0	0	0	0	0	0
0	1	0	1	2	2
0	0	0	0	0	0
2	0	0	0	2	2
0	0	0	0	0	0
2	1	0	1	4	4

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
5th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	Lankershim			Lankershim	
LANES:	NL 0	NT 1	NR 1	SL 0	ST 1

AM	7:00 AM	0	1	4	2	3
	7:15 AM	0	4	3	0	1
	7:30 AM	0	0	0	4	3
	7:45 AM	0	3	1	3	4
	8:00 AM	0	4	0	2	9
	8:15 AM	2	3	0	1	4
	8:30 AM	1	2	0	2	4
	8:45 AM	1	6	0	1	7
	VOLUMES	4	22	8	15	35
	APPROACH %	10%	66%	24%	19%	44%
	APP/DEPART	34	/	43	78	/
	BEGIN PEAK HR	7:00 AM				
	VOLUMES	0	8	8	9	11
	APPROACH %	0%	50%	50%	25%	31%
	PEAK HR FACTOR	0.571			0.750	
	APP/DEPART	16	/	16	36	/
PM	4:00 PM	0	9	5	3	0
	4:15 PM	0	8	1	5	1
	4:30 PM	2	4	2	0	3
	4:45 PM	3	6	2	3	5
	5:00 PM	1	8	1	0	3
	5:15 PM	2	11	1	3	6
	5:30 PM	0	4	2	0	4
	5:45 PM	0	7	1	2	5
	VOLUMES	8	56	15	16	27
	APPROACH %	10%	71%	19%	27%	45%

APP/DEPART	78	/	95	59	/
BEGIN PEAK HR	4:30 PM				
VOLUMES	8	28	6	6	17
APPROACH %	18%	67%	14%	19%	52%
PEAK HR FACTOR	0.769			0.750	
APP/DEPART	42	/	42	32	/

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5th

WEST SIDE

--	--

C. tel: 714 253 7888 cs@aimtd.com

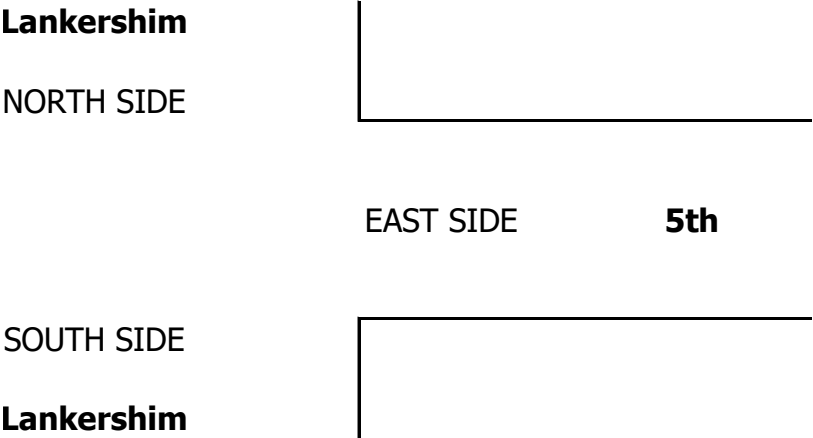
PROJECT #: SC4019
LOCATION #: 5
CONTROL: STOP N/S

				AM		▲	
5	6			PM		N	
2	2			MD	◀ W		E ▶
				OTHER		S	
				OTHER		▼	

	EASTBOUND			WESTBOUND			
	5th			5th			
SR	EL	ET	ER	WL	WT	WR	TOTAL
0	0	1	0	0	1	0	

4	0	16	0	2	62	0	93
4	2	24	0	0	74	0	111
3	1	34	0	1	76	1	123
5	1	28	0	1	92	3	141
6	0	19	0	0	48	0	88
4	7	29	2	0	55	0	105
1	2	21	1	0	37	1	72
2	3	34	6	0	57	0	116
29	16	204	9	4	499	5	847
37%	7%	89%	4%	1%	98%	1%	
47	228	/	227	508	/	531	0
16	4	101	0	4	303	4	467
44%	4%	96%	0%	1%	98%	1%	
		0.750			0.807		0.828
15	105	/	118	310	/	319	0
3	6	65	2	0	61	3	155
3	4	68	3	0	43	3	138
2	3	76	5	2	40	2	139
2	2	62	1	0	44	1	131
3	2	83	0	0	46	0	146
2	4	82	2	0	35	1	147
1	5	67	0	1	35	0	118
1	5	73	0	4	41	0	139
17	30	575	12	7	343	10	1,112
28%	5%	93%	2%	2%	95%	3%	

45	616	/	606	360	/	367	0
9	10	303	8	2	164	4	563
29%	3%	95%	2%	1%	96%	2%	
		0.914			0.931		0.957
26	320	/	315	170	/	180	0



U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
5
STOP N/S

CLASS 1:
PASSENGER
VEHICLES

NOTES:

AM
PM
MD
OTHER
OTHER

▲
N
S
▼

◀ W
E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	

AM	7:00 AM	0	1	1	2	3	4	0	11	0	0	58	0	80
	7:15 AM	0	2	0	0	1	4	2	22	0	0	64	0	95
	7:30 AM	0	0	0	4	3	3	1	21	0	1	64	1	98
	7:45 AM	0	3	1	3	4	5	1	22	0	1	79	3	122
	8:00 AM	0	2	0	2	9	4	0	19	0	0	48	0	84
	8:15 AM	0	3	0	1	2	2	5	24	0	0	50	0	87
	8:30 AM	1	2	0	2	2	1	2	14	1	0	34	1	60
	8:45 AM	1	4	0	1	7	2	3	26	3	0	47	0	94
	VOLUMES	2	17	2	15	31	25	14	159	4	2	444	5	720
	APPROACH %	10%	81%	10%	21%	44%	35%	8%	90%	2%	0%	98%	1%	
PM	APP/DEPART	21	/	35	71	/	37	177	/	176	451	/	472	0
	BEGIN PEAK HR	7:00 AM												
	VOLUMES	0	6	2	9	11	16	4	76	0	2	265	4	395
	APPROACH %	0%	75%	25%	25%	31%	44%	5%	95%	0%	1%	98%	1%	
	PEAK HR FACTOR	0.500			0.750			0.833			0.816			0.809
	APP/DEPART	8	/	14	36	/	13	80	/	87	271	/	281	0
	4:00 PM	0	9	2	0	0	1	2	59	0	0	52	3	128
	4:15 PM	0	6	1	5	1	3	4	63	1	0	34	3	121
	4:30 PM	0	4	2	0	3	2	1	66	3	2	31	2	116
	4:45 PM	0	6	2	3	5	2	2	59	1	0	42	1	123
	5:00 PM	1	6	1	0	3	3	2	83	0	0	39	0	138
	5:15 PM	2	9	1	3	4	2	2	79	2	0	33	1	138
	5:30 PM	0	4	2	0	4	1	5	65	0	1	33	0	115
	5:45 PM	0	7	1	2	5	1	5	64	0	1	32	0	118
	VOLUMES	3	51	12	13	25	15	23	538	7	4	296	10	997
	APPROACH %	5%	77%	18%	25%	47%	28%	4%	95%	1%	1%	95%	3%	
	APP/DEPART	66	/	84	53	/	36	568	/	563	310	/	314	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	3	25	6	6	15	9	7	287	6	2	145	4	515
	APPROACH %	9%	74%	18%	20%	50%	30%	2%	96%	2%	1%	96%	3%	
	PEAK HR FACTOR	0.708			0.750			0.882			0.878			0.933
	APP/DEPART	34	/	36	30	/	23	300	/	299	151	/	157	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	1	0	1

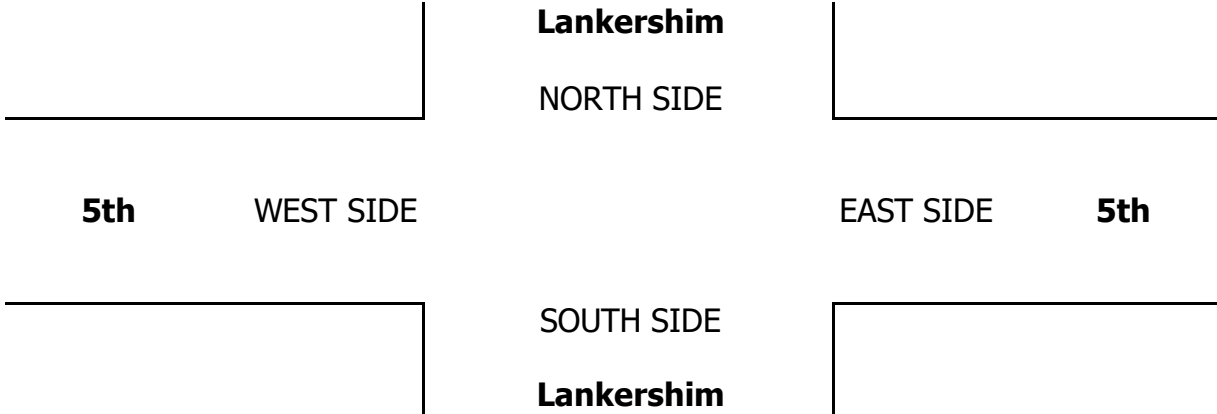
RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
5
STOP N/S

CLASS 2:
2-AXLE
WORK
VEHICLES/
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	

AM	7:00 AM	0	0	0	0	0	0	1	0	1	1	0	3
	7:15 AM	0	0	0	0	0	0	1	0	0	3	0	4
	7:30 AM	0	0	0	0	0	0	6	0	0	3	0	9
	7:45 AM	0	0	0	0	0	0	2	0	0	6	0	8
	8:00 AM	0	1	0	0	0	0	0	0	0	0	0	1
	8:15 AM	1	0	0	0	1	1	0	1	0	2	0	7
	8:30 AM	0	0	0	0	0	0	2	0	0	2	0	4
	8:45 AM	0	1	0	0	0	0	5	0	0	3	0	9
	VOLUMES	1	2	0	0	1	1	17	1	1	20	0	45
	APPROACH %	33%	67%	0%	0%	50%	50%	5%	89%	5%	5%	95%	0%
PM	4:00 PM	0	0	0	0	0	1	4	1	0	3	0	10
	4:15 PM	0	1	0	0	0	0	2	1	0	4	0	8
	4:30 PM	1	0	0	0	0	0	3	1	0	2	0	8
	4:45 PM	2	0	0	0	0	0	2	0	0	1	0	5
	5:00 PM	0	1	0	0	0	0	0	0	0	3	0	4
	5:15 PM	0	1	0	0	1	0	2	0	0	1	0	6
	5:30 PM	0	0	0	0	0	0	1	0	0	1	0	2
	5:45 PM	0	0	0	0	0	0	3	0	0	4	0	7
	VOLUMES	3	3	0	0	1	1	17	3	0	19	0	50
	APPROACH %	50%	50%	0%	0%	50%	50%	13%	74%	13%	0%	100%	0%
	7:00 AM	0	0	0	0	0	0	10	0	1	13	0	24
	7:15 AM	0	0	0	0	0	0	100%	0%	7%	93%	0%	
	7:30 AM	0	0	0	0	0	0	0.417	0.583				0.667
	7:45 AM	0	0	0	0	0	0	10	10	14	13	0	
	8:00 AM	0	0	0	0	0	0	10	10	14	13	0	
	8:15 AM	0	0	0	0	0	0	10	10	14	13	0	
	8:30 AM	0	0	0	0	0	0	10	10	14	13	0	
	8:45 AM	0	0	0	0	0	0	10	10	14	13	0	
	VOLUMES	3	3	0	0	1	1	17	3	0	19	0	50
	APPROACH %	50%	50%	0%	0%	50%	50%	13%	74%	13%	0%	100%	0%
	4:30 PM	3	2	0	0	1	0	7	1	0	7	0	23
	4:45 PM	60%	40%	0%	0%	100%	0%	20%	70%	10%	0%	100%	0%
	4:00 PM	0.625	0.250	0.500	0.583								0.719
	4:15 PM	5	4	1	2	10	7	7	10	7	10	0	
	4:30 PM	5	4	1	2	10	7	7	10	7	10	0	
	4:45 PM	5	4	1	2	10	7	7	10	7	10	0	
	5:00 PM	5	4	1	2	10	7	7	10	7	10	0	
	5:15 PM	5	4	1	2	10	7	7	10	7	10	0	
	5:30 PM	5	4	1	2	10	7	7	10	7	10	0	
	5:45 PM	5	4	1	2	10	7	7	10	7	10	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
---	---	---	---

Lankershim

NORTH SIDE

5th

WEST SIDE

EAST SIDE

5th

Lankershim

SOUTH SIDE

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
5
STOP N/S

CLASS 3:
3-AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	
	7:30 AM	0	0	0	0	0	0	0	2	0	0	2	4	
	7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	
	8:00 AM	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	1	0	2
	8:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	2
	8:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	VOLUMES	0	0	0	0	0	0	0	5	0	0	6	0	11
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
APP/DEPART	0	/	0	0	/	0	5	/	5	6	/	6	0	
BEGIN PEAK HR	7:00 AM													
VOLUMES	0	0	0	0	0	0	0	2	0	0	4	0	6	
APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.000			0.250			0.500			0.375	
APP/DEPART	0	/	0	0	/	0	2	/	2	4	/	4	0	
PM	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	1	0	0	0	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	0	3	0	3
	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	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	2	0	0	0	0	2
	VOLUMES	0	0	0	0	0	0	0	3	0	0	6	0	9
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	3	/	3	6	/	6	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	4	0	4
APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.000			0.000			0.333			0.333	
APP/DEPART	0	/	0	0	/	0	0	/	0	4	/	4	0	



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
5
STOP N/S

CLASS 4:
4 OR MORE
AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	0	0	1	0	0	0	0	1	0	0	0	0	2
	7:15 AM	0	0	1	0	0	0	0	0	0	0	1	0	2
	7:30 AM	0	0	0	0	0	0	0	0	0	1	0	0	1
	7:45 AM	0	0	0	0	0	0	1	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	0	0	0	0	0	1	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	1	0	1	0	0	2
	VOLUMES	0	0	2	0	0	0	0	3	1	0	3	0	9
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	75%	25%	0%	100%	0%	
PM	APP/DEPART	2	/	0	0	/	1	4	/	5	3	/	3	0
	BEGIN PEAK HR	7:00 AM												
	VOLUMES	0	0	2	0	0	0	0	2	0	0	2	0	6
	APPROACH %	0%	0%	100%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.500			0.000			0.500			0.500			0.750
	APP/DEPART	2	/	0	0	/	0	2	/	4	2	/	2	0
	4:00 PM	0	0	1	1	0	0	0	0	0	0	0	0	2
	4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
	4:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	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	1	1	0	0	2
	VOLUMES	0	0	1	1	0	0	0	1	0	1	2	0	6
	APPROACH %	0%	0%	100%	100%	0%	0%	0%	100%	0%	33%	67%	0%	
	APP/DEPART	1	/	0	1	/	1	1	/	3	3	/	2	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
PM	PEAK HR FACTOR	0.000			0.000			0.250			0.000			0.250
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

Lankershim

NORTH SIDE

5th

WEST SIDE

EAST SIDE

5th

SOUTH SIDE

Lankershim

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
5
STOP N/S

CLASS 5:
RV

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	

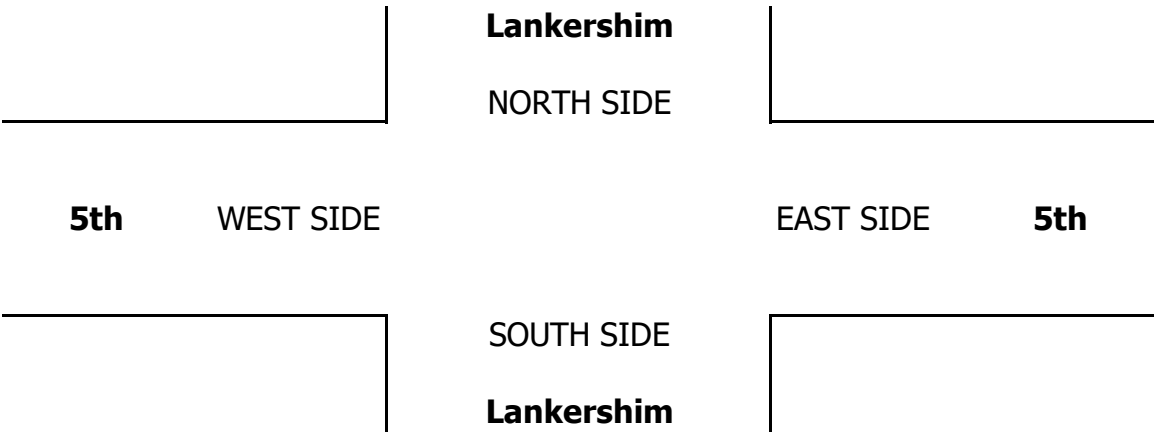
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	X	X	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:00 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	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
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Lankershim
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
5
STOP N/S

CLASS 6:

NOTES:

BUSES

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Lankershim			Lankershim			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	1	0	1	0	0	1	0	0	1	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

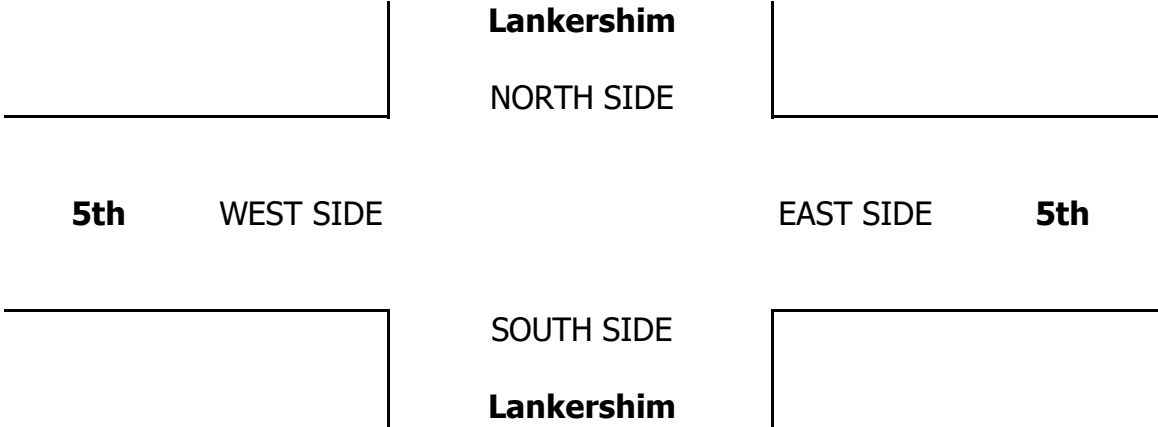
RTOR			
NRR	SRR	ERR	WRR
X	X	X	X

AM	7:00 AM	0	0	0	0	0	0	0	0	0	1	0	1
	7:15 AM	0	1	0	0	0	0	0	0	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	1	0	1
	8:00 AM	0	0	0	0	0	1	0	0	0	0	0	1
	8:15 AM	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	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	1	0	0	1	1	0	0	0	2	0	5
	APPROACH %	0%	100%	0%	0%	50%	50%	0%	0%	0%	100%	0%	
PM	APP/DEPART	1	/	1	2	/	1	0	/	0	2	/	3
	BEGIN PEAK HR	7:00 AM											
	VOLUMES	0	1	0	0	0	0	0	0	0	2	0	3
	APPROACH %	0%	100%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.250			0.000			0.000			0.500		
	APP/DEPART	1	/	1	0	/	0	0	/	0	2	/	2
	4:00 PM	0	0	0	0	0	0	1	0	0	0	0	1
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	1	0	0	0	1
	4:45 PM	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
	5:15 PM	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
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	1	1	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	0%	
	APP/DEPART	0	/	1	0	/	0	2	/	1	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	1	0	0	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.250			0.000		
	APP/DEPART	0	/	0	0	/	0	1	/	1	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, May 18, 23

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Victoria
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
6
SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Victoria			Victoria			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	1	2	0	1	1	1	
7:00 AM	0	18	7	6	47	5	3	12	0	48	56	15	217
7:15 AM	1	11	2	13	66	10	2	17	0	62	59	11	254
7:30 AM	0	14	7	23	67	3	4	28	1	57	61	10	275
7:45 AM	0	24	5	15	78	11	7	20	1	66	83	22	332
8:00 AM	0	32	12	16	62	4	2	17	2	51	39	25	262
8:15 AM	0	22	8	16	48	8	2	23	0	38	43	16	224
8:30 AM	0	30	13	12	42	3	0	14	3	33	36	31	217
8:45 AM	0	23	9	17	33	7	5	24	2	35	45	14	214
VOLUMES	1	174	63	118	443	51	25	155	9	390	422	144	1,995
APPROACH %	0%	73%	26%	19%	72%	8%	13%	82%	5%	41%	44%	15%	
APP/DEPART	238	/	343	612	/	842	189	/	336	956	/	474	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	1	81	26	67	273	28	15	82	4	236	242	68	1,123
APPROACH %	1%	75%	24%	18%	74%	8%	15%	81%	4%	43%	44%	12%	
PEAK HR FACTOR	0.614			0.885			0.765			0.798			0.846
APP/DEPART	108	/	164	368	/	513	101	/	175	546	/	271	0
4:00 PM	0	61	30	15	42	7	14	58	4	19	46	23	319
4:15 PM	1	73	24	14	34	9	6	60	3	25	27	25	301
4:30 PM	5	70	43	12	46	3	11	59	5	17	30	18	319
4:45 PM	0	95	32	14	51	4	16	48	1	14	37	35	347
5:00 PM	2	88	44	11	46	6	15	66	3	12	36	28	357
5:15 PM	2	124	44	16	47	1	14	59	5	21	28	31	392
5:30 PM	2	109	44	9	61	7	20	45	1	10	32	30	370
5:45 PM	2	69	21	20	29	7	10	61	2	11	25	24	281
VOLUMES	14	689	282	111	356	44	106	456	24	129	261	214	2,686
APPROACH %	1%	70%	29%	22%	70%	9%	18%	78%	4%	21%	43%	35%	
APP/DEPART	985	/	1,009	511	/	509	586	/	849	604	/	319	0
BEGIN PEAK HR	4:45 PM												
VOLUMES	6	416	164	50	205	18	65	218	10	57	133	124	1,466
APPROACH %	1%	71%	28%	18%	75%	7%	22%	74%	3%	18%	42%	39%	
PEAK HR FACTOR	0.862			0.886			0.872			0.913			0.935
APP/DEPART	586	/	605	273	/	272	293	/	432	314	/	157	0



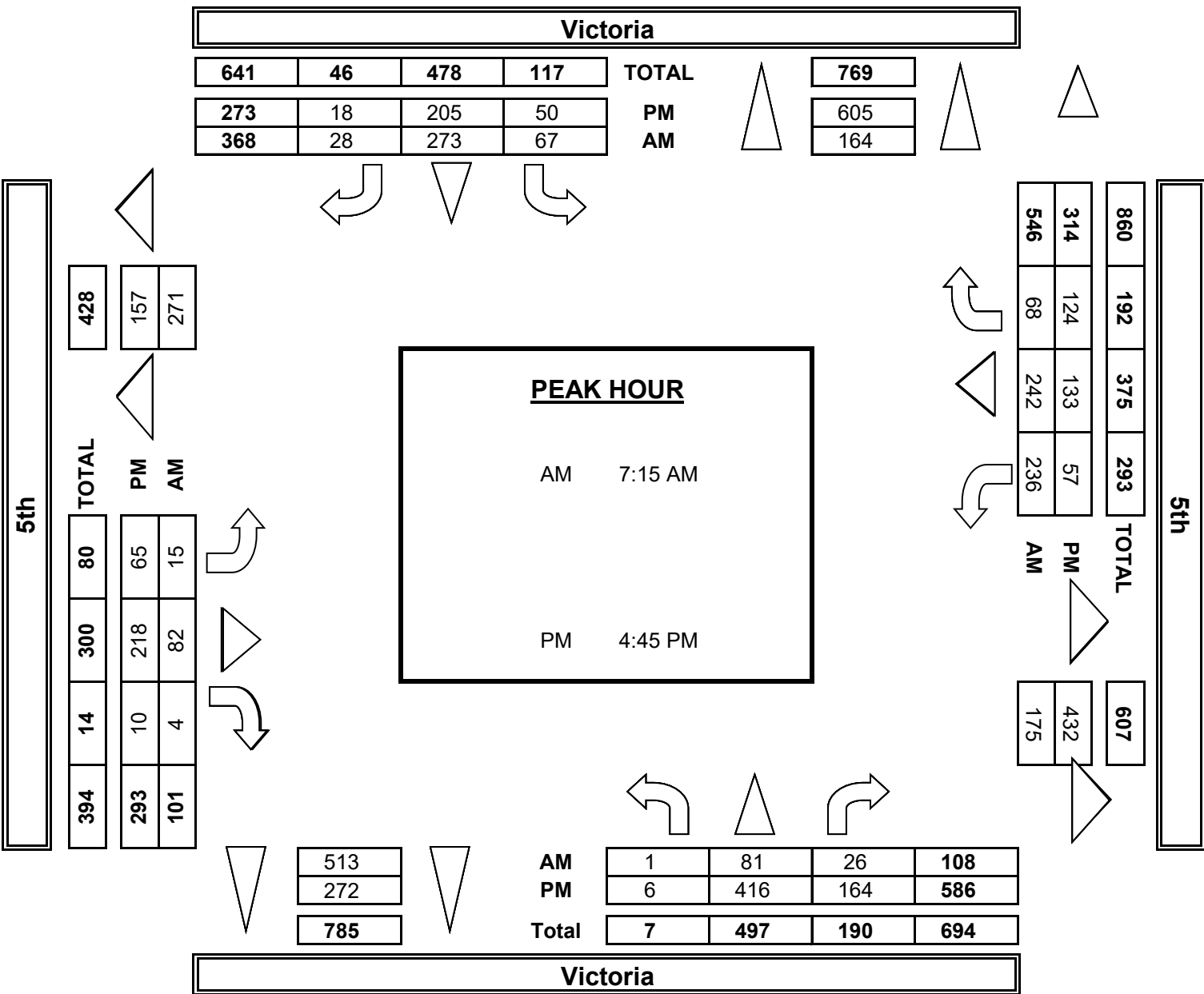
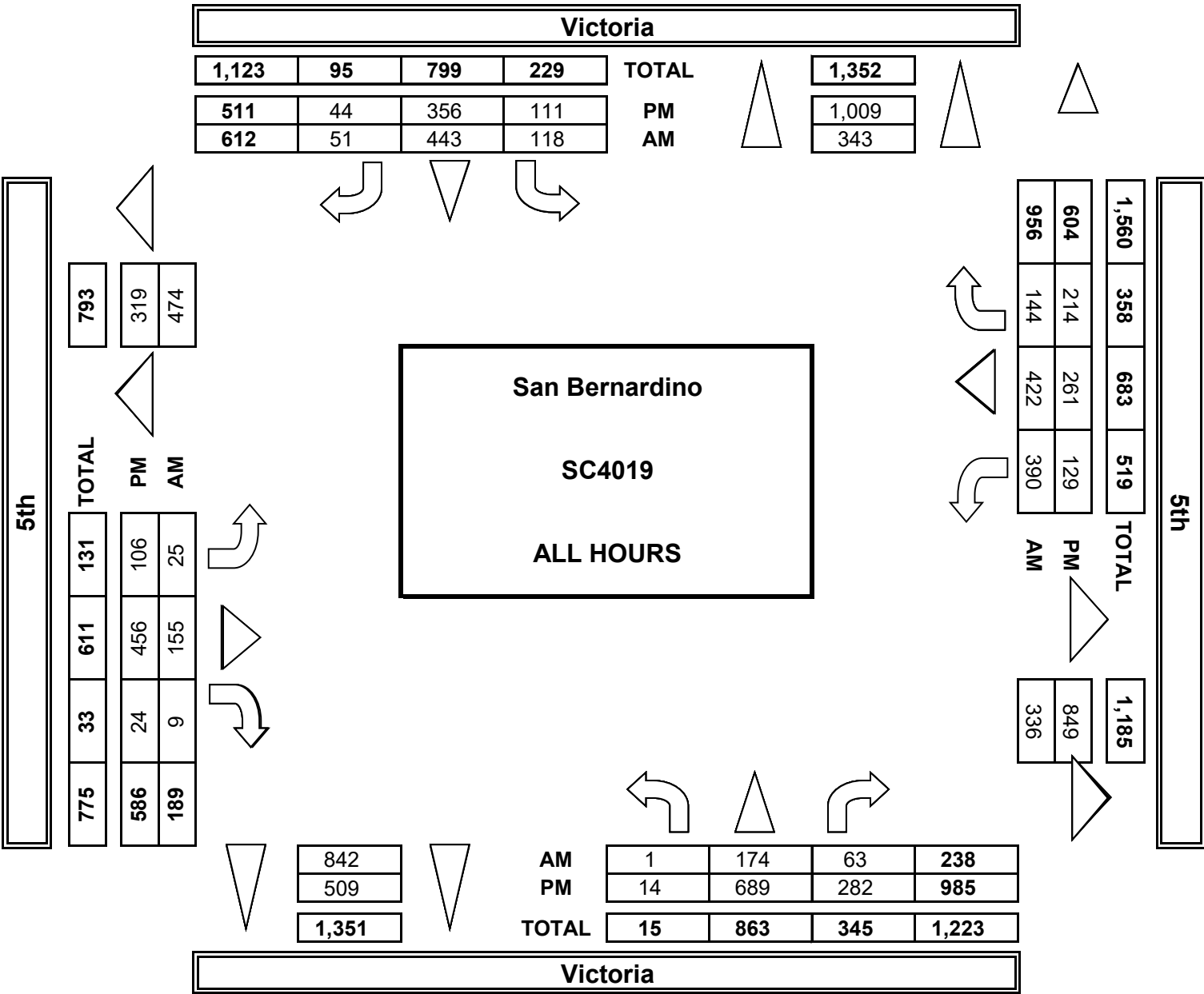
AM	7:00 AM
	7:15 AM
	7:30 AM
	7:45 AM
	8:00 AM
	8:15 AM
	8:30 AM
	8:45 AM
PM	TOTAL
	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
TOTAL	

ALL PED AND BIKE				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	3	0	3	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	3	0	3	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	1	0	1	2
0	0	0	0	0
0	0	0	0	0
0	1	0	2	3

PEDESTRIAN CROSSINGS				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	1	2
0	0	0	0	0
0	0	0	0	0
0	1	0	1	2

BICYCLE CROSSINGS				
ES	WS	SS	NS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	3	0	3	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	3	0	3	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE: 5/18/23 THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Victoria
5th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	Victoria			Victoria	
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2

AM	7:00 AM	0	21	8	6	49
	7:15 AM	1	11	5	13	68
	7:30 AM	0	15	7	25	69
	7:45 AM	0	24	7	15	84
	8:00 AM	0	35	17	18	66
	8:15 AM	0	23	8	19	49
	8:30 AM	0	30	16	14	42
	8:45 AM	0	31	13	18	34
	VOLUMES	1	190	79	127	460
	APPROACH %	0%	70%	29%	20%	72%
	APP/DEPART	269	/	370	640	/
	BEGIN PEAK HR	7:15 AM				
	VOLUMES	1	85	35	71	287
	APPROACH %	1%	70%	29%	18%	74%
	PEAK HR FACTOR	0.591			0.876	
	APP/DEPART	121	/	173	387	/
PM	4:00 PM	0	64	31	15	47
	4:15 PM	3	75	24	15	36
	4:30 PM	10	73	45	12	49
	4:45 PM	0	96	35	14	53
	5:00 PM	2	93	45	12	47
	5:15 PM	2	127	44	16	48
	5:30 PM	2	111	47	9	62
	5:45 PM	4	70	21	21	29
	VOLUMES	23	707	291	113	369
	APPROACH %	2%	69%	28%	21%	70%

APP/DEPART	1,020	/	1,037	527	/
BEGIN PEAK HR		4:45 PM			
VOLUMES	6	427	170	51	209
APPROACH %	1%	71%	28%	18%	75%
PEAK HR FACTOR		0.871			0.891
APP/DEPART	603	/	623	278	/



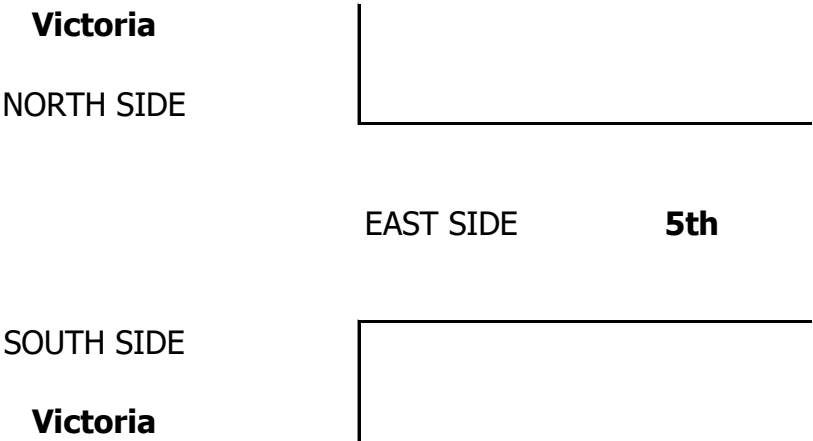
5th

WEST SIDE



######

542	607	/	875	639	/	340	0
18	67	220	10	64	137	130	1,507
6%	22%	74%	3%	19%	41%	39%	
		0.871			0.934		0.935
283	296	/	441	331	/	161	0



U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Victoria
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
6
SIGNAL

CLASS 1:
PASSENGER
VEHICLES

NOTES:

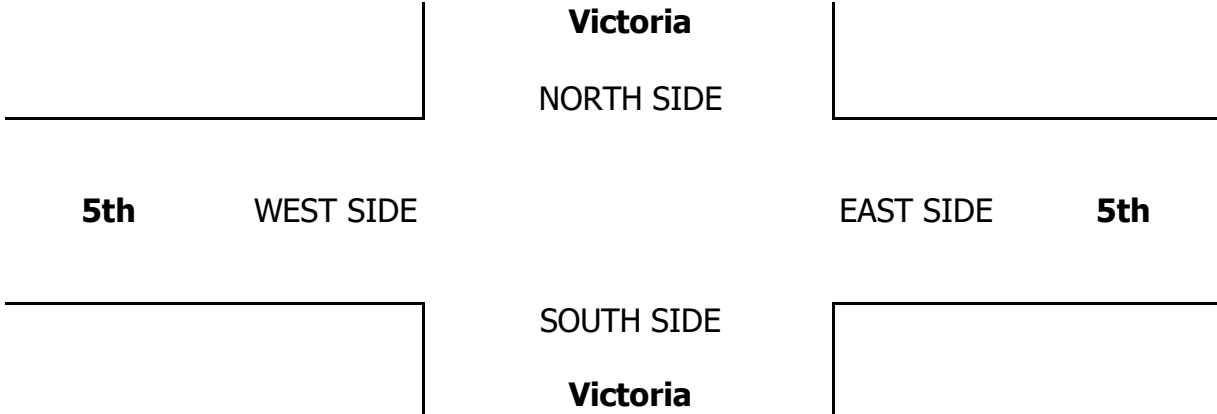
AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Victoria			Victoria			5th			5th			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL

AM	7:00 AM	0	14	6	6	44	5	3	9	0	47	55	15	204
	7:15 AM	1	11	0	13	63	9	1	16	0	58	55	10	237
	7:30 AM	0	12	7	22	64	3	2	25	1	55	55	9	255
	7:45 AM	0	24	4	15	71	10	7	18	1	64	80	20	314
	8:00 AM	0	30	9	14	58	4	2	17	1	48	38	24	245
	8:15 AM	0	20	8	14	47	7	2	22	0	37	41	13	211
	8:30 AM	0	30	10	10	42	3	0	13	1	27	33	30	199
	8:45 AM	0	19	6	15	32	6	5	21	2	34	41	11	192
	VOLUMES	1	160	50	109	421	47	22	141	6	370	398	132	1,857
	APPROACH %	0%	76%	24%	19%	73%	8%	13%	83%	4%	41%	44%	15%	
PM	APP/DEPART	211	/	314	577	/	797	169	/	300	900	/	446	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	1	77	20	64	256	26	12	76	3	225	228	63	1,051
	APPROACH %	1%	79%	20%	18%	74%	8%	13%	84%	3%	44%	44%	12%	
	PEAK HR FACTOR	0.628			0.901			0.813			0.787			0.837
	APP/DEPART	98	/	152	346	/	484	91	/	160	516	/	255	0
	4:00 PM	0	59	29	15	36	7	13	52	4	16	43	23	297
	4:15 PM	0	71	24	13	32	9	6	57	3	22	26	24	287
	4:30 PM	2	66	39	12	42	3	11	55	4	16	27	18	295
	4:45 PM	0	94	29	14	48	4	15	47	1	12	36	34	334
	5:00 PM	2	83	43	10	45	6	14	65	3	10	32	26	339
	5:15 PM	2	121	44	16	46	1	14	58	5	19	27	29	382
	5:30 PM	2	107	42	9	60	7	19	45	1	10	31	27	360
	5:45 PM	1	68	21	19	29	6	9	59	1	11	22	23	269
	VOLUMES	9	669	271	108	338	43	101	438	22	116	244	204	2,563
	APPROACH %	1%	70%	29%	22%	69%	9%	18%	78%	4%	21%	43%	36%	
	APP/DEPART	949	/	974	489	/	476	561	/	817	564	/	296	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	6	405	158	49	199	18	62	215	10	51	126	116	1,415
	APPROACH %	1%	71%	28%	18%	75%	7%	22%	75%	3%	17%	43%	40%	
	PEAK HR FACTOR	0.852			0.875			0.875			0.893			0.926
	APP/DEPART	569	/	583	266	/	260	287	/	422	293	/	150	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
1	1	0	1
0	2	0	2
0	0	0	1
0	0	1	2
2	0	0	2
0	1	0	1
3	0	0	5
0	1	0	2
6	5	1	16

2	2	1	7
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

3	2	1	1
3	0	0	0
2	1	0	3
1	2	0	2
5	1	0	1
3	0	0	4
3	0	1	0
3	2	0	4
23	8	2	15

12	3	1	7
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Victoria 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 6 SIGNAL
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CLASS 2:	NOTES:	AM		▲ N	
2-AXLE WORK		PM	◀ W		E ▶
VEHICLES/ TRUCKS		MD		S	
		OTHER		▼	
		OTHER			

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Victoria			Victoria			5th			5th			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL

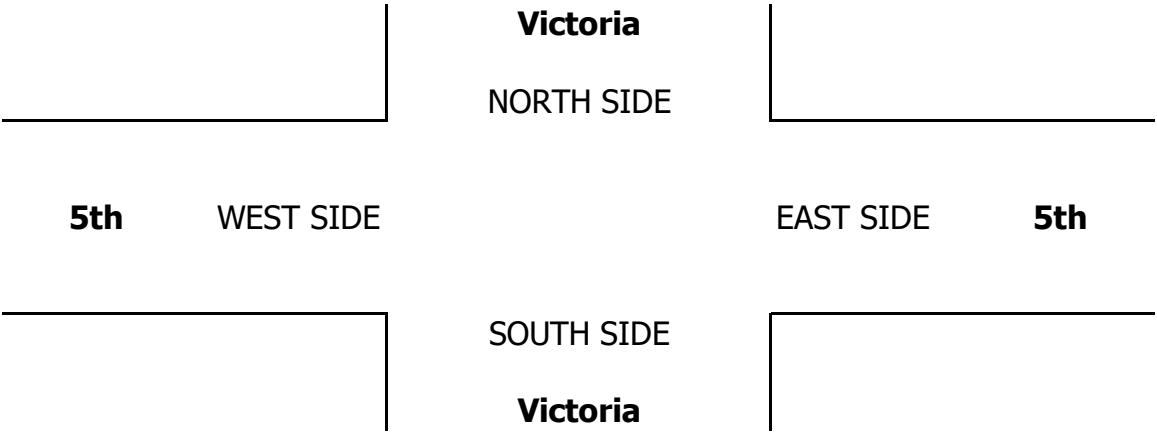
U-TURNS				
NB	SB	EB	WB	TTL
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0

AM	7:00 AM	0	2	1	0	3	0	0	1	0	0	1	0	0	8
	7:15 AM	0	0	1	0	2	0	1	0	0	2	2	2	1	9
	7:30 AM	0	2	0	0	2	0	1	2	0	0	3	0	0	10
	7:45 AM	0	0	0	0	4	1	0	2	0	1	3	2	0	13
	8:00 AM	0	1	1	1	2	0	0	0	0	3	1	0	0	9
	8:15 AM	0	2	0	1	1	1	0	0	0	1	1	1	0	8
	8:30 AM	0	0	1	1	0	0	0	1	0	3	3	1	0	10
	8:45 AM	0	0	1	2	1	1	0	3	0	0	2	2	0	12
	VOLUMES	0	7	5	5	15	3	2	9	0	11	15	7	0	79
	APPROACH %	0%	58%	42%	22%	65%	13%	18%	82%	0%	33%	45%	21%	0	
PM	APP/DEPART	12	/	16	23	/	26	11	/	19	33	/	18	0	
	BEGIN PEAK HR	7:15 AM													
	VOLUMES	0	3	2	1	10	1	2	4	0	6	9	3	0	41
	APPROACH %	0%	60%	40%	8%	83%	8%	33%	67%	0%	33%	50%	17%	0	
	PEAK HR FACTOR	0.625			0.600			0.500			0.750			0.788	
	APP/DEPART	5	/	8	12	/	16	6	/	7	18	/	10	0	
	4:00 PM	0	1	1	0	3	0	1	3	0	0	1	0	0	10
	4:15 PM	0	1	0	1	0	0	0	2	0	1	1	0	0	6
	4:30 PM	0	3	4	0	3	0	0	3	0	0	3	0	0	16
	4:45 PM	0	0	2	0	2	0	1	1	0	1	1	1	0	9
PM	5:00 PM	0	3	1	0	1	0	1	1	0	1	3	2	0	13
	5:15 PM	0	2	0	0	1	0	0	1	0	0	1	1	0	6
	5:30 PM	0	0	1	0	0	0	1	0	0	0	1	3	0	6
	5:45 PM	0	1	0	1	0	1	0	1	0	0	2	1	0	7
	VOLUMES	0	11	9	2	10	1	4	12	0	3	13	8	0	73
	APPROACH %	0%	55%	45%	15%	77%	8%	25%	75%	0%	13%	54%	33%	0	
	APP/DEPART	20	/	23	13	/	13	16	/	23	24	/	14	0	
	BEGIN PEAK HR	4:45 PM													
	VOLUMES	0	5	4	0	4	0	3	3	0	2	6	7	0	34
	APPROACH %	0%	56%	44%	0%	100%	0%	50%	50%	0%	13%	40%	47%	0	
PM	PEAK HR FACTOR	0.563			0.500			0.750			0.625			0.654	
	APP/DEPART	9	/	15	4	/	6	6	/	7	15	/	6	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
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0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Victoria
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
6
SIGNAL

CLASS 3:
3-AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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◀ W
S
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N
E▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Victoria			Victoria			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	1	2	0	1	1	1	

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 AM	0	0	0	0	1	0	0	0	0	1	2	0	4
	7:30 AM	0	0	0	0	1	0	1	1	0	0	0	1	4
	7:45 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
	8:00 AM	0	0	0	1	1	0	0	0	0	0	0	1	3
	8:15 AM	0	0	0	0	0	0	0	0	0	0	1	0	1
	8:30 AM	0	0	1	1	0	0	0	0	2	1	0	0	5
	8:45 AM	0	0	1	0	0	0	0	0	0	0	1	0	2
	VOLUMES	0	0	2	2	4	0	1	1	2	2	4	2	20
	APPROACH %	0%	0%	100%	33%	67%	0%	25%	25%	50%	25%	50%	25%	
APP/DEPART	2	/	3	6	/	8	4	/	5	8	/	4	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	1	4	0	1	1	0	1	2	2	12	
APPROACH %	0%	0%	0%	20%	80%	0%	50%	50%	0%	20%	40%	40%		
PEAK HR FACTOR	0.000			0.625			0.250			0.417			0.750	
APP/DEPART	0	/	3	5	/	5	2	/	2	5	/	2	0	
PM	4:00 PM	0	0	0	0	3	0	0	1	0	2	2	0	8
	4:15 PM	0	0	0	0	1	0	0	0	0	1	0	1	3
	4:30 PM	1	0	0	0	0	0	0	0	0	0	0	0	1
	4:45 PM	0	1	0	0	1	0	0	0	0	1	0	0	3
	5:00 PM	0	1	0	1	0	0	0	0	0	1	1	0	4
	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	0	0	0	0	0	3
	5:45 PM	0	0	0	0	0	0	1	1	1	0	0	0	3
	VOLUMES	1	4	0	1	6	0	1	2	1	5	3	1	25
	APPROACH %	20%	80%	0%	14%	86%	0%	25%	50%	25%	56%	33%	11%	
APP/DEPART	5	/	6	7	/	12	4	/	3	9	/	4	0	
BEGIN PEAK HR	4:45 PM													
VOLUMES	0	4	0	1	2	0	0	0	0	2	1	0	10	
APPROACH %	0%	100%	0%	33%	67%	0%	0%	0%	0%	67%	33%	0%		
PEAK HR FACTOR	0.500			0.750			0.000			0.375			0.625	
APP/DEPART	4	/	4	3	/	4	0	/	1	3	/	1	0	



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
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0	0	0	0

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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Victoria 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 6 SIGNAL
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CLASS 4:	NOTES:	AM		▲	
4 OR MORE AXLE TRUCKS		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Victoria			Victoria			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	1	2	0	1	1	1	

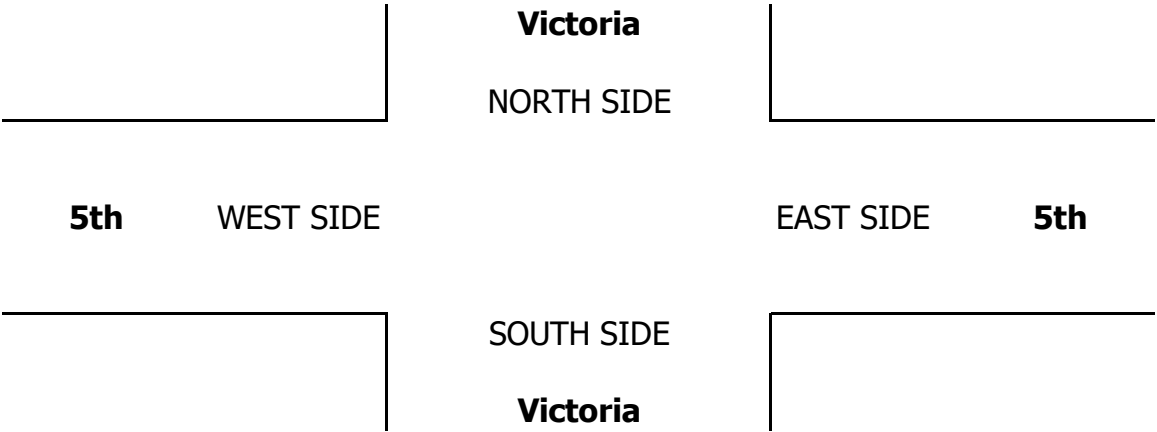
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	0	0	0	0	0	0	2	0	0	0	0	2	
	7:15 AM	0	0	1	0	0	0	1	0	1	0	0	3	
	7:30 AM	0	0	0	1	0	0	0	0	1	3	0	5	
	7:45 AM	0	0	1	0	1	0	0	0	0	0	0	2	
	8:00 AM	0	1	2	0	1	0	0	0	1	0	0	5	
	8:15 AM	0	0	0	1	0	0	0	1	0	0	0	2	
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:45 AM	0	4	1	0	0	0	0	0	0	1	1	1	8
	VOLUMES	0	5	5	2	2	0	0	4	1	3	4	1	27
	APPROACH %	0%	50%	50%	50%	50%	0%	0%	80%	20%	38%	50%	13%	
APP/DEPART	10	/	6	4	/	6	5	/	11	8	/	4	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	1	4	1	2	0	0	1	1	2	3	0	15	
APPROACH %	0%	20%	80%	33%	67%	0%	0%	50%	50%	40%	60%	0%		
PEAK HR FACTOR	0.417			0.750			0.500			0.313			0.750	
APP/DEPART	5	/	1	3	/	5	2	/	6	5	/	3	0	
PM	4:00 PM	0	1	0	0	0	0	2	0	1	0	0	4	
	4:15 PM	1	0	0	0	0	0	1	0	1	0	0	3	
	4:30 PM	2	0	0	0	0	0	0	1	1	0	0	4	
	4:45 PM	0	0	1	0	0	0	0	0	0	0	0	1	
	5:00 PM	0	1	0	0	0	0	0	0	0	0	0	1	
	5:15 PM	0	1	0	0	0	0	0	0	2	0	1	4	
	5:30 PM	0	0	1	0	0	0	0	0	0	0	0	1	
	5:45 PM	1	0	0	0	0	0	0	0	0	1	0	2	
	VOLUMES	4	3	2	0	0	0	0	3	1	5	1	1	20
	APPROACH %	44%	33%	22%	0%	0%	0%	0%	75%	25%	71%	14%	14%	
	APP/DEPART	9	/	4	0	/	6	4	/	5	7	/	5	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	0	2	2	0	0	0	0	0	0	2	0	1	7
	APPROACH %	0%	50%	50%	0%	0%	0%	0%	0%	0%	67%	0%	33%	
PEAK HR FACTOR	1.000			0.000			0.000			0.250			0.438	
APP/DEPART	4	/	3	0	/	2	0	/	2	3	/	0	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Victoria 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 6 SIGNAL
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CLASS 5:	NOTES:	AM		▲	
RV		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Victoria			Victoria			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	0	2	0	1	2	0	1	1	1	

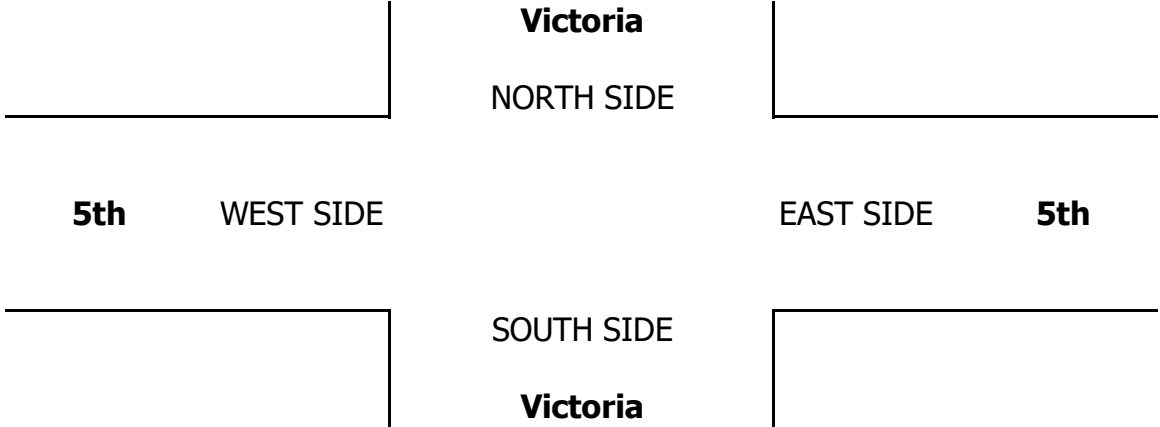
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	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
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:45 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Victoria 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 6 SIGNAL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N S ▼ ◀ W E ▶
BUSES			

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Victoria			Victoria			5th			5th			
LANES:	NL 0	NT 2	NR 0	SL 0	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	0	2	0	0	0	0	0	0	0	1	0	3	
	7:15 AM	0	0	0	0	0	1	0	0	0	0	0	1	
	7:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	
	7:45 AM	0	0	0	0	1	0	0	0	0	1	0	2	
	8:00 AM	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	2	2	
	8:30 AM	0	0	1	0	0	0	0	0	0	2	0	3	
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	VOLUMES	0	2	1	0	1	1	0	0	0	4	1	2	12
	APPROACH %	0%	67%	33%	0%	50%	50%	0%	0%	0%	57%	14%	29%	
APP/DEPART	3	/	4	2	/	5	0	/	1	7	/	2	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	0	1	1	0	0	0	2	0	0	4	
APPROACH %	0%	0%	0%	0%	50%	50%	0%	0%	0%	100%	0%	0%		
PEAK HR FACTOR	0.000			0.500			0.000			0.500			0.500	
APP/DEPART	0	/	0	2	/	3	0	/	0	2	/	1	0	
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	1	0	0	1	0	0	0	0	0	0	2	
	4:30 PM	0	1	0	0	1	0	0	1	0	0	0	3	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	5:00 PM	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	
	5:30 PM	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	
	VOLUMES	0	2	0	0	2	0	0	1	0	0	0	0	5
	APPROACH %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	0%	0%	
	APP/DEPART	2	/	2	2	/	2	1	/	1	0	/	0	0
	BEGIN PEAK HR	4:45 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PEAK HR FACTOR	0.000			0.000			0.000			0.000			0.000	
APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0	0	

0	0	0	0	0
0	0	0	0	0
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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, May 18, 23

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Central
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
7
SIGNAL

NOTES:

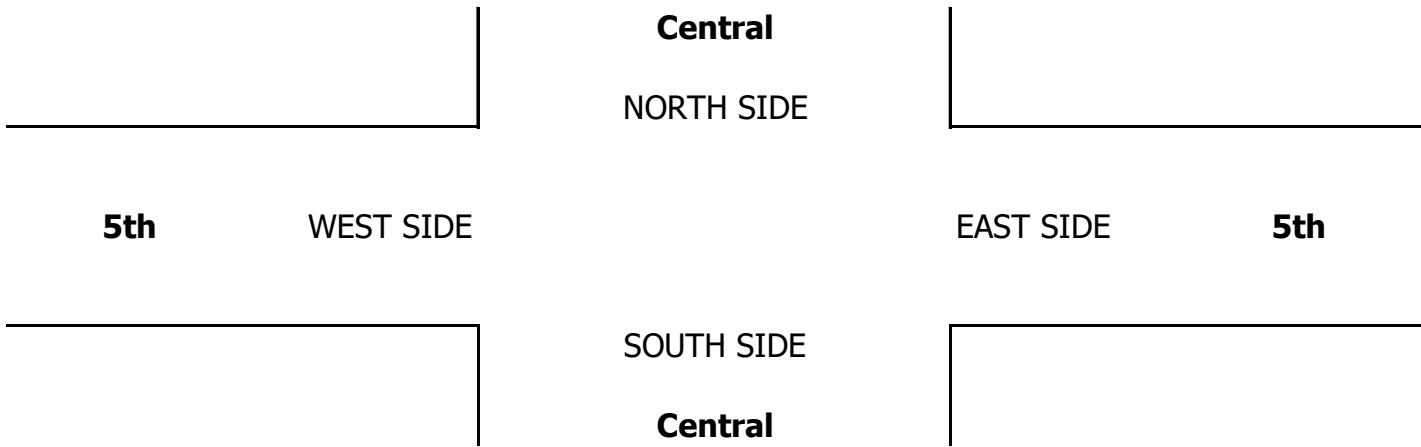
Construction

AM
PM
MD
OTHER
OTHER

▲
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S
▼

◀ W
E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Central			Central			5th			5th			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
7:00 AM	0	0	0	12	0	7	1	25	0	0	110	8	163
7:15 AM	1	1	0	8	0	9	1	36	2	1	127	5	191
7:30 AM	0	0	0	8	0	8	2	48	2	0	132	8	208
7:45 AM	1	0	0	12	0	16	1	45	2	0	154	13	244
8:00 AM	0	0	0	12	0	6	4	44	0	0	110	10	186
8:15 AM	1	0	0	11	2	9	3	46	1	1	98	10	182
8:30 AM	0	0	2	19	0	11	5	36	0	0	96	12	181
8:45 AM	2	0	0	22	0	11	6	48	0	0	74	13	176
VOLUMES	5	1	2	104	2	77	23	328	7	2	901	79	1,531
APPROACH %	63%	13%	25%	57%	1%	42%	6%	92%	2%	0%	92%	8%	
APP/DEPART	8	/	104	183	/	11	358	/	433	982	/	983	0
BEGIN PEAK HR	7:15 AM												
VOLUMES	2	1	0	40	0	39	8	173	6	1	523	36	829
APPROACH %	67%	33%	0%	51%	0%	49%	4%	93%	3%	0%	93%	6%	
PEAK HR FACTOR	0.375			0.705			0.899			0.838			0.849
APP/DEPART	3	/	45	79	/	7	187	/	213	560	/	564	0
4:00 PM	2	4	1	10	0	8	12	96	1	0	91	18	243
4:15 PM	0	0	0	11	0	9	4	89	0	1	76	9	199
4:30 PM	1	0	1	14	0	7	6	112	0	0	75	17	233
4:45 PM	0	1	2	14	0	8	13	87	0	0	77	31	233
5:00 PM	0	1	1	15	0	7	9	103	0	0	80	17	233
5:15 PM	0	0	0	10	1	1	18	98	0	0	76	14	218
5:30 PM	0	1	0	14	0	10	9	89	0	0	62	24	209
5:45 PM	0	0	1	16	0	8	6	89	0	0	59	26	205
VOLUMES	3	7	6	104	1	58	77	763	1	1	596	156	1,773
APPROACH %	19%	44%	38%	64%	1%	36%	9%	91%	0%	0%	79%	21%	
APP/DEPART	16	/	240	163	/	3	841	/	873	753	/	657	0
BEGIN PEAK HR	4:30 PM												
VOLUMES	1	2	4	53	1	23	46	400	0	0	308	79	917
APPROACH %	14%	29%	57%	69%	1%	30%	10%	90%	0%	0%	80%	20%	
PEAK HR FACTOR	0.583			0.875			0.945			0.896			0.984
APP/DEPART	7	/	127	77	/	1	446	/	457	387	/	332	0



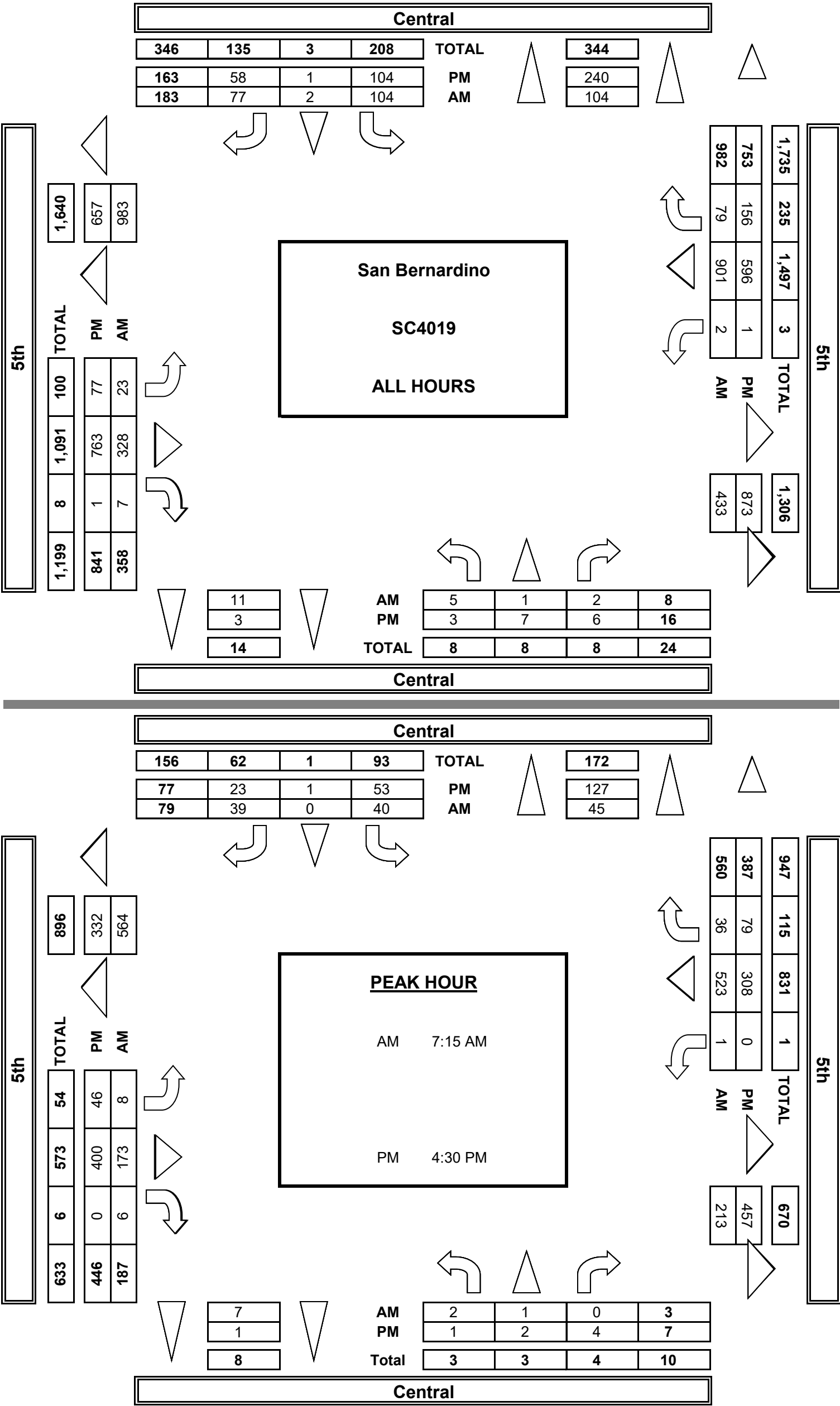
AM	7:00 AM
	7:15 AM
	7:30 AM
	7:45 AM
	8:00 AM
	8:15 AM
	8:30 AM
	8:45 AM
PM	TOTAL
	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
	TOTAL

ALL PED AND BIKE				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
1	0	0	3	4
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	0	3	5
0	0	0	2	2
1	0	0	0	1
0	0	0	1	1
0	0	1	2	3
1	0	1	0	2
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
3	0	2	5	10

PEDESTRIAN CROSSINGS				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	1	3

BICYCLE CROSSINGS				
ES	WS	SS	NS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
1	0	0	3	4
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	1	0	3	5
0	0	0	1	1
1	0	0	0	1
0	0	0	1	1
0	0	0	2	2
1	0	0	0	1
0	0	0	0	0
1	0	0	0	1
0	0	0	0	0
3	0	0	4	7

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE: 5/18/23 THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Central
5th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	Central			Central	
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1

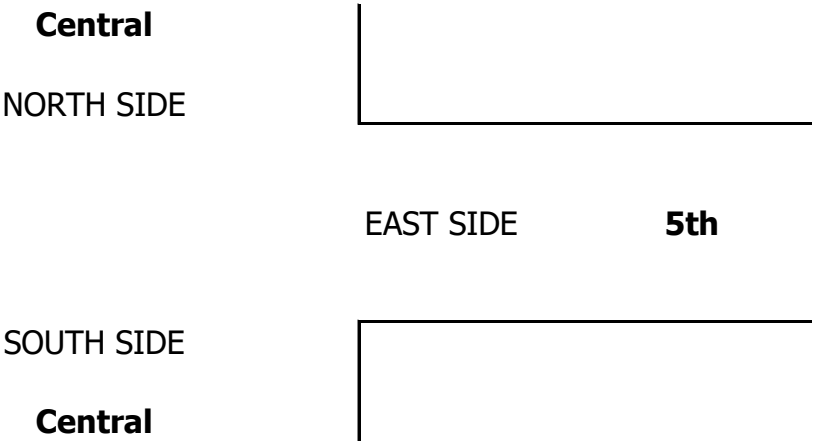
AM	7:00 AM	0	0	0	13	0
	7:15 AM	1	1	0	8	0
	7:30 AM	0	0	0	8	0
	7:45 AM	1	0	0	13	0
	8:00 AM	0	0	0	14	0
	8:15 AM	1	0	0	11	2
	8:30 AM	0	0	3	20	0
	8:45 AM	2	0	0	23	0
	VOLUMES	5	1	3	110	2
	APPROACH %	59%	12%	29%	57%	1%
PM	APP/DEPART	9	/	106	194	/
	BEGIN PEAK HR	7:15 AM				
	VOLUMES	2	1	0	43	0
	APPROACH %	67%	33%	0%	51%	0%
	PEAK HR FACTOR	0.375			0.703	
	APP/DEPART	3	/	46	83	/
	4:00 PM	2	4	1	11	0
	4:15 PM	0	0	0	13	0
	4:30 PM	1	0	1	14	0
	4:45 PM	0	1	3	14	0
	5:00 PM	0	1	1	15	0
	5:15 PM	0	0	0	10	2
	5:30 PM	0	1	0	16	0
	5:45 PM	0	0	1	16	0
	VOLUMES	3	7	7	108	2
	APPROACH %	18%	42%	39%	64%	1%

APP/DEPART	17	/	245	170	/
BEGIN PEAK HR	4:30 PM				
VOLUMES	1	2	5	53	2
APPROACH %	13%	27%	60%	68%	2%
PEAK HR FACTOR	0.536			0.853	
APP/DEPART	8	/	132	79	/

5th

WEST SIDE

4	866	/	900	789	/	693	0
24	49	406	0	0	324	81	946
31%	11%	89%	0%	0%	80%	20%	
		0.948			0.911		0.977
2	455	/	464	405	/	349	0



U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Central
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
7
SIGNAL

CLASS 1:
PASSENGER
VEHICLES

NOTES:

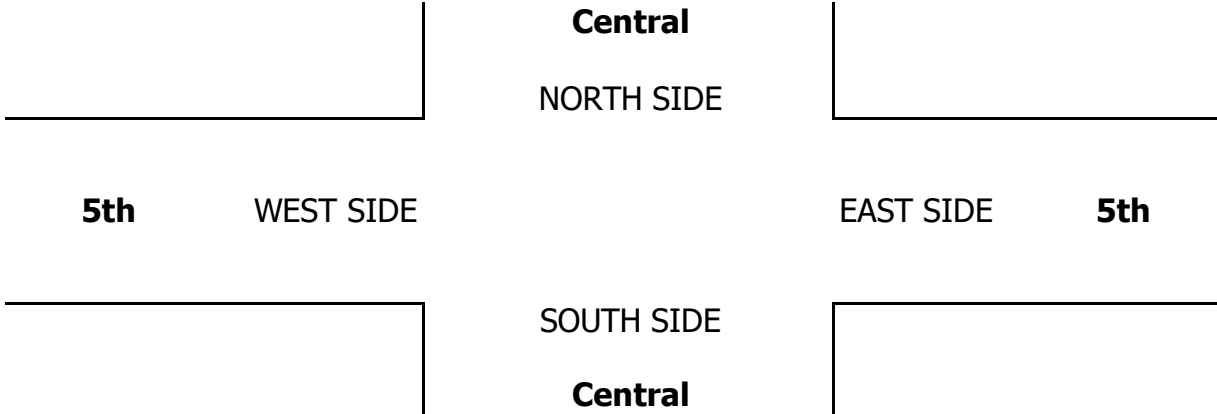
AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Central			Central			5th			5th			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL

AM	7:00 AM	0	0	0	11	0	6	1	22	0	0	108	8	156
	7:15 AM	1	1	0	8	0	8	1	32	2	1	117	5	176
	7:30 AM	0	0	0	8	0	8	2	46	2	0	122	7	195
	7:45 AM	1	0	0	11	0	15	1	40	2	0	147	13	230
	8:00 AM	0	0	0	10	0	6	4	37	0	0	104	10	171
	8:15 AM	1	0	0	11	2	9	3	41	1	1	92	10	171
	8:30 AM	0	0	1	18	0	9	5	31	0	0	90	11	165
	8:45 AM	2	0	0	20	0	10	5	38	0	0	66	13	154
	VOLUMES	5	1	1	97	2	71	22	287	7	2	846	77	1,418
	APPROACH %	71%	14%	14%	57%	1%	42%	7%	91%	2%	0%	91%	8%	
PM	APP/DEPART	7	/	101	170	/	11	316	/	384	925	/	922	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	2	1	0	37	0	37	8	155	6	1	490	35	772
	APPROACH %	67%	33%	0%	50%	0%	50%	5%	92%	4%	0%	93%	7%	
	PEAK HR FACTOR	0.375			0.712			0.845			0.822			0.839
	APP/DEPART	3	/	44	74	/	7	169	/	192	526	/	529	0
	4:00 PM	2	4	1	9	0	6	12	89	1	0	84	17	225
	4:15 PM	0	0	0	9	0	9	4	84	0	1	69	9	185
	4:30 PM	1	0	1	14	0	7	6	108	0	0	70	16	223
	4:45 PM	0	1	1	14	0	8	11	84	0	0	73	30	222
	5:00 PM	0	1	1	15	0	5	7	101	0	0	74	17	221
	5:15 PM	0	0	0	10	0	1	17	98	0	0	71	14	211
	5:30 PM	0	1	0	12	0	10	9	88	0	0	59	24	203
	5:45 PM	0	0	1	16	0	8	6	84	0	0	56	26	197
	VOLUMES	3	7	5	99	0	54	72	736	1	1	556	153	1,687
	APPROACH %	20%	47%	33%	65%	0%	35%	9%	91%	0%	0%	78%	22%	
	APP/DEPART	15	/	232	153	/	2	809	/	840	710	/	613	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	1	2	3	53	0	21	41	391	0	0	288	77	877
	APPROACH %	17%	33%	50%	72%	0%	28%	9%	91%	0%	0%	79%	21%	
	PEAK HR FACTOR	0.750			0.841			0.939			0.886			0.983
	APP/DEPART	6	/	120	74	/	0	432	/	447	365	/	310	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1
0	0	0	0	0
0	0	0	0	0
0	1	0	0	1

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	4	0	0
0	8	0	3
0	6	0	0
0	9	0	2
0	2	0	1
0	7	0	4
0	6	0	2
0	4	0	6
0	46	0	18

0	25	0	6
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	4	0	2
0	6	0	3
0	3	0	4
1	5	0	3
1	3	0	2
0	1	0	1
0	5	0	3
1	4	0	2
3	31	0	20

2	12	0	10
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INTERSECTION TURNING MOVEMENT COUNTS

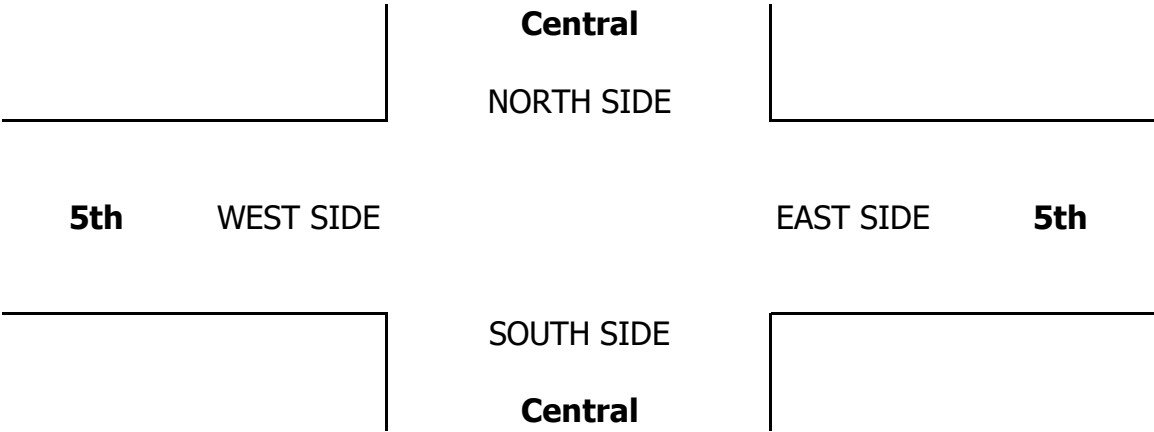
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Central 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 7 SIGNAL
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CLASS 2:	NOTES:	AM		▲	
2-AXLE		PM		N	
WORK		MD	◄ W		E ►
VEHICLES/		OTHER		S	
TRUCKS		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Central			Central			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	1	0	1	2	0	1	2	1	

AM	7:00 AM	0	0	0	0	0	0	2	0	0	2	0	4	
	7:15 AM	0	0	0	0	0	1	0	1	0	0	5	7	
	7:30 AM	0	0	0	0	0	0	2	0	0	2	0	4	
	7:45 AM	0	0	0	1	0	0	4	0	0	5	0	10	
	8:00 AM	0	0	0	0	0	0	4	0	0	4	0	8	
	8:15 AM	0	0	0	0	0	0	3	0	0	3	0	6	
	8:30 AM	0	0	1	0	0	0	3	0	0	5	0	9	
	8:45 AM	0	0	0	2	0	1	1	8	0	0	5	0	17
	VOLUMES	0	0	1	3	0	2	1	27	0	0	31	0	65
	APPROACH %	0%	0%	100%	60%	0%	40%	4%	96%	0%	0%	100%	0%	
APP/DEPART	1	/	1	5	/	0	28	/	31	31	/	33	0	
BEGIN PEAK HR	7:15 AM													
VOLUMES	0	0	0	1	0	1	0	11	0	0	16	0	29	
APPROACH %	0%	0%	0%	50%	0%	50%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.500			0.688			0.800			0.725	
APP/DEPART	0	/	0	2	/	0	11	/	12	16	/	17	0	
PM	4:00 PM	0	0	0	1	0	2	0	5	0	0	2	1	11
	4:15 PM	0	0	0	0	0	0	0	4	0	0	4	0	8
	4:30 PM	0	0	0	0	0	0	0	4	0	0	4	0	8
	4:45 PM	0	0	1	0	0	0	2	2	0	0	3	1	9
	5:00 PM	0	0	0	0	0	2	1	2	0	0	3	0	8
	5:15 PM	0	0	0	0	1	0	1	0	0	0	4	0	6
	5:30 PM	0	0	0	1	0	0	0	0	0	0	3	0	4
	5:45 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
	VOLUMES	0	0	1	2	1	4	4	20	0	0	25	2	59
	APPROACH %	0%	0%	100%	29%	14%	57%	17%	83%	0%	0%	93%	7%	
	APP/DEPART	1	/	6	7	/	1	24	/	23	27	/	29	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	1	0	1	2	4	8	0	0	14	1	31
	APPROACH %	0%	0%	100%	0%	33%	67%	33%	67%	0%	0%	93%	7%	
PEAK HR FACTOR	0.250			0.375			0.750			0.938			0.861	
APP/DEPART	1	/	5	3	/	1	12	/	9	15	/	16	0	



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	2	0	0

0	1	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	2	0	0
0	0	0	0
0	0	0	0
1	0	0	1
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	3	0	1

1	1	0	1
---	---	---	---

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Central
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
7
SIGNAL

CLASS 3:
3-AXLE
TRUCKS

NOTES:

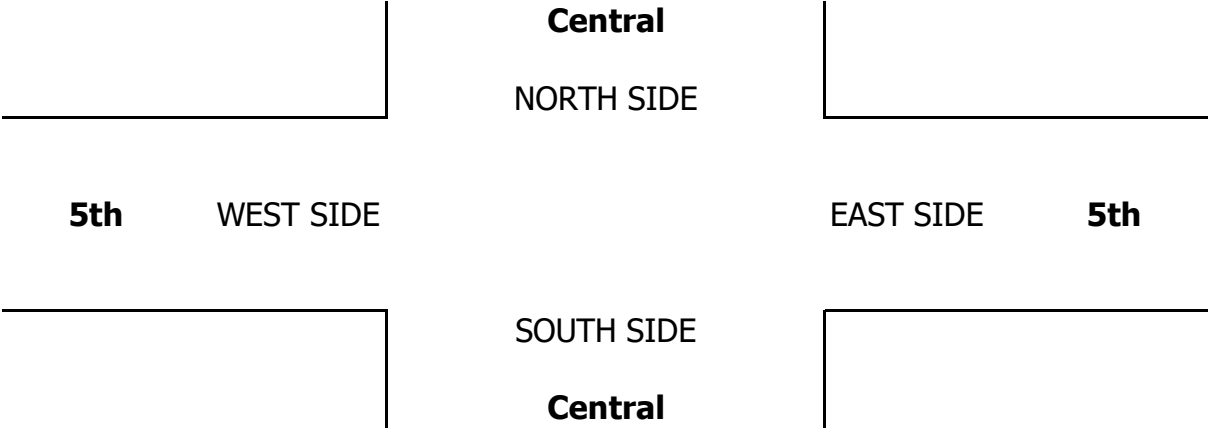
AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Central			Central			5th			5th			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL

AM	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	4	0	4
	7:30 AM	0	0	0	0	0	0	0	0	0	4	0	4
	7:45 AM	0	0	0	0	0	0	0	0	0	2	0	2
	8:00 AM	0	0	0	1	0	0	1	0	0	1	0	3
	8:15 AM	0	0	0	0	0	0	1	0	0	1	0	2
	8:30 AM	0	0	0	0	0	0	1	0	0	1	0	2
	8:45 AM	0	0	0	0	0	0	1	0	0	0	0	1
	VOLUMES	0	0	0	1	0	0	4	0	0	13	0	18
	APPROACH %	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	1	/	0	4	/	5	13	/	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	1	0	0	0	1	0	0	11	13
	APPROACH %	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.250			0.250			0.688		
	APP/DEPART	0	/	0	1	/	0	1	/	2	11	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	4	0	4
	4:15 PM	0	0	0	0	0	0	1	0	0	2	0	3
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1
	5:00 PM	0	0	0	0	0	0	1	0	0	2	0	3
	5:15 PM	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
	5:45 PM	0	0	0	0	0	0	1	0	0	0	0	1
	VOLUMES	0	0	0	0	0	0	1	2	0	0	9	12
	APPROACH %	0%	0%	0%	0%	0%	0%	33%	67%	0%	0%	100%	
	APP/DEPART	0	/	1	0	/	0	3	/	2	9	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	1	0	0	0	3	4
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.250			0.375		
	APP/DEPART	0	/	1	0	/	0	1	/	0	3	/	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

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0	0	0	0
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0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Central
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
7
SIGNAL

CLASS 4:
4 OR MORE
AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Central			Central			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	1	0	1	2	0	1	2	1	

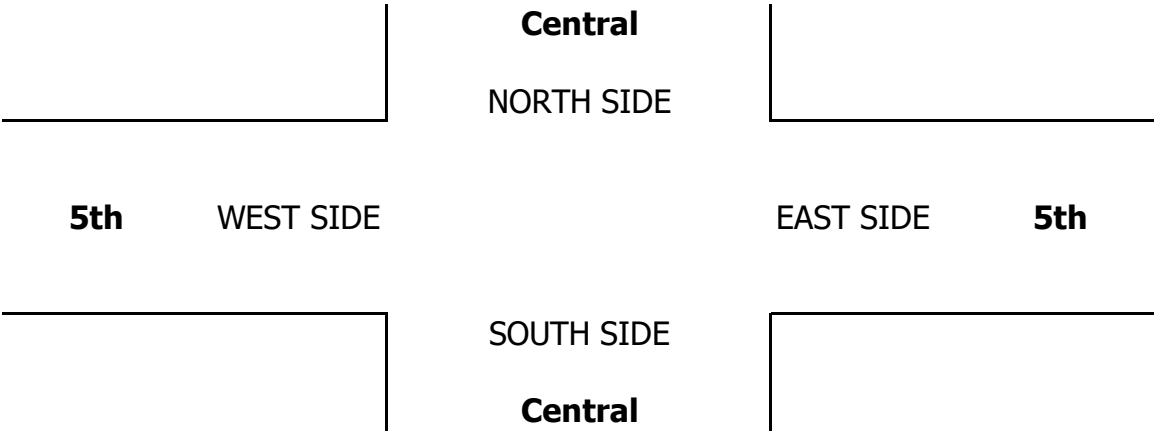
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	0	0	0	0	0	0	1	0	0	0	0	1
	7:15 AM	0	0	0	0	0	0	3	0	0	1	0	4
	7:30 AM	0	0	0	0	0	0	0	0	0	4	0	4
	7:45 AM	0	0	0	0	0	0	1	0	0	0	0	1
	8:00 AM	0	0	0	0	0	0	2	0	0	1	0	3
	8:15 AM	0	0	0	0	0	0	1	0	0	1	0	2
	8:30 AM	0	0	0	0	0	0	1	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	1	0	0	3	0	4
	VOLUMES	0	0	0	0	0	0	10	0	0	10	0	20
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	0	/	0	10	/	10	10	/	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	0	6	0	0	6	0	12
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.500			0.375		
	APP/DEPART	0	/	0	0	/	0	6	/	6	6	/	0
	4:00 PM	0	0	0	0	0	0	2	0	0	1	0	3
	4:15 PM	0	0	0	0	0	0	0	0	0	1	0	1
	4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1
	4:45 PM	0	0	0	0	0	0	1	0	0	0	0	1
PM	5:00 PM	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	0	1
	5:30 PM	0	0	0	0	0	0	1	0	0	0	0	1
	5:45 PM	0	0	0	0	0	0	1	0	0	1	0	2
	VOLUMES	0	0	0	0	0	0	5	0	0	6	0	11
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	5	/	5	6	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	1	0	0	3	0	4
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PM	PEAK HR FACTOR	0.000			0.000			0.250			0.750		
	APP/DEPART	0	/	0	0	/	0	1	/	1	3	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Central 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 7 SIGNAL
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CLASS 5:	NOTES:	AM		▲	
RV		PM	◀ W	N	E ▶
		MD		S	
		OTHER		▼	
		OTHER			

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Central			Central			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	1	0	1	1	0	1	2	0	1	2	1	

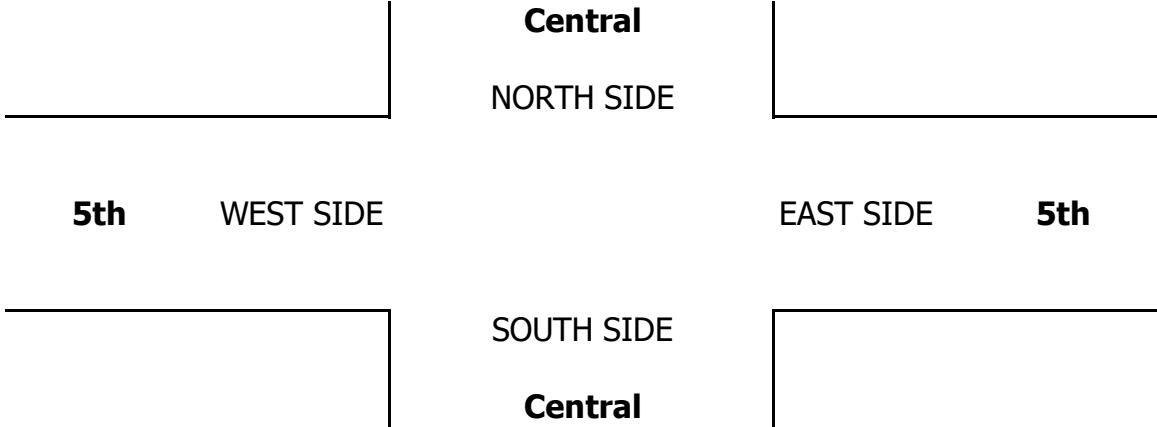
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:15 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	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
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Central 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 7 SIGNAL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER		▲ N S ▼	
BUSES			◀ W		E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Central			Central			5th			5th			
LANES:	NL 1	NT 1	NR 0	SL 1	ST 1	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

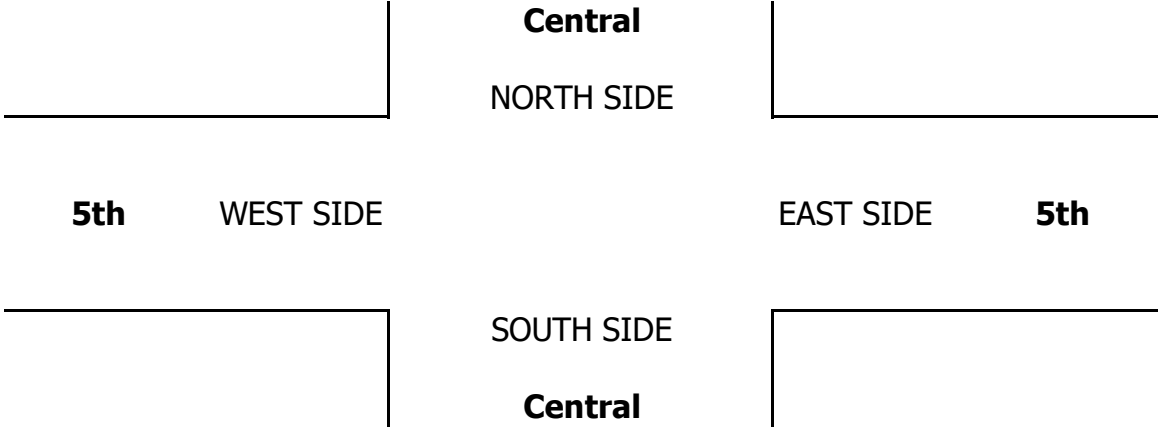
RTOR			
NRR 0	SRR 0	ERR 0	WRR 0
0	1	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	3	0	0

AM	7:00 AM	0	0	0	1	0	1	0	0	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	1	1	1
	7:45 AM	0	0	0	0	0	1	0	0	0	0	0	1	1
	8:00 AM	0	0	0	1	0	0	0	0	0	0	0	1	1
	8:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
	8:30 AM	0	0	0	1	0	2	0	0	0	0	1	4	4
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	3	0	4	0	0	0	0	1	2	10
	APPROACH %	0%	0%	0%	43%	0%	57%	0%	0%	0%	0%	33%	67%	
PM	APP/DEPART	0	/	2	7	/	0	0	/	3	3	/	5	0
	BEGIN PEAK HR	7:15 AM												
	VOLUMES	0	0	0	1	0	1	0	0	0	0	0	1	3
	APPROACH %	0%	0%	0%	50%	0%	50%	0%	0%	0%	0%	0%	100%	
	PEAK HR FACTOR	0.000			0.500			0.000			0.250			0.750
	APP/DEPART	0	/	1	2	/	0	0	/	1	1	/	1	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	2	0	0	0	0	0	0	0	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	1	1	1
	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	1	0	0	0	0	0	0	0	1	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	3	0	0	0	0	0	0	1	4	4
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	100%		
	APP/DEPART	0	/	1	3	/	0	0	/	3	1	/	0	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	1	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%		
	PEAK HR FACTOR	0.000			0.000			0.000			0.250			0.250
	APP/DEPART	0	/	1	0	/	0	0	/	0	1	/	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, May 18, 23

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Palm
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
8
SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

◀ W

▲ N

S ▼

E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Palm			Palm			5th			5th			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL

AM	7:00 AM	11	16	25	26	61	10	1	26	6	29	104	14	329
	7:15 AM	11	33	17	21	62	14	3	34	8	39	106	15	363
	7:30 AM	9	42	25	27	84	18	5	50	10	51	115	21	457
	7:45 AM	12	36	31	30	97	19	0	44	24	69	144	18	524
	8:00 AM	13	35	29	40	116	10	6	49	11	64	114	23	510
	8:15 AM	15	62	38	35	87	8	1	44	18	71	87	19	485
	8:30 AM	15	57	42	33	65	12	3	40	16	37	76	21	417
	8:45 AM	12	48	23	37	49	10	5	48	17	41	79	16	385
	VOLUMES	98	329	230	249	621	101	24	335	110	401	825	147	3,470
	APPROACH %	15%	50%	35%	26%	64%	10%	5%	71%	23%	29%	60%	11%	
APP/DEPART		657	/	500	971	/	1,132	469	/	814	1,373	/	1,024	0
PM	BEGIN PEAK HR	7:30 AM												
	VOLUMES	49	175	123	132	384	55	12	187	63	255	460	81	1,976
	APPROACH %	14%	50%	35%	23%	67%	10%	5%	71%	24%	32%	58%	10%	
	PEAK HR FACTOR	0.754			0.860			0.963			0.861			0.943
	APP/DEPART	347	/	268	571	/	702	262	/	442	796	/	564	0
	4:00 PM	22	124	50	33	46	11	11	80	10	48	62	35	532
	4:15 PM	16	120	57	35	71	5	11	94	14	50	65	40	578
	4:30 PM	27	84	42	35	82	10	9	92	23	54	53	35	546
	4:45 PM	25	135	73	31	76	11	11	86	17	38	69	33	605
	5:00 PM	19	132	51	33	63	4	12	86	14	31	74	36	555
	5:15 PM	20	115	62	37	81	8	12	100	19	41	67	28	590
	5:30 PM	29	134	37	27	75	1	17	85	15	27	59	24	530
	5:45 PM	15	111	46	33	52	6	10	86	15	22	60	32	488
	VOLUMES	173	955	418	264	546	56	93	709	127	311	509	263	4,424
	APPROACH %	11%	62%	27%	30%	63%	6%	10%	76%	14%	29%	47%	24%	
	APP/DEPART	1,546	/	1,311	866	/	985	929	/	1,391	1,083	/	737	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	91	466	228	136	302	33	44	364	73	164	263	132	2,296
	APPROACH %	12%	59%	29%	29%	64%	7%	9%	76%	15%	29%	47%	24%	
	PEAK HR FACTOR	0.842			0.927			0.918			0.984			0.949
APP/DEPART		785	/	642	471	/	539	481	/	728	559	/	387	0



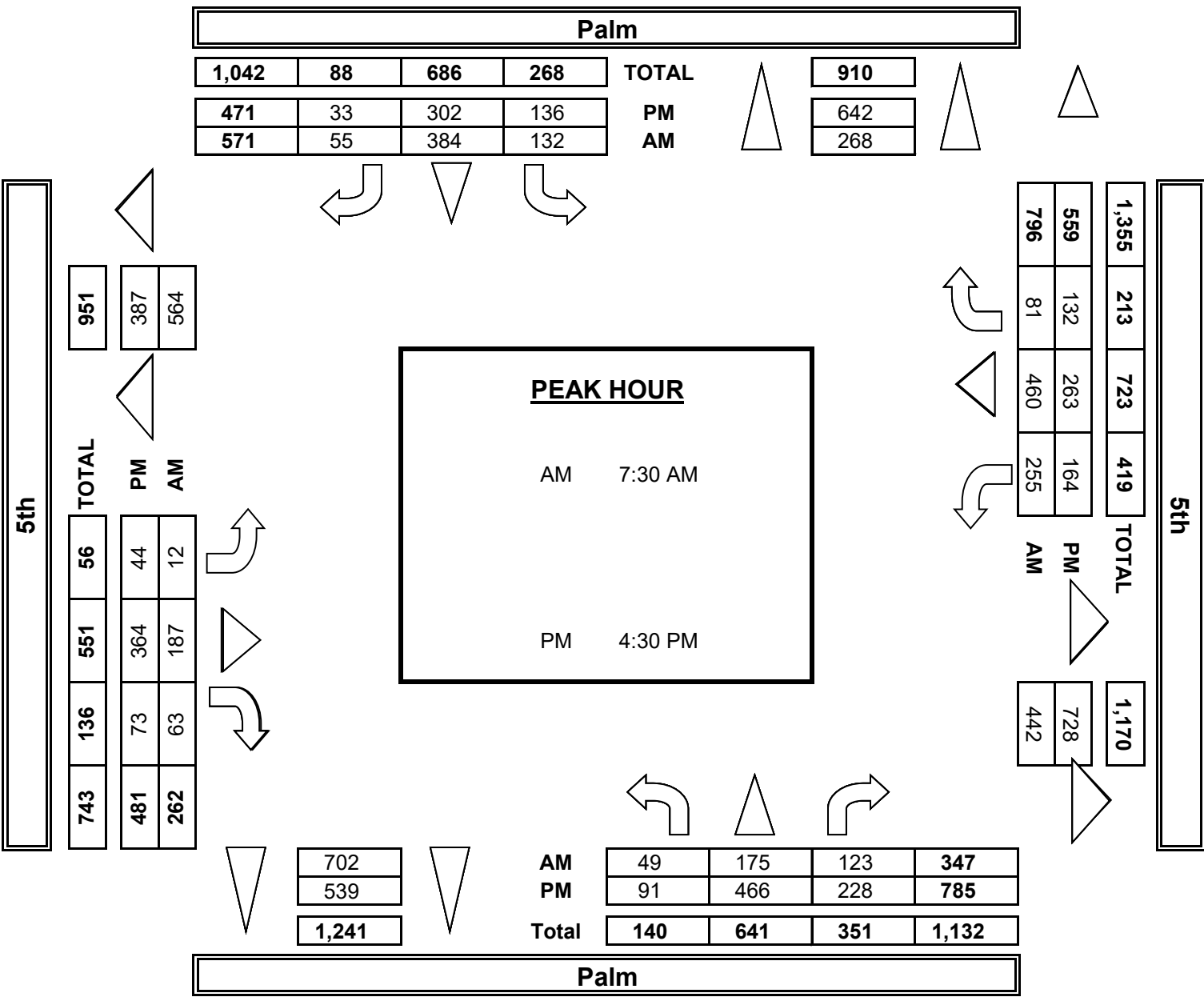
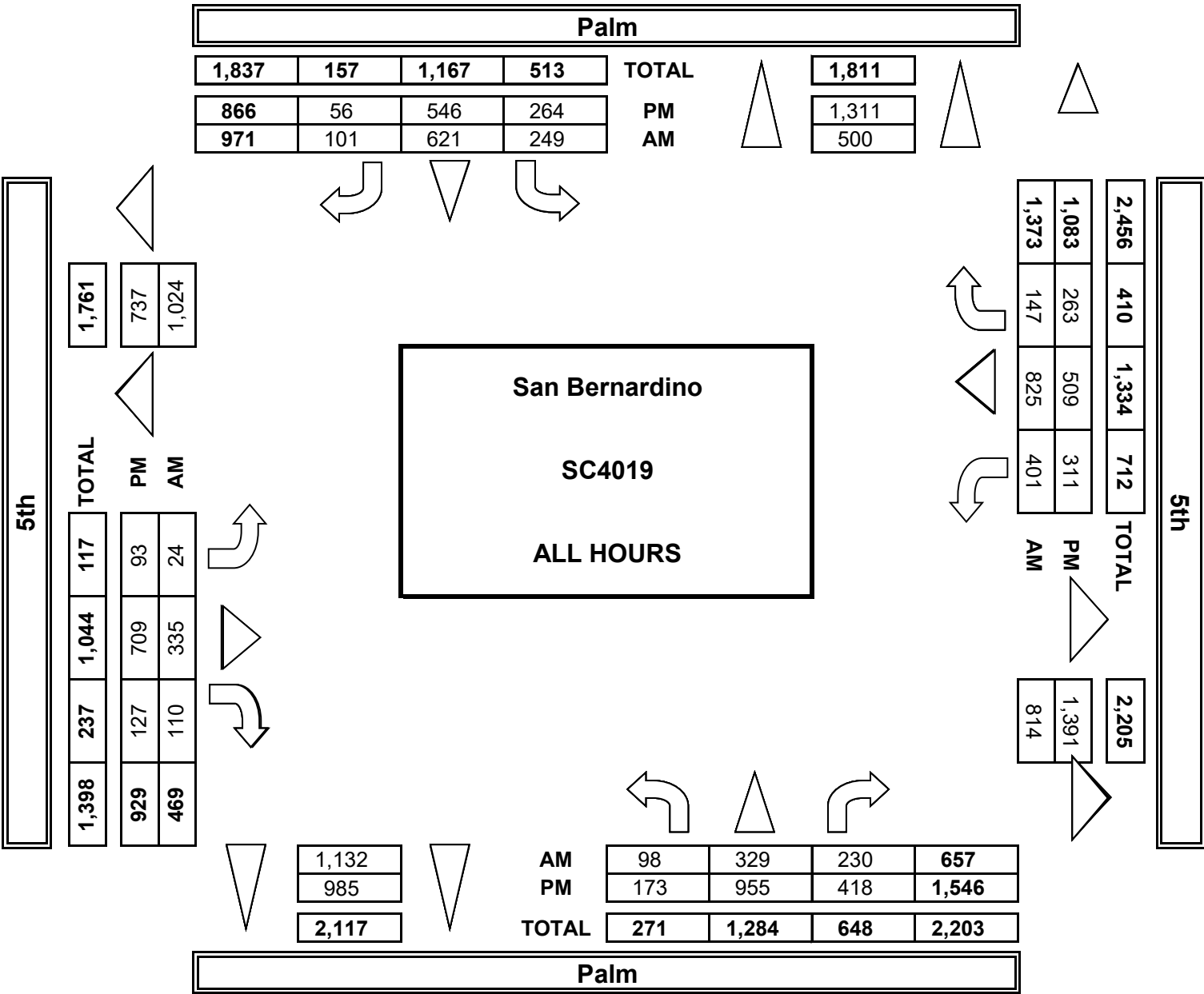
AM	7:00 AM
	7:15 AM
	7:30 AM
	7:45 AM
	8:00 AM
	8:15 AM
	8:30 AM
	8:45 AM
TOTAL	
PM	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
TOTAL	

ALL PED AND BIKE					
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	
0	0	0	0	0	0
1	0	0	0	0	1
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	3	3	3
0	1	0	0	1	1
0	2	0	0	2	2
0	0	0	0	0	0
1	3	0	3	7	7
0	0	0	0	0	0
0	1	1	1	3	3
1	0	0	1	2	2
0	0	0	1	1	1
0	1	1	2	4	4
0	0	0	0	0	0
0	1	0	0	1	1
1	2	3	3	9	9
2	5	5	8	20	20

PEDESTRIAN CROSSINGS					
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL	
0	0	0	0	0	0
1	0	0	0	1	1
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	1	0	0	1	1
0	1	0	0	1	1
0	0	0	0	0	0
1	2	0	0	3	3
1	2	0	0	3	3
2	4	4	6	16	16

BICYCLE CROSSINGS					
ES	WS	SS	NS	TOTAL	
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	3	3	3
0	0	0	0	0	0
0	1	0	0	1	1
0	1	0	0	1	1
0	0	0	0	0	0
0	1	0	0	1	1
0	0	0	0	0	0
0	1	1	2	4	4

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE: 5/18/23 THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Palm
5th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	Palm			Palm	
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2

AM	7:00 AM	11	18	46	30	68
	7:15 AM	14	34	24	23	63
	7:30 AM	12	45	45	28	85
	7:45 AM	12	38	45	31	100
	8:00 AM	13	36	44	41	120
	8:15 AM	16	62	54	37	88
	8:30 AM	15	60	54	35	73
	8:45 AM	13	49	31	38	50
	VOLUMES	105	341	340	262	645
	APPROACH %	13%	43%	43%	26%	64%
PM	APP/DEPART	786	/	530	1,013	/
	BEGIN PEAK HR	7:30 AM				
	VOLUMES	53	181	186	136	393
	APPROACH %	13%	43%	44%	23%	67%
	PEAK HR FACTOR	0.800			0.860	
	APP/DEPART	419	/	280	587	/
	4:00 PM	23	125	56	33	48
	4:15 PM	16	123	65	38	74
	4:30 PM	27	87	46	36	83
	4:45 PM	26	137	74	32	78
	5:00 PM	20	135	57	34	63
	5:15 PM	20	116	67	37	81
	5:30 PM	30	136	39	28	77
	5:45 PM	15	112	51	34	52
	VOLUMES	176	970	453	270	555
	APPROACH %	11%	61%	28%	31%	63%

APP/DEPART	1,599	/	1,331	884	/
BEGIN PEAK HR		4:30 PM			
VOLUMES	93	474	244	138	304
APPROACH %	11%	58%	30%	29%	64%
PEAK HR FACTOR		0.855			0.922
APP/DEPART	811	/	653	476	/

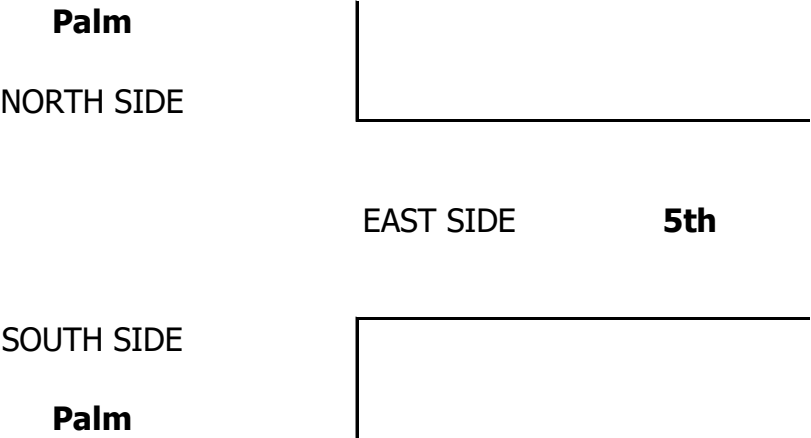


5th

WEST SIDE



1,042	959	/	1,455	1,163	/	777	0
35 7%	45 9%	372 76%	74 15%	184 31%	279 47%	134 22%	2,373 0.955
562	491	/	753	596	/	406	0



U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Palm
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
8
SIGNAL

CLASS 1:
PASSENGER
VEHICLES

NOTES:

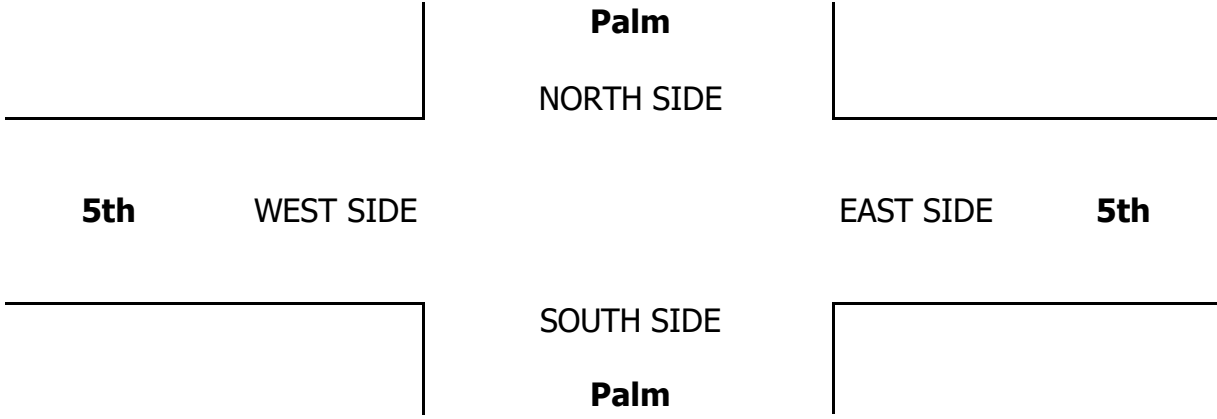
AM
PM
MD
OTHER
OTHER

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N
S
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◀ W
E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Palm			Palm			5th			5th			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL

AM	7:00 AM	11	13	11	22	54	8	0	23	6	21	102	13	284
	7:15 AM	8	31	12	20	61	14	3	29	7	31	97	14	327
	7:30 AM	7	37	9	26	82	16	4	44	10	42	110	20	407
	7:45 AM	12	34	19	29	94	18	0	42	20	63	137	16	484
	8:00 AM	13	34	18	38	112	10	5	41	11	57	107	21	467
	8:15 AM	14	62	26	32	85	8	1	40	17	64	83	17	449
	8:30 AM	15	52	31	30	59	11	3	35	14	29	71	17	367
	8:45 AM	11	47	18	36	48	10	3	45	15	36	66	14	349
	VOLUMES	91	310	144	233	595	95	19	299	100	343	773	132	3,134
	APPROACH %	17%	57%	26%	25%	64%	10%	5%	72%	24%	27%	62%	11%	
PM	APP/DEPART	545	/	461	923	/	1,038	418	/	676	1,248	/	959	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	46	167	72	125	373	52	10	167	58	226	437	74	1,807
	APPROACH %	16%	59%	25%	23%	68%	9%	4%	71%	25%	31%	59%	10%	
	PEAK HR FACTOR	0.699			0.859			0.948			0.853			0.933
	APP/DEPART	285	/	251	550	/	657	235	/	364	737	/	535	0
	4:00 PM	21	122	44	33	44	9	11	76	8	41	56	34	499
	4:15 PM	16	114	51	32	66	5	11	90	12	46	59	39	541
	4:30 PM	27	81	40	34	81	9	9	90	21	48	47	35	522
	4:45 PM	23	131	71	30	73	11	10	81	17	35	65	33	580
	5:00 PM	18	130	47	32	63	4	12	85	14	29	67	34	535
	5:15 PM	20	114	59	37	81	7	12	98	19	39	63	27	576
	5:30 PM	28	131	36	26	72	1	16	81	15	23	56	24	509
	5:45 PM	15	109	43	32	52	6	10	82	14	20	57	31	471
	VOLUMES	168	932	391	256	532	52	91	683	120	281	470	257	4,233
	APPROACH %	11%	63%	26%	30%	63%	6%	10%	76%	13%	28%	47%	25%	
	APP/DEPART	1,491	/	1,280	840	/	934	894	/	1,330	1,008	/	689	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	88	456	217	133	298	31	43	354	71	151	242	129	2,213
	APPROACH %	12%	60%	29%	29%	65%	7%	9%	76%	15%	29%	46%	25%	
	PEAK HR FACTOR	0.846			0.924			0.907			0.981			0.954
	APP/DEPART	761	/	628	462	/	520	468	/	704	522	/	361	0



U-TURNS				
NB	SB	EB	WB	TTL

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR

0	0	0	0
6	1	4	2
3	3	4	4
6	9	2	2
13	9	3	5
6	6	4	1
11	0	4	2
16	3	5	3
8	4	6	3
69	35	32	22

36	24	13	10
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1	0	0	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
1	0	0	0	1

13	6	1	6
14	1	5	11
0	2	10	6
16	7	8	6
8	1	3	8
9	4	8	1
7	0	6	7
8	3	6	6
75	24	47	51

33	14	29	21
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Palm 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 8 SIGNAL
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CLASS 2:	NOTES:	AM		▲	
2-AXLE		PM		N	
WORK		MD	◄ W		E ►
VEHICLES/		OTHER		S	
TRUCKS		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Palm			Palm			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	1	2	0	1	2	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

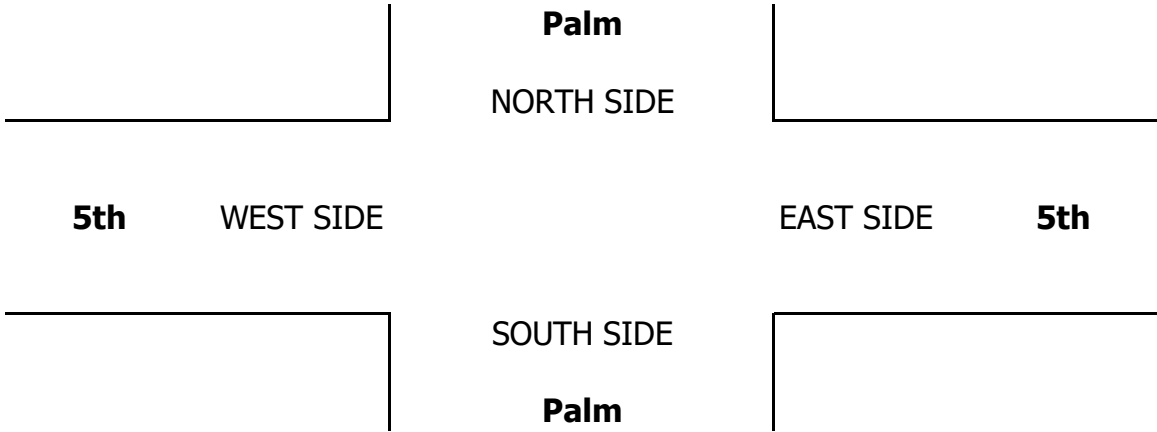
RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
2	0	0	0
2	0	0	0
0	0	0	0
8	0	1	0

AM	7:00 AM	0	2	3	2	3	0	0	2	0	2	2	0	16
	7:15 AM	2	2	0	0	1	0	0	2	1	3	7	0	18
	7:30 AM	0	4	7	1	2	1	0	4	0	4	0	0	23
	7:45 AM	0	1	5	1	2	1	0	1	4	2	3	2	22
	8:00 AM	0	0	1	2	3	0	0	4	0	3	3	2	18
	8:15 AM	1	0	3	2	2	0	0	2	1	3	1	2	17
	8:30 AM	0	4	5	2	3	0	0	3	2	3	3	3	28
	8:45 AM	1	1	1	1	1	0	0	3	1	2	9	1	21
	VOLUMES	4	14	25	11	17	2	0	21	9	22	28	10	163
	APPROACH %	9%	33%	58%	37%	57%	7%	0%	70%	30%	37%	47%	17%	
PM	APP/DEPART	43	/	24	30	/	48	30	/	57	60	/	34	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	1	5	16	6	9	2	0	11	5	12	7	6	80
	APPROACH %	5%	23%	73%	35%	53%	12%	0%	69%	31%	48%	28%	24%	
	PEAK HR FACTOR	0.500			0.850			0.800			0.781			0.870
	APP/DEPART	22	/	11	17	/	26	16	/	33	25	/	10	0
	4:00 PM	1	2	3	0	1	0	0	3	1	3	2	1	17
	4:15 PM	0	6	3	1	4	0	0	2	2	0	3	1	22
	4:30 PM	0	2	0	1	1	0	0	1	2	1	5	0	13
	4:45 PM	2	4	2	1	3	0	1	4	0	2	3	0	22
	5:00 PM	0	1	0	1	0	0	0	1	0	0	4	1	8
	5:15 PM	0	1	1	0	0	1	0	2	0	0	3	1	9
	5:30 PM	1	2	0	1	2	0	0	2	0	2	3	0	13
	5:45 PM	0	2	1	0	0	0	0	3	0	0	2	1	9
	VOLUMES	4	20	10	5	11	1	1	18	5	8	25	5	113
	APPROACH %	12%	59%	29%	29%	65%	6%	4%	75%	21%	21%	66%	13%	
	APP/DEPART	34	/	26	17	/	24	24	/	33	38	/	30	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	2	8	3	3	4	1	1	8	2	3	15	2	52
	APPROACH %	15%	62%	23%	38%	50%	13%	9%	73%	18%	15%	75%	10%	
	PEAK HR FACTOR	0.406			0.500			0.550			0.833			0.591
	APP/DEPART	13	/	11	8	/	9	11	/	14	20	/	18	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

1	0	1	0
0	0	1	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	2	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Palm
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
8
SIGNAL

CLASS 3:
3-AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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N
◀ W
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E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Palm			Palm			5th			5th			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL

AM	7:00 AM	0	1	3	1	2	2	0	0	0	3	0	1	13
	7:15 AM	0	0	3	0	0	0	0	0	0	3	0	0	6
	7:30 AM	1	1	2	0	0	0	1	1	0	3	2	0	11
	7:45 AM	0	0	3	0	0	0	0	0	0	2	1	0	6
	8:00 AM	0	0	6	0	0	0	0	0	0	1	1	0	8
	8:15 AM	0	0	4	1	0	0	0	0	0	2	2	0	9
	8:30 AM	0	1	3	1	0	0	0	1	0	2	2	0	10
	8:45 AM	0	0	1	0	0	0	1	0	1	2	1	0	6
	VOLUMES	1	3	25	3	2	2	2	2	1	18	9	1	69
	APPROACH %	3%	10%	86%	43%	29%	29%	40%	40%	20%	64%	32%	4%	
PM	APP/DEPART	29	/	6	7	/	21	5	/	30	28	/	12	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	1	1	15	1	0	0	1	1	0	8	6	0	34
	APPROACH %	6%	6%	88%	100%	0%	0%	50%	50%	0%	57%	43%	0%	
	PEAK HR FACTOR	0.708			0.250			0.250			0.700			0.773
	APP/DEPART	17	/	2	1	/	8	2	/	17	14	/	7	0
	4:00 PM	0	0	2	0	1	2	0	0	0	0	2	0	7
	4:15 PM	0	0	0	0	0	0	0	0	0	1	2	0	3
	4:30 PM	0	0	0	0	0	1	0	0	0	1	0	0	2
	4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	5:00 PM	1	0	2	0	0	0	0	0	0	1	2	1	7
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
	5:45 PM	0	0	0	1	0	0	0	0	1	1	0	0	3
	VOLUMES	1	1	4	1	2	3	0	0	1	4	7	1	25
	APPROACH %	17%	17%	67%	17%	33%	50%	0%	0%	100%	33%	58%	8%	
	APP/DEPART	6	/	2	6	/	7	1	/	5	12	/	11	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	1	0	2	0	0	1	0	0	0	2	3	1	10
	APPROACH %	33%	0%	67%	0%	0%	100%	0%	0%	0%	33%	50%	17%	
	PEAK HR FACTOR	0.250			0.250			0.000			0.375			0.357
	APP/DEPART	3	/	1	1	/	2	0	/	2	6	/	5	0

Palm

NORTH SIDE

5th

WEST SIDE

EAST SIDE

5th

Palm

SOUTH SIDE

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
2	0	0	0
1	0	0	0
1	0	0	0
0	0	0	0
4	1	0	0

3	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	1	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Palm 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 8 SIGNAL
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CLASS 4:	NOTES:	AM		▲	
4 OR MORE AXLE TRUCKS		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Palm			Palm			5th			5th			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

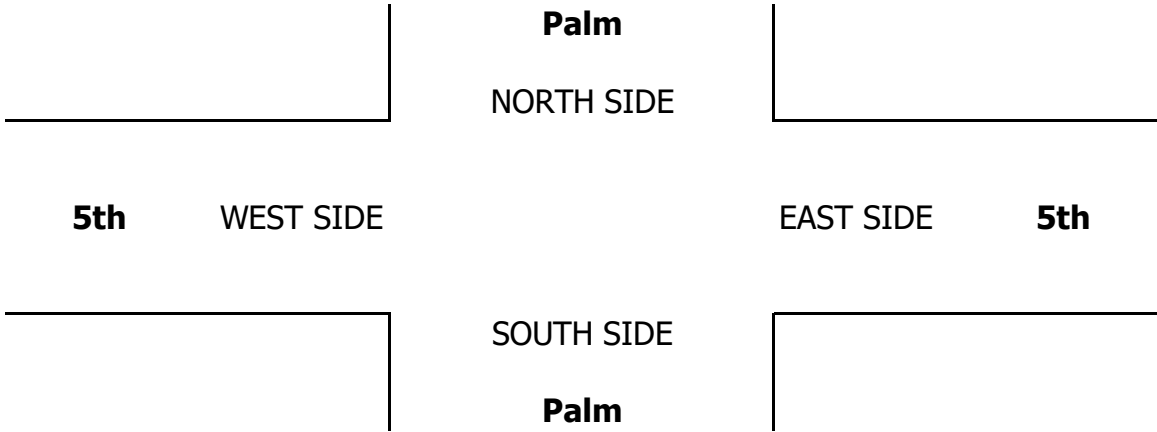
RTOR			
NRR 0	SRR 0	ERR 0	WRR 0

AM	7:00 AM	0	0	8	1	1	0	0	1	0	3	0	0	14
	7:15 AM	1	0	2	1	0	0	0	3	0	2	2	1	12
	7:30 AM	1	0	7	0	0	1	0	1	0	2	2	0	14
	7:45 AM	0	0	4	0	1	0	0	1	0	2	3	0	11
	8:00 AM	0	0	4	0	1	0	0	4	0	3	3	0	15
	8:15 AM	0	0	5	0	0	0	0	2	0	2	0	0	9
	8:30 AM	0	0	3	0	3	0	0	1	0	3	0	1	11
	8:45 AM	0	0	3	0	0	0	0	0	0	1	3	1	8
	VOLUMES	2	0	36	2	6	1	0	13	0	18	13	3	94
	APPROACH %	5%	0%	95%	22%	67%	11%	0%	100%	0%	53%	38%	9%	
PM	APP/DEPART	38	/	3	9	/	24	13	/	51	34	/	16	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	1	0	20	0	2	1	0	8	0	9	8	0	49
	APPROACH %	5%	0%	95%	0%	67%	33%	0%	100%	0%	53%	47%	0%	
	PEAK HR FACTOR	0.656			0.750			0.500			0.708			0.817
	APP/DEPART	21	/	0	3	/	11	8	/	28	17	/	10	0
	4:00 PM	0	0	1	0	0	0	0	1	1	4	2	0	9
	4:15 PM	0	0	3	0	0	0	0	1	0	3	1	0	8
	4:30 PM	0	1	2	0	0	0	0	1	0	4	0	0	8
	4:45 PM	0	0	0	0	0	0	0	1	0	1	0	0	2
	5:00 PM	0	1	2	0	0	0	0	0	0	1	1	0	5
	5:15 PM	0	0	2	0	0	0	0	0	0	2	1	0	5
	5:30 PM	0	0	1	0	0	0	0	1	0	2	0	0	4
	5:45 PM	0	0	2	0	0	0	0	1	0	1	1	0	5
	VOLUMES	0	2	13	0	0	0	0	6	1	18	6	0	46
	APPROACH %	0%	13%	87%	0%	0%	0%	0%	86%	14%	75%	25%	0%	
	APP/DEPART	15	/	2	0	/	19	7	/	19	24	/	6	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	2	6	0	0	0	0	2	0	8	2	0	20
	APPROACH %	0%	25%	75%	0%	0%	0%	0%	100%	0%	80%	20%	0%	
	PEAK HR FACTOR	0.667			0.000			0.500			0.625			0.625
	APP/DEPART	8	/	2	0	/	8	2	/	8	10	/	2	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
1	0	0	0
2	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
1	0	0	0
1	0	0	0
6	0	0	0

3	0	0	0
---	---	---	---



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Palm
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
8
SIGNAL

CLASS 5:
RV

NOTES:

AM
PM
MD
OTHER
OTHER

▲
N
◀ W
S
▼

E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Palm			Palm			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	2	0	1	2	0	1	2	0	1	2	0	

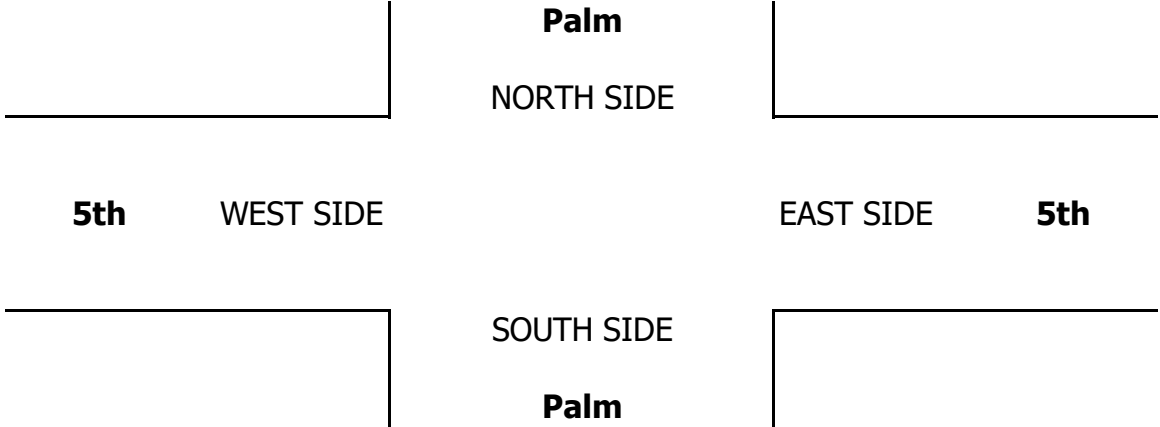
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:30 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	2	0	0	0	0	0	0	0	2
	4:30 PM	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
PM	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	2	0	0	0	0	0	0	0	2
	APPROACH %	0%	0%	0%	100%	0%	0%	0%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	2	/	0	0	/	2	0	/	0
	BEGIN PEAK HR	4:30 PM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	2	0	0	0	0	0	0	0	2
	4:30 PM	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
	5:00 PM	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
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Palm 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 8 SIGNAL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N S ▼	◀ W E ▶
BUSES				

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Palm			Palm			5th			5th			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

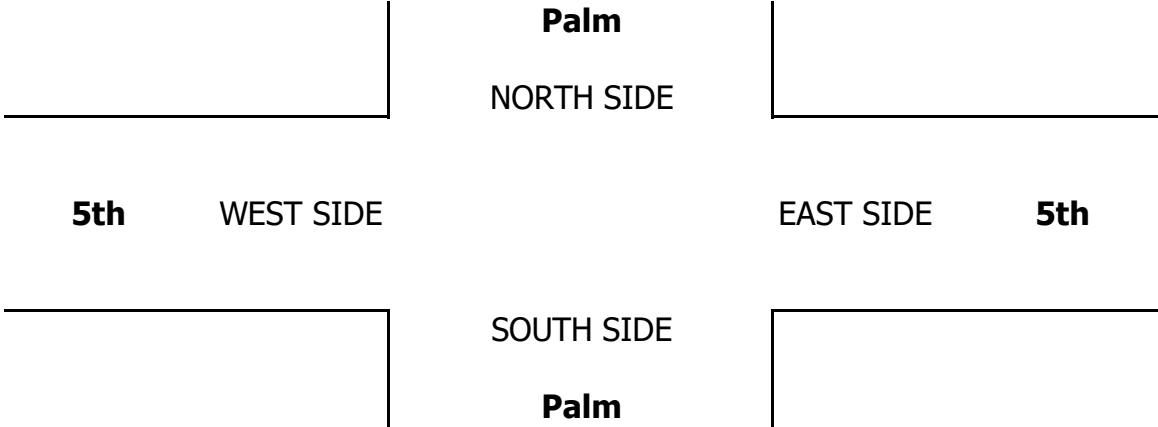
RTOR			
NRR 0	SRR 0	ERR 0	WRR 0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	0	0	0	0	1	0	1	0	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	1	1	2	
	7:45 AM	0	1	0	0	0	0	0	0	0	0	0	1	
	8:00 AM	0	1	0	0	0	0	1	0	0	0	0	2	
	8:15 AM	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	1	
	8:45 AM	0	0	0	0	0	0	1	0	0	0	0	1	
	VOLUMES	0	2	0	0	1	1	3	0	0	0	2	1	10
	APPROACH %	0%	100%	0%	0%	50%	50%	100%	0%	0%	0%	67%	33%	
PM	APP/DEPART	2	/	6	2	/	1	3	/	0	3	/	3	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	2	0	0	0	0	1	0	0	0	2	1	6
	APPROACH %	0%	100%	0%	0%	0%	0%	100%	0%	0%	0%	67%	33%	
	PEAK HR FACTOR	0.500			0.000			0.250			0.375			0.750
	APP/DEPART	2	/	4	0	/	0	1	/	0	3	/	2	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	1	0	0	1	0	0	0	0	2
	4:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	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	1	1	0	0	0	0	2
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	1	0	1	2	0	0	1	0	5
	APPROACH %	0%	0%	0%	0%	100%	0%	33%	67%	0%	0%	100%	0%	
	APP/DEPART	0	/	1	1	/	1	3	/	2	1	/	1	0
	BEGIN PEAK HR	4:30 PM												
	VOLUMES	0	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.250			0.250
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	1	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, May 18, 23

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Church
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
9
SIGNAL

NOTES:

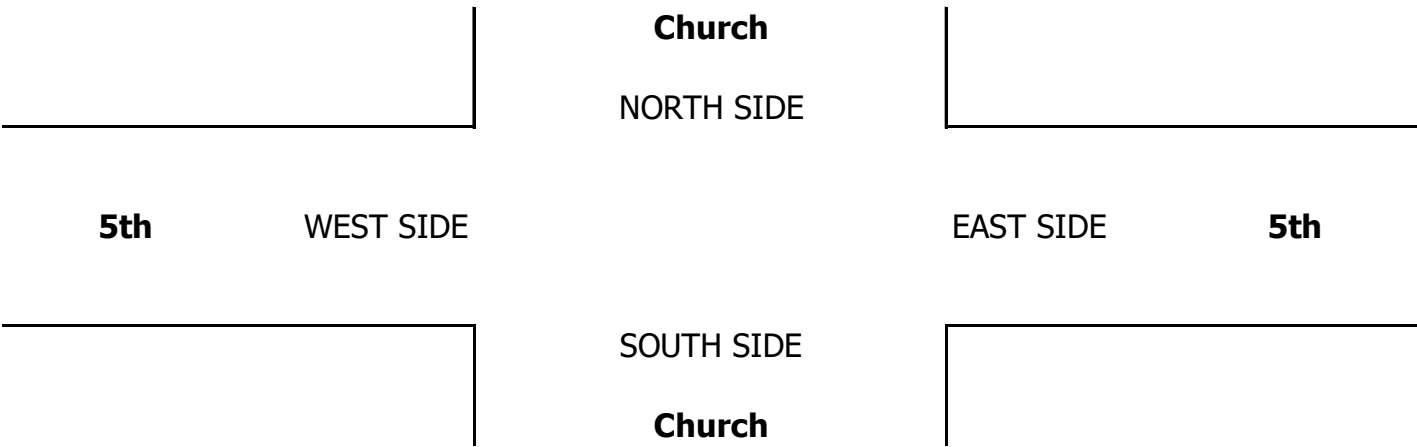
Construction

AM
PM
MD
OTHER
OTHER

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E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Church			Church			5th			5th			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL
7:00 AM	0	0	0	19	0	10	3	77	0	0	134	11	254
7:15 AM	0	0	0	29	0	15	4	65	0	0	155	12	280
7:30 AM	0	0	0	29	0	17	2	95	0	0	181	21	345
7:45 AM	0	0	0	35	0	11	5	107	0	0	208	21	387
8:00 AM	0	0	0	29	0	14	3	105	0	0	189	15	355
8:15 AM	0	0	0	19	0	11	11	108	0	0	180	25	354
8:30 AM	0	0	0	22	0	11	4	109	0	0	128	29	303
8:45 AM	0	0	0	20	0	16	8	100	0	0	106	14	264
VOLUMES	0	0	0	202	0	105	40	766	0	0	1,281	148	2,542
APPROACH %	0%	0%	0%	66%	0%	34%	5%	95%	0%	0%	90%	10%	
APP/DEPART	0	/	186	307	/	0	806	/	968	1,429	/	1,388	0
BEGIN PEAK HR	7:30 AM												
VOLUMES	0	0	0	112	0	53	21	415	0	0	758	82	1,441
APPROACH %	0%	0%	0%	68%	0%	32%	5%	95%	0%	0%	90%	10%	
PEAK HR FACTOR	0.000			0.897			0.916			0.917			0.931
APP/DEPART	0	/	102	165	/	0	436	/	527	840	/	812	0
4:00 PM	0	0	0	18	0	9	8	163	0	0	116	18	332
4:15 PM	0	0	0	24	0	12	16	172	0	0	137	29	390
4:30 PM	0	0	0	16	0	8	12	162	0	0	128	21	347
4:45 PM	0	0	0	20	0	8	12	187	0	0	140	23	390
5:00 PM	0	0	0	13	0	9	13	179	0	0	121	22	357
5:15 PM	0	0	0	22	0	12	9	187	0	0	94	21	345
5:30 PM	0	0	0	27	0	7	11	145	0	0	106	27	323
5:45 PM	0	0	0	11	0	7	11	144	0	0	101	24	298
VOLUMES	0	0	0	151	0	72	92	1,339	0	0	943	185	2,782
APPROACH %	0%	0%	0%	68%	0%	32%	6%	94%	0%	0%	84%	16%	
APP/DEPART	0	/	276	223	/	0	1,431	/	1,490	1,128	/	1,016	0
BEGIN PEAK HR	4:15 PM												
VOLUMES	0	0	0	73	0	37	53	700	0	0	526	95	1,484
APPROACH %	0%	0%	0%	66%	0%	34%	7%	93%	0%	0%	85%	15%	
PEAK HR FACTOR	0.000			0.764			0.946			0.935			0.951
APP/DEPART	0	/	147	110	/	0	753	/	773	621	/	564	0



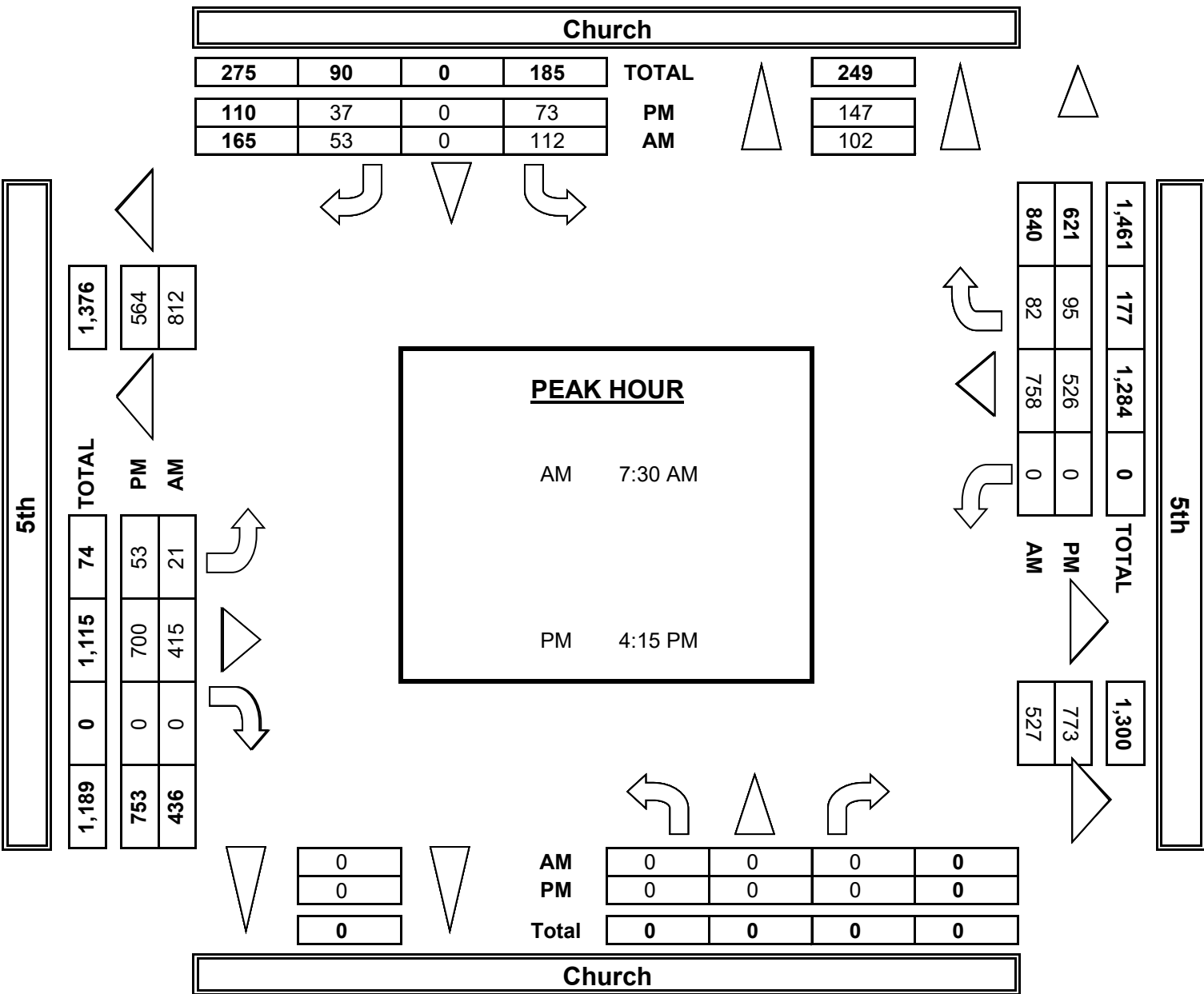
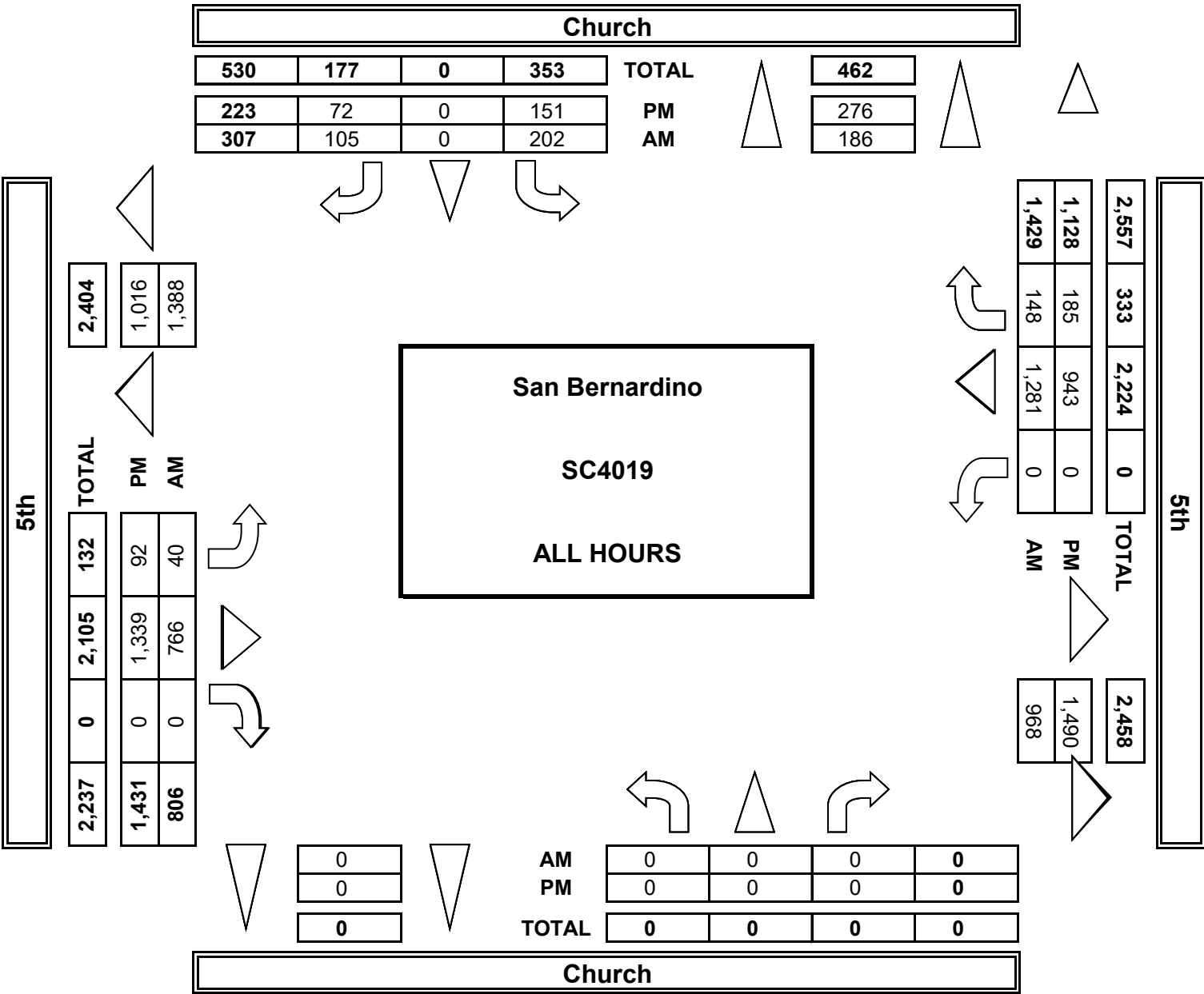
AM	7:00 AM	
	7:15 AM	
	7:30 AM	
	7:45 AM	
	8:00 AM	
	8:15 AM	
	8:30 AM	
	8:45 AM	
PM	TOTAL	
	4:00 PM	
	4:15 PM	
	4:30 PM	
	4:45 PM	
	5:00 PM	
	5:15 PM	
	5:30 PM	
	5:45 PM	
	TOTAL	

ALL PED AND BIKE				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	5	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	1	0	6	7
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	1	0	1	2
0	0	1	0	1
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	1	1
0	1	2	3	6

PEDESTRIAN CROSSINGS				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	1	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	1	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	1	0	1	2

BICYCLE CROSSINGS				
ES	WS	SS	NS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	4	4
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	5	5
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	1	1
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	2	2	4

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE: 5/18/23 THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Church
5th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	Church			Church	
LANES:	NL X	NT X	NR X	SL 1	ST X

AM	7:00 AM	0	0	0	20	0
	7:15 AM	0	0	0	29	0
	7:30 AM	0	0	0	30	0
	7:45 AM	0	0	0	35	0
	8:00 AM	0	0	0	30	0
	8:15 AM	0	0	0	20	0
	8:30 AM	0	0	0	24	0
	8:45 AM	0	0	0	20	0
	VOLUMES	0	0	0	207	0
	APPROACH %	0%	0%	0%	66%	0%
	APP/DEPART	0	/	193	315	/
	BEGIN PEAK HR	7:30 AM				
PM	VOLUMES	0	0	0	114	0
	APPROACH %	0%	0%	0%	67%	0%
	PEAK HR FACTOR	0.000			0.883	
	APP/DEPART	0	/	108	170	/
	4:00 PM	0	0	0	19	0
	4:15 PM	0	0	0	25	0
	4:30 PM	0	0	0	16	0
	4:45 PM	0	0	0	23	0
	5:00 PM	0	0	0	15	0
	5:15 PM	0	0	0	22	0
	5:30 PM	0	0	0	27	0
	5:45 PM	0	0	0	11	0
	VOLUMES	0	0	0	157	0
	APPROACH %	0%	0%	0%	69%	0%

APP/DEPART	0	/	284	229	/
BEGIN PEAK HR	4:15 PM				
VOLUMES	0	0	0	78	0
APPROACH %	0%	0%	0%	68%	0%
PEAK HR FACTOR	0.000			0.777	
APP/DEPART	0	/	152	115	/

5th

WEST SIDE

C. tel: 714 253 7888 cs@aimtd.com

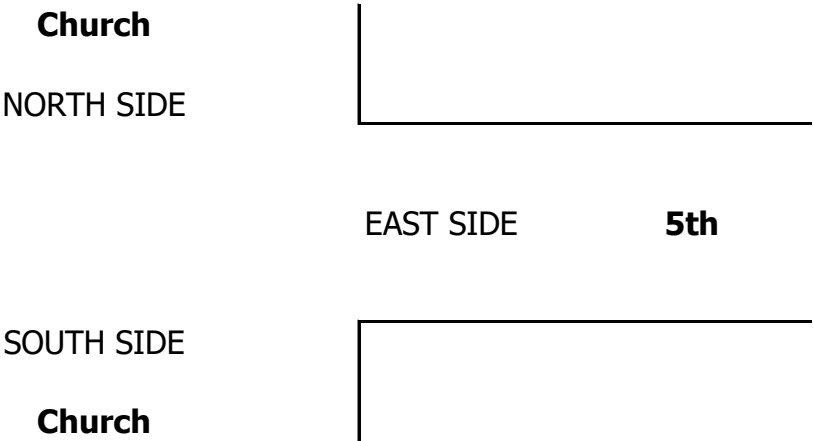
PROJECT #: SC4019
 LOCATION #: 9
 CONTROL: SIGNAL

				AM		▲	
5	6			PM		N	
2	2			MD	◀ W		E ▶
				OTHER		S	
				OTHER		▼	

	EASTBOUND			WESTBOUND			
	5th			5th			
SR	EL	ET	ER	WL	WT	WR	TOTAL
1	1	2	X	X	2	0	

10	3	104	0	0	146	11	294
16	4	82	0	0	169	12	312
18	2	118	0	0	205	22	395
11	6	126	0	0	217	22	417
15	4	131	0	0	204	16	397
12	11	127	0	0	192	26	387
11	4	126	0	0	146	29	340
16	9	113	0	0	121	14	292
109	42	927	0	0	1,398	151	2,833
34%	4%	96%	0%	0%	90%	10%	
0	969	/	1,133	1,549	/	1,507	0
56	23	502	0	0	817	85	1,595
33%	4%	96%	0%	0%	91%	9%	
		0.949			0.945		0.957
0	524	/	616	902	/	872	0
9	8	174	0	0	132	19	361
12	16	182	0	0	151	30	416
8	12	170	0	0	140	22	367
8	14	192	0	0	149	23	408
9	13	186	0	0	131	23	376
12	9	192	0	0	102	22	359
7	11	149	0	0	111	27	332
7	12	149	0	0	107	24	310
72	95	1,393	0	0	1,021	189	2,927
31%	6%	94%	0%	0%	84%	16%	

0	1,488	/	1,550	1,210	/	1,093	0
37	55	730	0	0	570	97	1,566
32%	7%	93%	0%	0%	85%	15%	
		0.954			0.923		0.942
0	784	/	808	667	/	607	0



U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Church
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
9
SIGNAL

CLASS 1:
PASSENGER
VEHICLES

NOTES:

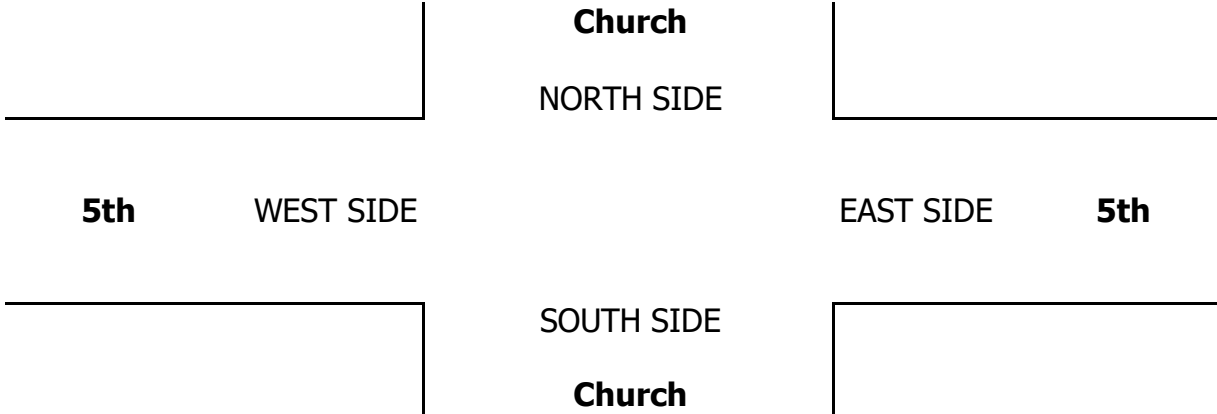
AM
PM
MD
OTHER
OTHER

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◀ W
E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Church			Church			5th			5th			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL

AM	7:00 AM	0	0	0	18	0	10	3	58	0	0	123	11	223
	7:15 AM	0	0	0	29	0	13	4	50	0	0	139	12	247
	7:30 AM	0	0	0	27	0	16	2	76	0	0	162	19	302
	7:45 AM	0	0	0	35	0	11	4	87	0	0	199	20	356
	8:00 AM	0	0	0	28	0	13	2	87	0	0	175	14	319
	8:15 AM	0	0	0	18	0	10	11	92	0	0	168	23	322
	8:30 AM	0	0	0	20	0	11	4	91	0	0	109	29	264
	8:45 AM	0	0	0	20	0	16	7	89	0	0	90	14	236
	VOLUMES	0	0	0	195	0	100	37	630	0	0	1,165	142	2,269
	APPROACH %	0%	0%	0%	66%	0%	34%	6%	94%	0%	0%	89%	11%	
PM	APP/DEPART	0	/	178	295	/	0	667	/	825	1,307	/	1,266	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	108	0	50	19	342	0	0	704	76	1,299
	APPROACH %	0%	0%	0%	68%	0%	32%	5%	95%	0%	0%	90%	10%	
	PEAK HR FACTOR	0.000			0.859			0.876			0.890			0.912
	APP/DEPART	0	/	95	158	/	0	361	/	450	780	/	754	0
	4:00 PM	0	0	0	17	0	9	8	152	0	0	102	16	304
	4:15 PM	0	0	0	23	0	12	16	161	0	0	126	28	366
	4:30 PM	0	0	0	16	0	8	12	157	0	0	117	20	330
	4:45 PM	0	0	0	18	0	8	10	183	0	0	131	23	373
	5:00 PM	0	0	0	10	0	9	13	173	0	0	110	20	335
	5:15 PM	0	0	0	22	0	12	9	183	0	0	88	19	333
	5:30 PM	0	0	0	27	0	7	11	141	0	0	102	27	315
	5:45 PM	0	0	0	11	0	7	10	140	0	0	96	24	288
	VOLUMES	0	0	0	144	0	72	89	1,290	0	0	872	177	2,644
	APPROACH %	0%	0%	0%	67%	0%	33%	6%	94%	0%	0%	83%	17%	
	APP/DEPART	0	/	265	216	/	0	1,379	/	1,434	1,049	/	945	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	0	0	0	67	0	37	50	674	0	0	484	91	1,404
	APPROACH %	0%	0%	0%	64%	0%	36%	7%	93%	0%	0%	84%	16%	
	PEAK HR FACTOR	0.000			0.743			0.939			0.933			0.941
	APP/DEPART	0	/	141	104	/	0	725	/	741	575	/	522	0



U-TURNS				
NB	SB	EB	WB	TTL

0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1

RTOR			
NRR	SRR	ERR	WRR

0	8	0	3
0	8	0	0
0	9	0	4
0	3	0	1
0	7	0	2
0	6	0	4
0	8	0	4
0	11	0	4
0	60	0	22

0	25	0	11
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0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1

0	3	0	2
0	8	0	8
0	6	0	2
0	7	0	1
0	6	0	2
0	10	0	7
0	6	0	5
0	6	0	6
0	52	0	33

0	27	0	13
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INTERSECTION TURNING MOVEMENT COUNTS

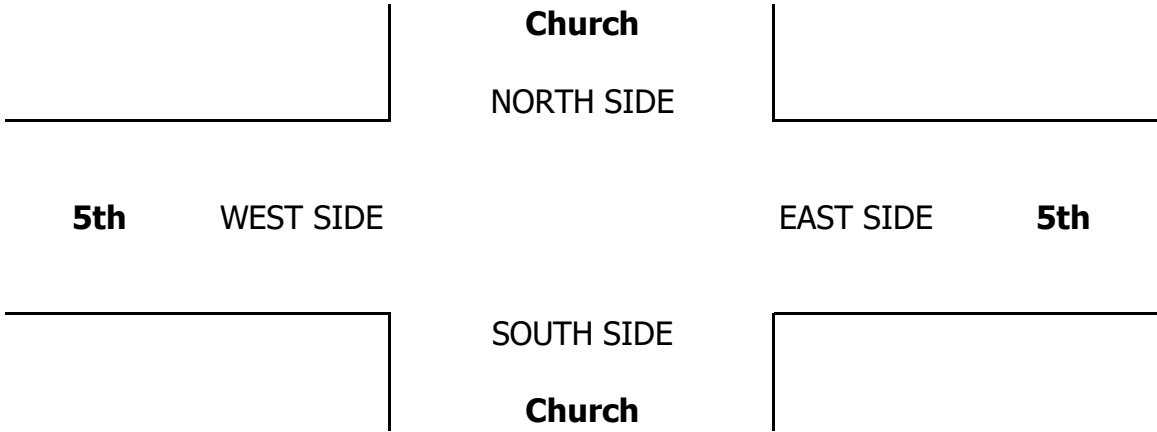
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Church 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 9 SIGNAL
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CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	E ▶
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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Church			Church			5th			5th			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL

AM	7:00 AM	0	0	0	1	0	0	0	4	0	0	6	0	11
	7:15 AM	0	0	0	0	0	2	0	8	0	0	10	0	20
	7:30 AM	0	0	0	2	0	0	0	6	0	0	7	2	17
	7:45 AM	0	0	0	0	0	0	0	12	0	0	4	1	17
	8:00 AM	0	0	0	1	0	1	1	3	0	0	7	1	14
	8:15 AM	0	0	0	1	0	0	0	6	0	0	5	2	14
	8:30 AM	0	0	0	0	0	0	0	10	0	0	10	0	20
	8:45 AM	0	0	0	0	0	0	1	4	0	0	9	0	14
	VOLUMES	0	0	0	5	0	3	2	53	0	0	58	6	127
	APPROACH %	0%	0%	0%	63%	0%	38%	4%	96%	0%	0%	91%	9%	
PM	APP/DEPART	0	/	7	8	/	0	55	/	58	64	/	62	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	4	0	1	0	27	0	0	23	6	62
	APPROACH %	0%	0%	0%	80%	0%	20%	0%	96%	0%	0%	79%	21%	
	PEAK HR FACTOR	0.000			0.625			0.583			0.806			0.912
	APP/DEPART	0	/	6	5	/	0	28	/	31	29	/	25	0
	4:00 PM	0	0	0	0	0	0	0	6	0	0	6	2	14
	4:15 PM	0	0	0	0	0	0	0	6	0	0	2	1	9
	4:30 PM	0	0	0	0	0	0	0	1	0	0	7	1	9
	4:45 PM	0	0	0	1	0	0	1	2	0	0	5	0	9
	5:00 PM	0	0	0	3	0	0	0	2	0	0	7	2	14
	5:15 PM	0	0	0	0	0	0	0	2	0	0	3	2	7
	5:30 PM	0	0	0	0	0	0	0	3	0	0	2	0	5
	5:45 PM	0	0	0	0	0	0	0	2	0	0	2	0	4
	VOLUMES	0	0	0	4	0	0	1	24	0	0	34	8	71
	APPROACH %	0%	0%	0%	100%	0%	0%	4%	96%	0%	0%	81%	19%	
	APP/DEPART	0	/	9	4	/	0	25	/	28	42	/	34	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	0	0	0	4	0	0	1	11	0	0	21	4	41
	APPROACH %	0%	0%	0%	100%	0%	0%	8%	92%	0%	0%	84%	16%	
	PEAK HR FACTOR	0.000			0.333			0.500			0.694			0.732
	APP/DEPART	0	/	5	4	/	0	12	/	15	25	/	21	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

RTOR			
NRR X	SRR 0	ERR X	WRR 0
0	0	0	0

0	0	0	1
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Church
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
9
SIGNAL

CLASS 3:
3-AXLE
TRUCKS

NOTES:

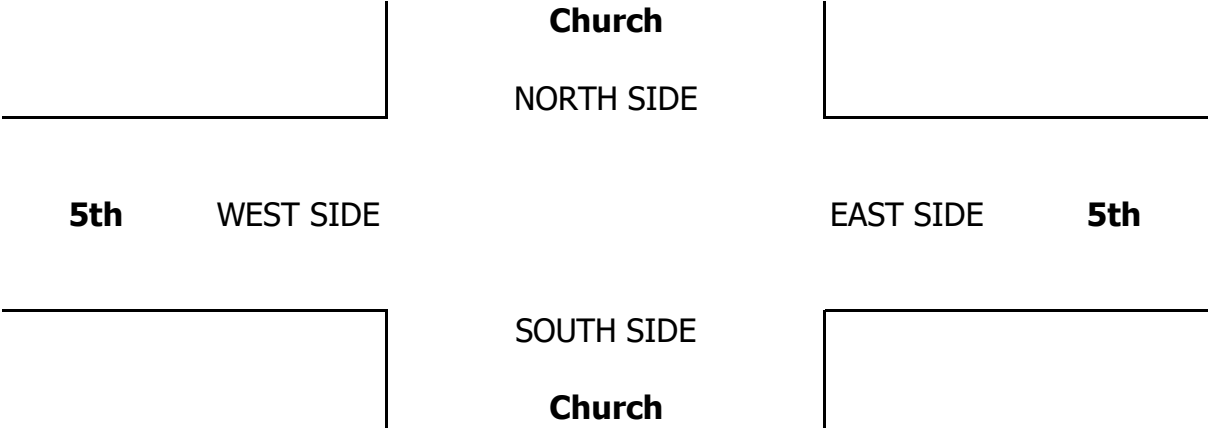
AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Church			Church			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	1	X	1	1	2	X	X	2	0	

AM	7:00 AM	0	0	0	0	0	0	5	0	0	1	0	6	
	7:15 AM	0	0	0	0	0	0	1	0	0	3	0	4	
	7:30 AM	0	0	0	0	0	0	6	0	0	3	0	9	
	7:45 AM	0	0	0	0	0	0	1	3	0	3	0	7	
	8:00 AM	0	0	0	0	0	0	6	0	0	3	0	9	
	8:15 AM	0	0	0	0	0	0	4	0	0	5	0	9	
	8:30 AM	0	0	0	2	0	0	4	0	0	5	0	11	
	8:45 AM	0	0	0	0	0	0	3	0	0	4	0	7	
	VOLUMES	0	0	0	2	0	0	1	32	0	0	27	0	62
	APPROACH %	0%	0%	0%	100%	0%	0%	3%	97%	0%	0%	100%	0%	
APP/DEPART	0	/	1	2	/	0	33	/	34	27	/	27	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	0	0	0	0	0	0	1	19	0	0	14	0	34	
APPROACH %	0%	0%	0%	0%	0%	0%	5%	95%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.000			0.833			0.700			0.944	
APP/DEPART	0	/	1	0	/	0	20	/	19	14	/	14	0	
PM	4:00 PM	0	0	0	1	0	0	0	2	0	0	3	0	6
	4:15 PM	0	0	0	1	0	0	0	0	0	4	0	5	
	4:30 PM	0	0	0	0	0	0	0	1	0	0	0	1	
	4:45 PM	0	0	0	0	0	0	0	0	0	2	0	2	
	5:00 PM	0	0	0	0	0	0	0	2	0	0	2	4	
	5:15 PM	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	
	5:45 PM	0	0	0	0	0	0	1	0	0	0	1	2	
	VOLUMES	0	0	0	2	0	0	1	5	0	0	12	0	20
	APPROACH %	0%	0%	0%	100%	0%	0%	17%	83%	0%	0%	100%	0%	
	APP/DEPART	0	/	1	2	/	0	6	/	7	12	/	12	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	0	0	0	1	0	0	0	3	0	0	8	0	12
APPROACH %	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.250			0.375			0.500			0.600	
APP/DEPART	0	/	0	1	/	0	3	/	4	8	/	8	0	



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	0	X	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Church
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
9
SIGNAL

CLASS 4:
4 OR MORE
AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Church			Church			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	1	X	1	1	2	X	X	2	0	

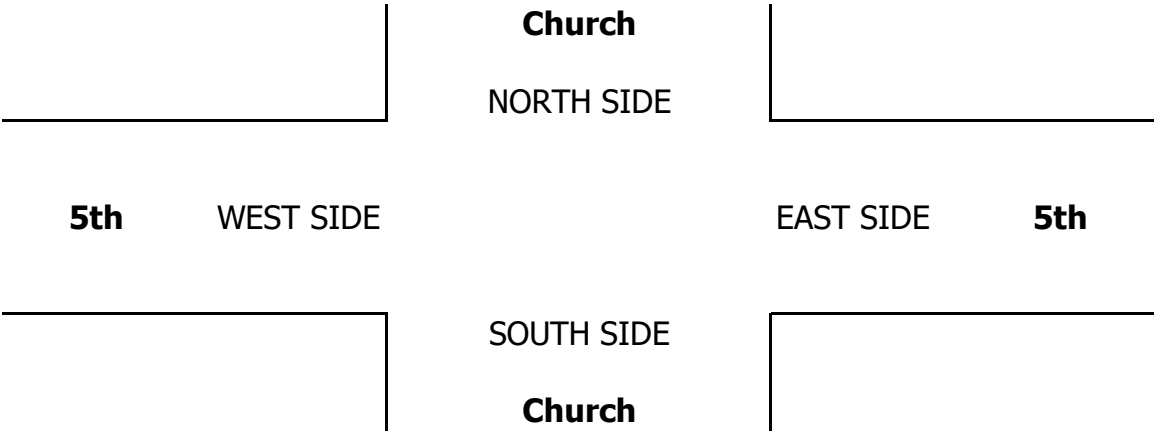
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	0	X	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	0	0	0	0	0	0	10	0	0	4	0	14	
	7:15 AM	0	0	0	0	0	0	6	0	0	3	0	9	
	7:30 AM	0	0	0	0	0	0	7	0	0	8	0	15	
	7:45 AM	0	0	0	0	0	0	5	0	0	2	0	7	
	8:00 AM	0	0	0	0	0	0	9	0	0	4	0	13	
	8:15 AM	0	0	0	0	0	0	6	0	0	2	0	8	
	8:30 AM	0	0	0	0	0	0	4	0	0	4	0	8	
	8:45 AM	0	0	0	0	0	0	4	0	0	3	0	7	
	VOLUMES	0	0	0	0	0	0	51	0	0	30	0	81	
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%		
APP/DEPART	0	/	0	0	/	0	51	/	51	30	/	30	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	0	0	0	0	0	0	27	0	0	16	0	43		
APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%			
PEAK HR FACTOR	0.000			0.000			0.750			0.500			0.717	
APP/DEPART	0	/	0	0	/	0	27	/	27	16	/	16	0	
PM	4:00 PM	0	0	0	0	0	0	3	0	0	5	0	8	
	4:15 PM	0	0	0	0	0	0	2	0	0	4	0	6	
	4:30 PM	0	0	0	0	0	0	3	0	0	4	0	7	
	4:45 PM	0	0	0	1	0	0	2	0	0	2	0	5	
	5:00 PM	0	0	0	0	0	0	2	0	0	2	0	4	
	5:15 PM	0	0	0	0	0	0	2	0	0	3	0	5	
	5:30 PM	0	0	0	0	0	0	1	0	0	2	0	3	
	5:45 PM	0	0	0	0	0	0	2	0	0	2	0	4	
	VOLUMES	0	0	0	1	0	0	17	0	0	24	0	42	
	APPROACH %	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%		
	APP/DEPART	0	/	0	1	/	0	17	/	18	24	/	24	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	0	0	0	1	0	0	9	0	0	12	0	22	
	APPROACH %	0%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.250			0.750			0.750			0.786	
APP/DEPART	0	/	0	1	/	0	9	/	10	12	/	12	0	

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
Church
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
9
SIGNAL

CLASS 5:
RV

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Church			Church			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	1	X	1	1	2	X	X	2	0	

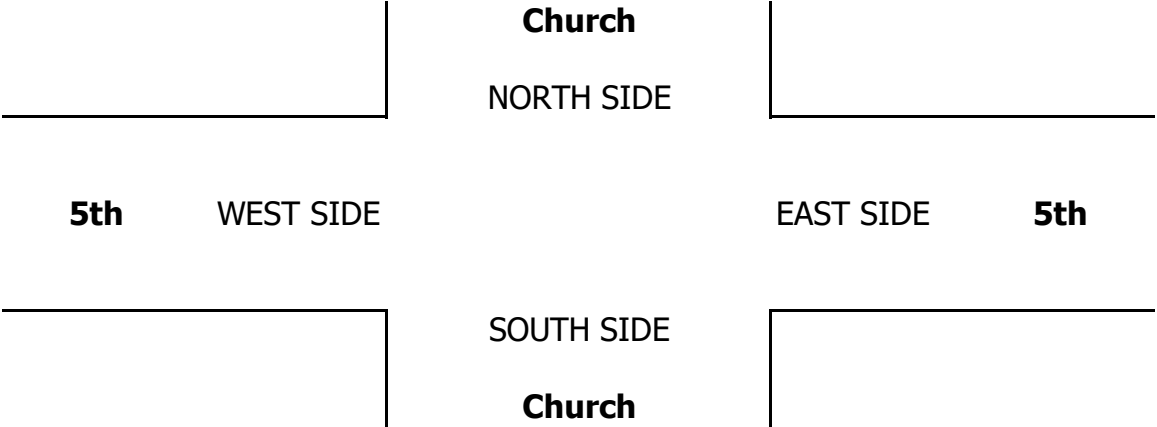
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	0	X	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:30 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	2	0	0	0	0	2
	4:30 PM	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
PM	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0
	BEGIN PEAK HR	4:15 PM											
	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
PM	PEAK HR FACTOR	0.000			0.000			0.250			0.000		
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	2	0	0	0	0	2
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
PM	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0
	BEGIN PEAK HR	4:15 PM											
	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.250			0.000		
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	2	0	0	0	0	2
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0
	BEGIN PEAK HR	4:15 PM											
	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.250			0.000		
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

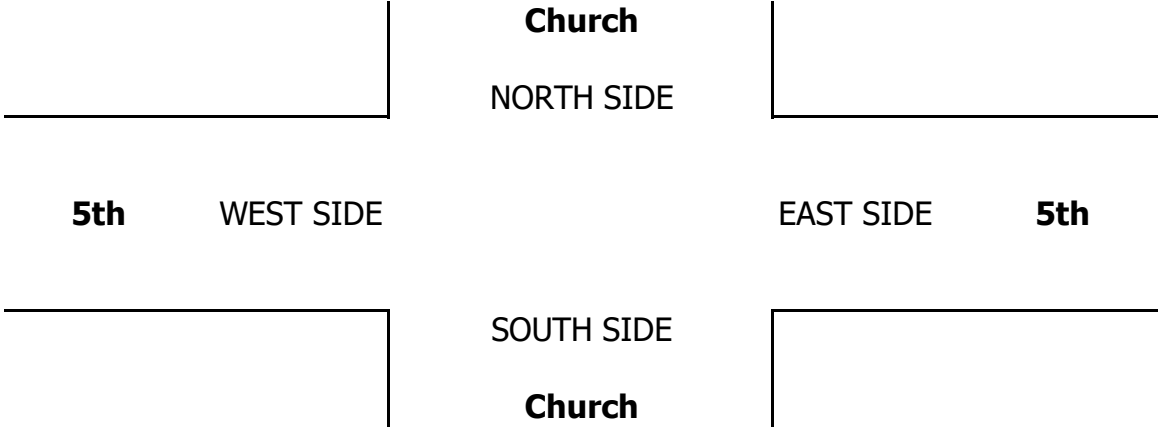
PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino Church 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 9 SIGNAL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼	▶ E
BUSES				

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	Church			Church			5th			5th			
LANES:	NL X	NT X	NR X	SL 1	ST X	SR 1	EL 1	ET 2	ER X	WL X	WT 2	WR 0	TOTAL

AM	7:00 AM	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	
	7:30 AM	0	0	0	0	0	1	0	0	0	0	1	0	
	7:45 AM	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	
	8:15 AM	0	0	0	0	0	1	0	0	0	0	0	0	
	8:30 AM	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	
	VOLUMES	0	0	0	0	0	2	0	0	0	0	1	0	3
	APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%	
APP/DEPART	0	/	0	2	/	0	0	/	0	1	/	3	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	0	0	0	0	0	2	0	0	0	0	1	0	3	
APPROACH %	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	100%	0%		
PEAK HR FACTOR	0.000			0.500			0.000			0.250			0.375	
APP/DEPART	0	/	0	2	/	0	0	/	0	1	/	3	0	
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:45 PM	0	0	0	0	0	0	1	0	0	0	0	0	
	5:00 PM	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	
	5:30 PM	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	
	VOLUMES	0	0	0	0	0	0	1	1	0	0	1	0	3
	APPROACH %	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	100%	0%	
	APP/DEPART	0	/	1	0	/	0	2	/	1	1	/	1	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	0	0	0	0	0	0	1	1	0	0	1	0	3
	APPROACH %	0%	0%	0%	0%	0%	0%	50%	50%	0%	0%	100%	0%	
PEAK HR FACTOR	0.000			0.000			0.500			0.250			0.375	
APP/DEPART	0	/	1	0	/	0	2	/	1	1	/	1	0	



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR X	SRR 0	ERR X	WRR 0
0	0	0	0
0	0	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	1	0	0

0	1	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, May 18, 23

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
I-210 SB Ramps
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
10
SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

◀ W

▲ N

S ▼

E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 SB Ramps			I-210 SB Ramps			5th			5th			
LANES:	NL X	NT X	NR X	SL 0.5	ST 0.5	SR 1	EL X	ET 2	ER 1	WL 2	WT 2	WR X	TOTAL
7:00 AM	0	0	0	24	0	28	0	38	58	100	117	0	365
7:15 AM	0	0	0	24	0	27	0	27	67	127	140	0	412
7:30 AM	0	0	0	50	4	39	0	50	74	120	163	0	500
7:45 AM	0	0	0	58	20	62	0	65	77	137	174	0	593
8:00 AM	0	0	0	65	14	52	0	60	68	117	152	0	528
8:15 AM	0	0	0	51	3	43	0	68	59	119	162	0	505
8:30 AM	0	0	0	33	0	25	0	76	55	99	132	0	420
8:45 AM	0	0	0	49	1	15	0	62	58	80	105	0	370
VOLUMES	0	0	0	354	42	291	0	446	516	899	1,145	0	3,693
APPROACH %	0%	0%	0%	52%	6%	42%	0%	46%	54%	44%	56%	0%	
APP/DEPART	0	/	0	687	/	1,457	962	/	800	2,044	/	1,436	0
BEGIN PEAK HR	7:30 AM												
VOLUMES	0	0	0	224	41	196	0	243	278	493	651	0	2,126
APPROACH %	0%	0%	0%	49%	9%	43%	0%	47%	53%	43%	57%	0%	
PEAK HR FACTOR	0.000			0.823			0.917			0.920			0.896
APP/DEPART	0	/	0	461	/	812	521	/	467	1,144	/	847	0
4:00 PM	0	0	0	84	0	32	0	147	34	43	102	0	442
4:15 PM	0	0	0	107	2	45	0	142	54	47	121	0	518
4:30 PM	0	0	0	82	2	44	0	131	47	47	105	0	458
4:45 PM	0	0	0	73	0	29	0	160	47	52	134	0	495
5:00 PM	0	0	0	80	0	35	0	142	50	48	112	0	467
5:15 PM	0	0	0	68	1	22	0	149	60	44	93	0	437
5:30 PM	0	0	0	72	1	19	0	119	50	65	114	0	440
5:45 PM	0	0	0	87	1	16	0	91	64	58	109	0	426
VOLUMES	0	0	0	653	7	242	0	1,081	406	404	890	0	3,683
APPROACH %	0%	0%	0%	72%	1%	27%	0%	73%	27%	31%	69%	0%	
APP/DEPART	0	/	0	902	/	817	1,487	/	1,734	1,294	/	1,132	0
BEGIN PEAK HR	4:15 PM												
VOLUMES	0	0	0	342	4	153	0	575	198	194	472	0	1,938
APPROACH %	0%	0%	0%	69%	1%	31%	0%	74%	26%	29%	71%	0%	
PEAK HR FACTOR	0.000			0.810			0.934			0.895			0.935
APP/DEPART	0	/	0	499	/	396	773	/	917	666	/	625	0



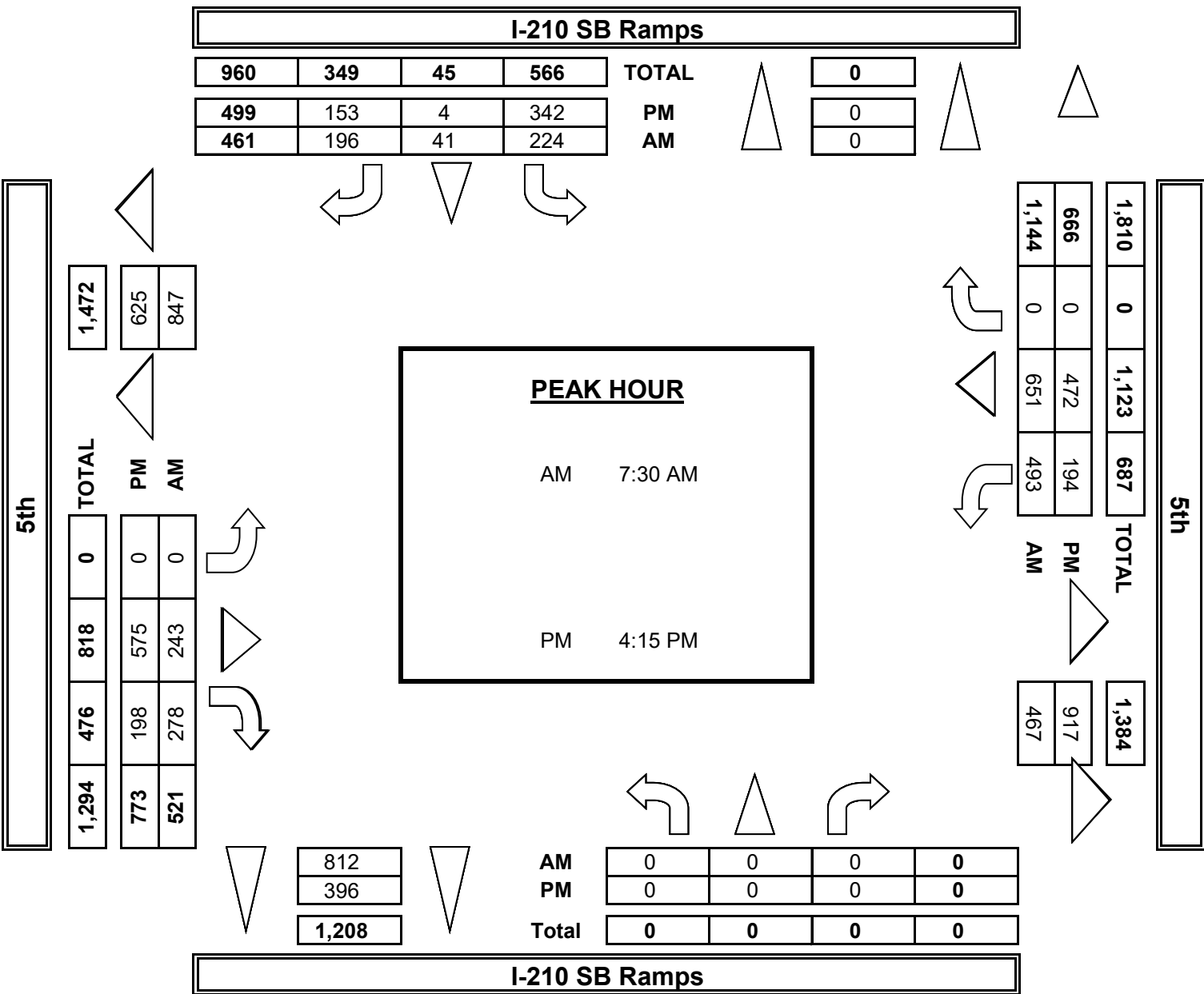
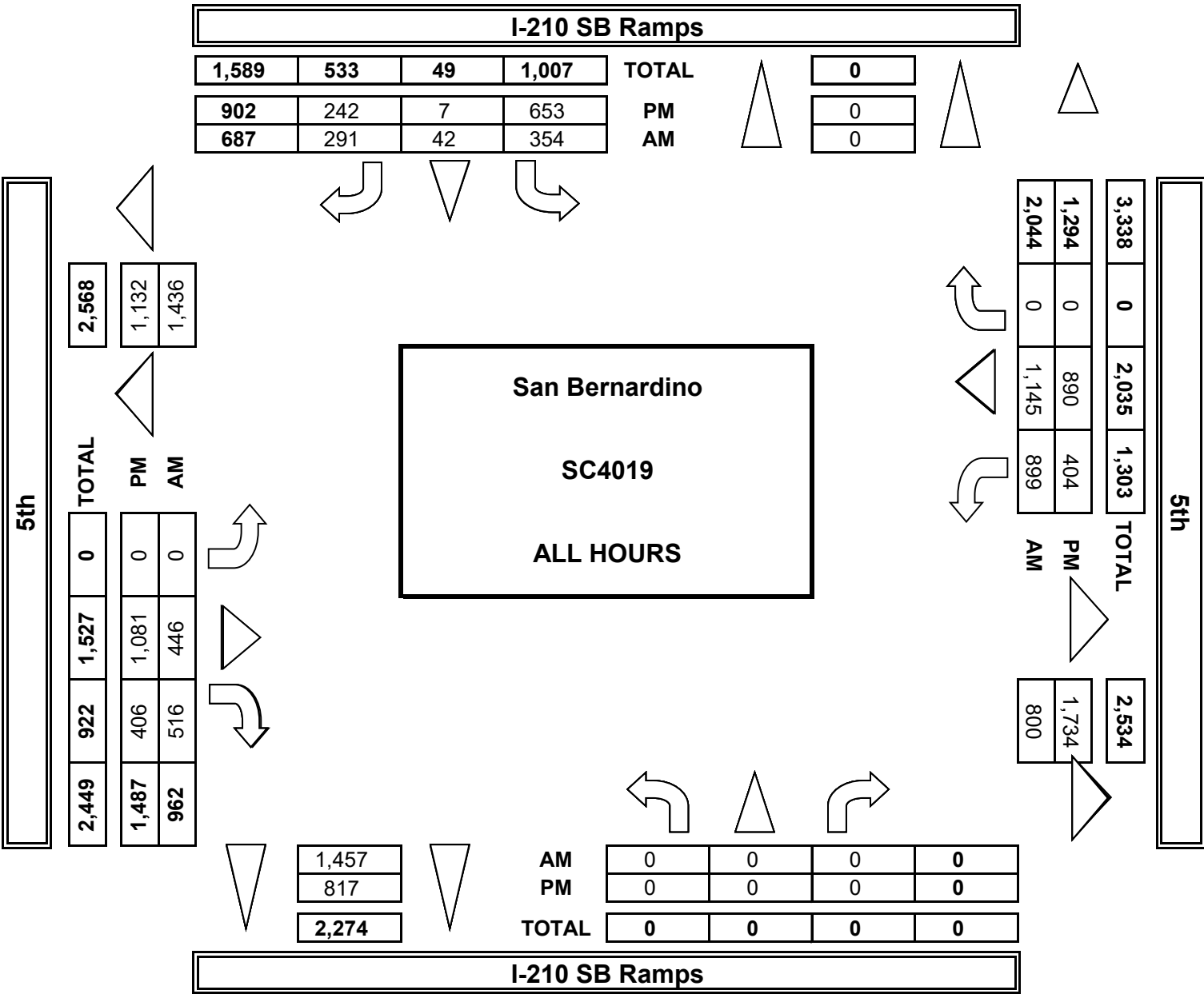
AM	7:00 AM
	7:15 AM
	7:30 AM
	7:45 AM
	8:00 AM
	8:15 AM
	8:30 AM
	8:45 AM
PM	TOTAL
	4:00 PM
	4:15 PM
	4:30 PM
	4:45 PM
	5:00 PM
	5:15 PM
	5:30 PM
	5:45 PM
TOTAL	

ALL PED AND BIKE				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	3	4
0	0	0	0	0
0	0	1	0	1
0	0	0	1	1
0	0	2	4	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	1	3

PEDESTRIAN CROSSINGS				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	2	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1

BICYCLE CROSSINGS				
ES	WS	SS	NS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	3	3
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	4	4
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE: 5/18/23 THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
I-210 SB Ramps
5th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	I-210 SB Ramps			I-210 SB Ramps	
LANES:	NL X	NT X	NR X	SL 0.5	ST 0.5

AM	7:00 AM	0	0	0	28	0
	7:15 AM	0	0	0	26	0
	7:30 AM	0	0	0	55	4
	7:45 AM	0	0	0	64	21
	8:00 AM	0	0	0	69	15
	8:15 AM	0	0	0	53	3
	8:30 AM	0	0	0	37	0
	8:45 AM	0	0	0	51	1
	VOLUMES	0	0	0	381	44
	APPROACH %	0%	0%	0%	50%	6%
	APP/DEPART	0	/	0	760	/
	BEGIN PEAK HR	7:30 AM				
PM	VOLUMES	0	0	0	240	43
	APPROACH %	0%	0%	0%	48%	9%
	PEAK HR FACTOR	0.000			0.839	
	APP/DEPART	0	/	0	500	/
	4:00 PM	0	0	0	89	0
	4:15 PM	0	0	0	120	2
	4:30 PM	0	0	0	85	2
	4:45 PM	0	0	0	82	0
	5:00 PM	0	0	0	83	0
	5:15 PM	0	0	0	69	1
	5:30 PM	0	0	0	75	1
	5:45 PM	0	0	0	88	1
	VOLUMES	0	0	0	689	7
	APPROACH %	0%	0%	0%	70%	1%

APP/DEPART	0	/	0	985	/
BEGIN PEAK HR	4:15 PM				
VOLUMES	0	0	0	369	4
APPROACH %	0%	0%	0%	67%	1%
PEAK HR FACTOR	0.000			0.788	
APP/DEPART	0	/	0	552	/

I-2

5th WEST SIDE

I-2

C. tel: 714 253 7888 cs@aimtd.com

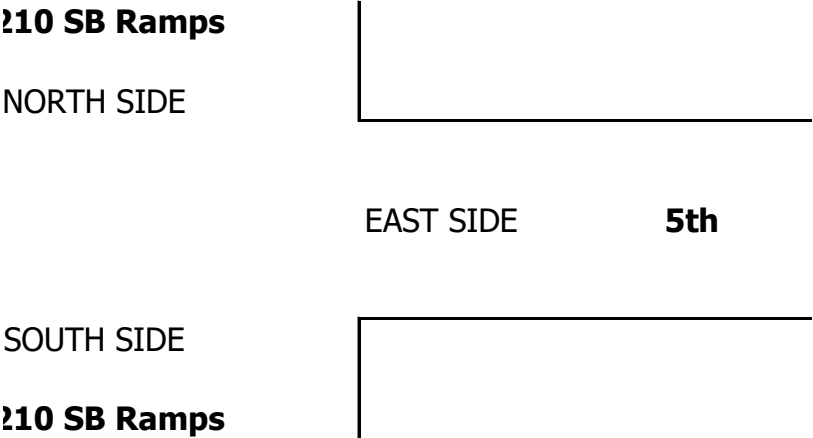
PROJECT #: SC4019
LOCATION #: 10
CONTROL: SIGNAL

				AM		▲	
5	6			PM		N	
2	2			MD	◀ W		E ▶
				OTHER		S	
				OTHER		▼	

	EASTBOUND			WESTBOUND			
	5th			5th			
SR	EL	ET	ER	WL	WT	WR	TOTAL
1	X	2	1	2	2	X	

34	0	47	77	103	123	0	411
36	0	31	80	129	145	0	447
48	0	64	85	124	179	0	557
65	0	77	85	141	181	0	631
60	0	69	85	122	160	0	579
45	0	83	64	122	173	0	542
33	0	89	61	102	143	0	464
16	0	70	64	85	119	0	404
336	0	528	599	926	1,221	0	4,033
44%	0%	47%	53%	43%	57%	0%	
1,568	1,127	/	909	2,146	/	1,556	0
218	0	292	318	508	691	0	2,308
44%	0%	48%	52%	42%	58%	0%	
		0.946			0.933		0.914
868	610	/	532	1,199	/	909	0
44	0	156	38	46	108	0	479
54	0	151	56	47	127	0	556
53	0	138	48	49	108	0	482
33	0	165	50	54	139	0	521
40	0	148	53	54	118	0	494
26	0	152	63	45	98	0	452
23	0	122	51	69	115	0	455
18	0	92	69	58	113	0	438
290	0	1,123	425	420	925	0	3,876
29%	0%	73%	27%	31%	69%	0%	

851	1,547	/	1,811	1,344	/	1,214	0
179	0	602	206	203	492	0	2,053
32%	0%	75%	25%	29%	71%	0%	
		0.941			0.901		0.923
412	808	/	971	694	/	671	0



U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
I-210 SB Ramps
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
10
SIGNAL

CLASS 1:
PASSENGER
VEHICLES

NOTES:

AM
PM
MD
OTHER
OTHER

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S
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E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 SB Ramps			I-210 SB Ramps			5th			5th			
LANES:	NL X	NT X	NR X	SL 0.5	ST 0.5	SR 1	EL X	ET 2	ER 1	WL 2	WT 2	WR X	TOTAL

AM	7:00 AM	0	0	0	19	0	23	0	30	46	96	111	0	325
	7:15 AM	0	0	0	23	0	20	0	23	56	124	131	0	377
	7:30 AM	0	0	0	45	4	31	0	39	64	117	150	0	450
	7:45 AM	0	0	0	51	19	60	0	53	69	130	166	0	548
	8:00 AM	0	0	0	60	13	47	0	52	57	111	142	0	482
	8:15 AM	0	0	0	47	3	40	0	54	56	114	151	0	465
	8:30 AM	0	0	0	26	0	18	0	61	50	96	120	0	371
	8:45 AM	0	0	0	46	1	14	0	55	54	76	90	0	336
	VOLUMES	0	0	0	317	40	253	0	367	452	864	1,061	0	3,354
	APPROACH %	0%	0%	0%	52%	7%	41%	0%	45%	55%	45%	55%	0%	
PM	APP/DEPART	0	/	0	610	/	1,356	819	/	684	1,925	/	1,314	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	203	39	178	0	198	246	472	609	0	1,945
	APPROACH %	0%	0%	0%	48%	9%	42%	0%	45%	55%	44%	56%	0%	
	PEAK HR FACTOR	0.000			0.808			0.910			0.913			0.887
	APP/DEPART	0	/	0	420	/	757	444	/	401	1,081	/	787	0
	4:00 PM	0	0	0	78	0	23	0	138	31	41	95	0	406
	4:15 PM	0	0	0	97	2	39	0	133	51	47	115	0	484
	4:30 PM	0	0	0	79	2	38	0	127	46	44	99	0	435
	4:45 PM	0	0	0	68	0	26	0	156	45	50	128	0	473
	5:00 PM	0	0	0	76	0	29	0	135	48	42	105	0	435
	5:15 PM	0	0	0	66	1	20	0	147	58	43	87	0	422
	5:30 PM	0	0	0	69	1	17	0	116	49	62	112	0	426
	5:45 PM	0	0	0	86	1	15	0	90	61	58	105	0	416
	VOLUMES	0	0	0	619	7	207	0	1,042	389	387	846	0	3,497
	APPROACH %	0%	0%	0%	74%	1%	25%	0%	73%	27%	31%	69%	0%	
	APP/DEPART	0	/	0	833	/	783	1,431	/	1,661	1,233	/	1,053	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	0	0	0	320	4	132	0	551	190	183	447	0	1,827
	APPROACH %	0%	0%	0%	70%	1%	29%	0%	74%	26%	29%	71%	0%	
	PEAK HR FACTOR	0.000			0.826			0.922			0.885			0.944
	APP/DEPART	0	/	0	456	/	377	741	/	871	630	/	579	0

I-210 SB Ramps

NORTH SIDE

5th

WEST SIDE

EAST SIDE

5th

SOUTH SIDE

I-210 SB Ramps

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR X	SRR 0	ERR 0	WRR X
0	14	16	0
0	13	27	0
0	15	33	0
0	36	41	0
0	29	28	0
0	23	27	0
0	13	27	0
0	7	31	0
0	150	230	0

0	103	129	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	7	10	0
0	25	19	0
0	22	14	0
0	16	19	0
0	19	15	0
0	16	17	0
0	7	16	0
0	11	21	0
0	123	131	0

0	82	67	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino I-210 SB Ramps 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 10 SIGNAL
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CLASS 2: 2-AXLE WORK VEHICLES/ TRUCKS	NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 SB Ramps			I-210 SB Ramps			5th			5th			
LANES:	NL X	NT X	NR X	SL 0.5	ST 0.5	SR 1	EL X	ET 2	ER 1	WL 2	WT 2	WR X	TOTAL

U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR X	SRR 0	ERR 0	WRR X

AM	7:00 AM	0	0	0	3	0	2	0	3	2	3	4	0	17
	7:15 AM	0	0	0	0	0	2	0	2	6	3	8	0	21
	7:30 AM	0	0	0	3	0	4	0	3	5	1	5	0	21
	7:45 AM	0	0	0	5	1	0	0	7	5	7	5	0	30
	8:00 AM	0	0	0	4	0	1	0	2	2	5	7	0	21
	8:15 AM	0	0	0	4	0	2	0	6	1	4	5	0	22
	8:30 AM	0	0	0	6	0	3	0	10	0	2	7	0	28
	8:45 AM	0	0	0	3	0	1	0	3	1	2	8	0	18
	VOLUMES	0	0	0	28	1	15	0	36	22	27	49	0	178
	APPROACH %	0%	0%	0%	64%	2%	34%	0%	62%	38%	36%	64%	0%	
PM	APP/DEPART	0	/	0	44	/	50	58	/	64	76	/	64	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	16	1	7	0	18	13	17	22	0	94
	APPROACH %	0%	0%	0%	67%	4%	29%	0%	58%	42%	44%	56%	0%	
	PEAK HR FACTOR	0.000			0.857			0.646			0.813			0.783
	APP/DEPART	0	/	0	24	/	31	31	/	34	39	/	29	0
	4:00 PM	0	0	0	5	0	3	0	5	1	0	5	0	19
	4:15 PM	0	0	0	5	0	1	0	4	2	0	2	0	14
	4:30 PM	0	0	0	2	0	2	0	0	1	3	6	0	14
	4:45 PM	0	0	0	1	0	1	0	2	1	1	4	0	10
PM	5:00 PM	0	0	0	3	0	4	0	4	1	3	5	0	20
	5:15 PM	0	0	0	2	0	0	0	1	1	1	5	0	10
	5:30 PM	0	0	0	2	0	0	0	2	1	1	2	0	8
	5:45 PM	0	0	0	1	0	0	0	1	1	0	2	0	5
	VOLUMES	0	0	0	21	0	11	0	19	9	9	31	0	100
	APPROACH %	0%	0%	0%	66%	0%	34%	0%	68%	32%	23%	78%	0%	
	APP/DEPART	0	/	0	32	/	18	28	/	40	40	/	42	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	0	0	0	11	0	8	0	10	5	7	17	0	58
	APPROACH %	0%	0%	0%	58%	0%	42%	0%	67%	33%	29%	71%	0%	
PM	PEAK HR FACTOR	0.000			0.679			0.625			0.667			0.725
	APP/DEPART	0	/	0	19	/	12	15	/	21	24	/	25	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

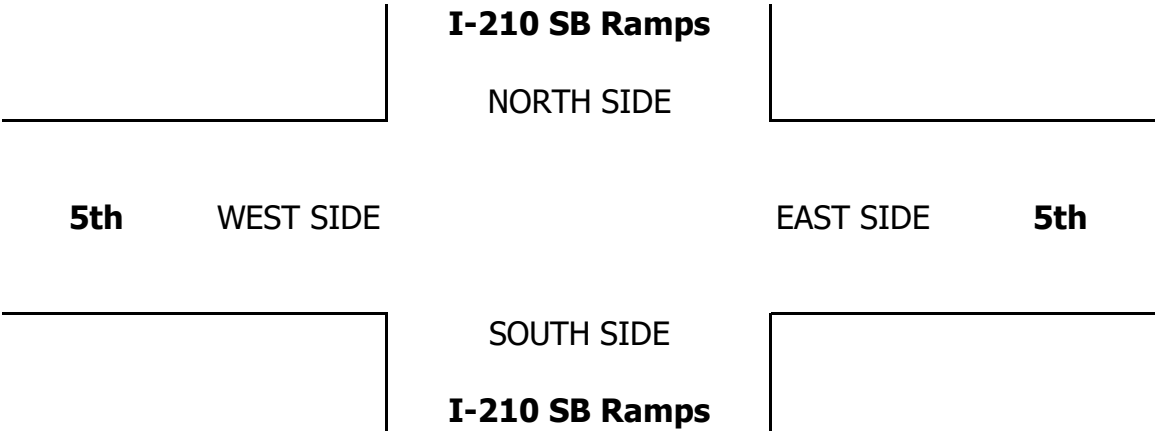
0	1	1	0
0	1	2	0
0	3	3	0
0	0	2	0
0	0	1	0
0	2	0	0
0	1	0	0
0	1	0	0
0	9	9	0

0	5	6	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	1	0	0
0	1	1	0
0	1	0	0
0	1	0	0
0	4	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	8	1	0

0	7	1	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
I-210 SB Ramps
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
10
SIGNAL

CLASS 3:
3-AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

▲
N
◀ W
S
▼

E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 SB Ramps			I-210 SB Ramps			5th			5th			
LANES:	NL X	NT X	NR X	SL 0.5	ST 0.5	SR 1	EL X	ET 2	ER 1	WL 2	WT 2	WR X	TOTAL

AM	7:00 AM	0	0	0	2	0	1	0	3	2	1	0	0	9
	7:15 AM	0	0	0	0	0	2	0	1	0	0	1	0	4
	7:30 AM	0	0	0	1	0	1	0	4	2	1	2	0	11
	7:45 AM	0	0	0	1	0	1	0	2	1	0	2	0	7
	8:00 AM	0	0	0	0	1	1	0	4	2	0	2	0	10
	8:15 AM	0	0	0	0	0	1	0	4	0	1	4	0	10
	8:30 AM	0	0	0	1	0	2	0	2	4	0	3	0	12
	8:45 AM	0	0	0	0	0	0	0	2	1	0	4	0	7
	VOLUMES	0	0	0	5	1	9	0	22	12	3	18	0	70
	APPROACH %	0%	0%	0%	33%	7%	60%	0%	65%	35%	14%	86%	0%	
PM	APP/DEPART	0	/	0	15	/	16	34	/	27	21	/	27	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	2	1	4	0	14	5	2	10	0	38
	APPROACH %	0%	0%	0%	29%	14%	57%	0%	74%	26%	17%	83%	0%	
	PEAK HR FACTOR	0.000			0.875			0.792			0.600			0.864
	APP/DEPART	0	/	0	7	/	8	19	/	16	12	/	14	0
	4:00 PM	0	0	0	0	0	2	0	2	1	1	1	0	7
	4:15 PM	0	0	0	0	0	2	0	0	1	0	2	0	5
	4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	4:45 PM	0	0	0	0	0	1	0	0	0	1	1	0	3
	5:00 PM	0	0	0	1	0	1	0	2	0	2	1	0	7
	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	1	0	0	1
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1
	VOLUMES	0	0	0	1	0	6	0	5	2	5	6	0	25
	APPROACH %	0%	0%	0%	14%	0%	86%	0%	71%	29%	45%	55%	0%	
	APP/DEPART	0	/	0	7	/	7	7	/	6	11	/	12	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	0	0	0	1	0	4	0	3	1	3	4	0	16
	APPROACH %	0%	0%	0%	20%	0%	80%	0%	75%	25%	43%	57%	0%	
	PEAK HR FACTOR	0.000			0.625			0.500			0.583			0.571
	APP/DEPART	0	/	0	5	/	4	4	/	4	7	/	8	0



U-TURNS				
NB	SB	EB	WB	TTL

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR

X	0	0	X
0	0	2	0
0	2	0	0
0	1	2	0
0	0	0	0
0	0	2	0
0	0	0	0
0	2	0	0
0	0	0	0
0	5	6	0

0	1	4	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	2	0	0
0	0	0	0
0	0	0	0
0	1	0	0
0	1	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	4	0	0

0	2	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino I-210 SB Ramps 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 10 SIGNAL
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CLASS 4:	NOTES:	AM		▲	
4 OR MORE AXLE TRUCKS		PM		N	
		MD	◀ W		E ▶
		OTHER		S	
		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 SB Ramps			I-210 SB Ramps			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	0.5	0.5	1	X	2	1	2	2	X	

U-TURNS				
NB	SB	EB	WB	TTL

RTOR			
NRR	SRR	ERR	WRR
X	0	0	X

AM	7:00 AM	0	0	0	0	0	2	0	2	8	0	2	0	14
	7:15 AM	0	0	0	1	0	3	0	1	5	0	0	0	10
	7:30 AM	0	0	0	1	0	3	0	4	3	1	5	0	17
	7:45 AM	0	0	0	1	0	1	0	3	2	0	1	0	8
	8:00 AM	0	0	0	1	0	3	0	2	7	1	1	0	15
	8:15 AM	0	0	0	0	0	0	0	4	2	0	2	0	8
	8:30 AM	0	0	0	0	0	2	0	3	1	1	2	0	9
	8:45 AM	0	0	0	0	0	0	0	2	2	2	3	0	9
	VOLUMES	0	0	0	4	0	14	0	21	30	5	16	0	90
	APPROACH %	0%	0%	0%	22%	0%	78%	0%	41%	59%	24%	76%	0%	
PM	APP/DEPART	0	/	0	18	/	35	51	/	25	21	/	30	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	0	0	0	3	0	7	0	13	14	2	9	0	48
	APPROACH %	0%	0%	0%	30%	0%	70%	0%	48%	52%	18%	82%	0%	
	PEAK HR FACTOR	0.000			0.625			0.750			0.458			0.706
	APP/DEPART	0	/	0	10	/	16	27	/	16	11	/	16	0
	4:00 PM	0	0	0	1	0	4	0	2	1	1	1	0	10
	4:15 PM	0	0	0	5	0	3	0	2	0	0	1	0	11
	4:30 PM	0	0	0	1	0	4	0	3	0	0	0	0	8
	4:45 PM	0	0	0	4	0	1	0	2	1	0	1	0	9
	5:00 PM	0	0	0	0	0	1	0	1	1	1	1	0	5
	5:15 PM	0	0	0	0	0	2	0	1	1	0	1	0	5
	5:30 PM	0	0	0	1	0	2	0	1	0	1	0	0	5
	5:45 PM	0	0	0	0	0	1	0	0	2	0	1	0	4
	VOLUMES	0	0	0	12	0	18	0	12	6	3	6	0	57
	APPROACH %	0%	0%	0%	40%	0%	60%	0%	67%	33%	33%	67%	0%	
	APP/DEPART	0	/	0	30	/	9	18	/	24	9	/	24	0
	BEGIN PEAK HR	4:15 PM												
	VOLUMES	0	0	0	10	0	9	0	8	2	1	3	0	33
	APPROACH %	0%	0%	0%	53%	0%	47%	0%	80%	20%	25%	75%	0%	
	PEAK HR FACTOR	0.000			0.594			0.833			0.500			0.750
	APP/DEPART	0	/	0	19	/	3	10	/	18	4	/	12	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

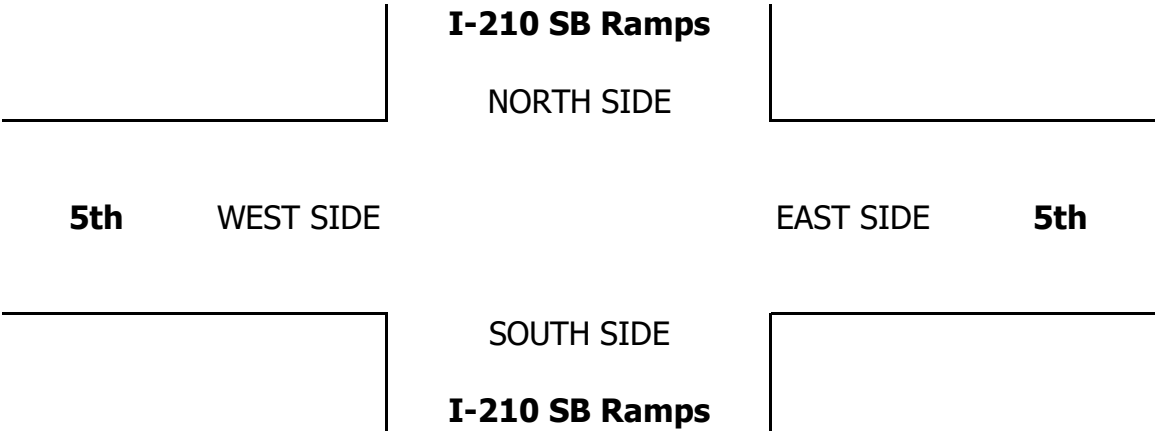
0	2	0	0
0	1	2	0
0	2	1	0
0	1	1	0
0	2	4	0
0	0	2	0
0	0	0	0
0	1	1	0
0	0	0	0
0	9	11	0

0	5	8	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	1	0	0
0	3	0	0
0	3	0	0
0	1	0	0
0	1	1	0
0	2	0	0
0	1	0	0
0	0	0	0
0	12	1	0

0	8	1	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino I-210 SB Ramps 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 10 SIGNAL
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CLASS 5:	NOTES:	AM		▲	
RV		PM		N	
		MD	◄ W		E ►
		OTHER		S	
		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 SB Ramps			I-210 SB Ramps			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	X	X	X	0.5	0.5	1	X	2	1	2	2	X	

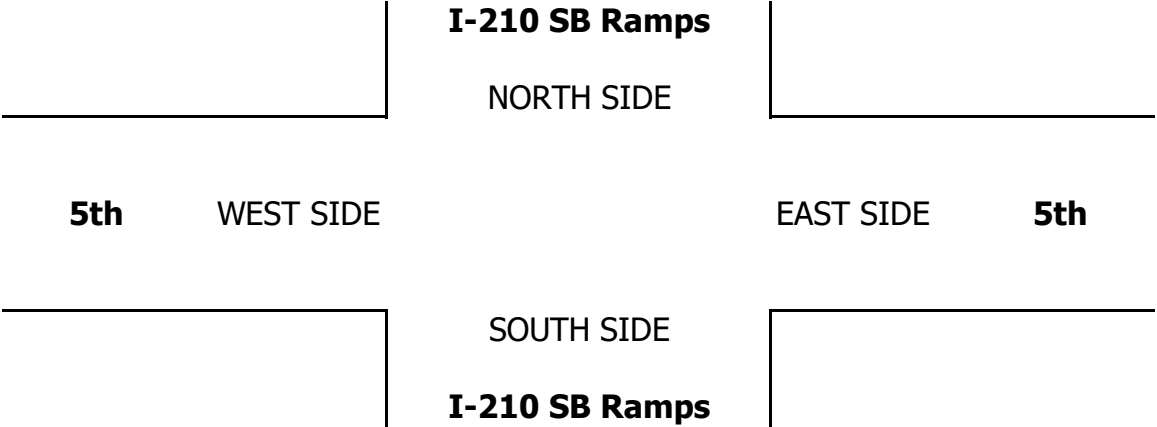
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
X	0	0	X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:30 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	2	0	0	0	0	2
	4:30 PM	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
PM	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0
	BEGIN PEAK HR	4:15 PM											
	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
PM	PEAK HR FACTOR	0.000			0.000			0.250			0.000		
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	2	0	0	0	0	2
	4:30 PM	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
	5:00 PM	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
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino I-210 SB Ramps 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 10 SIGNAL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N ◀ W S ▼ E ▶
BUSES			

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 SB Ramps			I-210 SB Ramps			5th			5th			
LANES:	NL X	NT X	NR X	SL 0.5	ST 0.5	SR 1	EL X	ET 2	ER 1	WL 2	WT 2	WR X	TOTAL

AM	7:00 AM	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
	7:30 AM	0	0	0	0	0	0	0	0	0	1	0	1
	7:45 AM	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
	8:15 AM	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
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0
	VOLUMES	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
PM	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	0
	BEGIN PEAK HR	7:30 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	1	0	1
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.250		
	APP/DEPART	0	/	0	0	/	0	0	/	0	1	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	1	0	0	1	0	2
	4:30 PM	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
	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	1	0	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	0
	BEGIN PEAK HR	4:15 PM											
	VOLUMES	0	0	0	0	0	0	1	0	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	PEAK HR FACTOR	0.000			0.000			0.250			0.250		
	APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

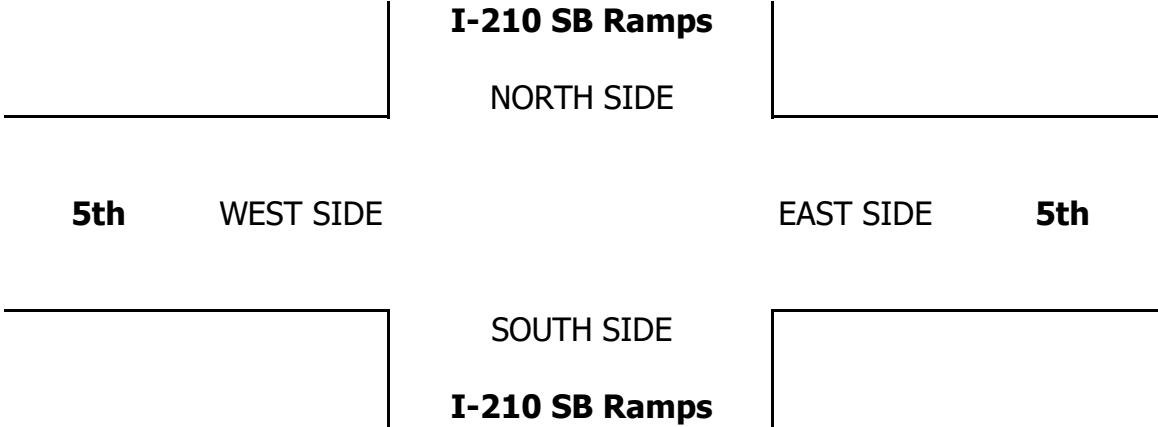
RTOR			
NRR X	SRR 0	ERR 0	WRR X
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
Thu, May 18, 23

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
I-210 NB Ramps
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
11
SIGNAL

NOTES:

AM
PM
MD
OTHER
OTHER

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E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 NB Ramps			I-210 NB Ramps			5th			5th			
LANES:	NL 1.5	NT 0.5	NR 2	SL X	ST X	SR X	EL 1	ET 2	ER X	WL X	WT 3	WR 1	TOTAL

AM	7:00 AM	61	0	42	0	0	0	7	55	0	0	156	56	377
	7:15 AM	52	1	77	0	0	0	2	49	0	0	215	62	458
	7:30 AM	62	0	70	0	0	0	9	91	0	0	221	76	529
	7:45 AM	67	1	56	0	0	0	16	107	0	0	244	57	548
	8:00 AM	56	0	83	0	0	0	17	105	0	0	213	52	526
	8:15 AM	68	1	66	0	0	0	14	105	0	0	213	56	523
	8:30 AM	39	0	53	0	0	0	15	94	0	0	192	65	458
	8:45 AM	45	1	50	0	0	0	10	101	0	0	146	35	388
	VOLUMES	450	4	497	0	0	0	90	707	0	0	1,600	459	3,807
	APPROACH %	47%	0%	52%	0%	0%	0%	11%	89%	0%	0%	78%	22%	
	APP/DEPART	951	/	553	0	/	0	797	/	1,204	2,059	/	2,050	0
	BEGIN PEAK HR	7:30 AM												
PM	VOLUMES	253	2	275	0	0	0	56	408	0	0	891	241	2,126
	APPROACH %	48%	0%	52%	0%	0%	0%	12%	88%	0%	0%	79%	21%	
	PEAK HR FACTOR	0.953			0.000			0.943			0.940			0.970
	APP/DEPART	530	/	299	0	/	0	464	/	683	1,132	/	1,144	0
	4:00 PM	41	0	83	0	0	0	45	186	0	0	104	75	534
	4:15 PM	43	1	98	0	0	0	30	211	0	0	125	67	575
	4:30 PM	38	2	74	0	0	0	25	188	0	0	114	85	526
	4:45 PM	57	0	83	0	0	0	43	190	0	0	129	79	581
	5:00 PM	40	0	67	0	0	0	40	182	0	0	120	75	524
	5:15 PM	36	1	77	0	0	0	31	186	0	0	104	81	516
	5:30 PM	45	1	72	0	0	0	27	164	0	0	134	66	509
	5:45 PM	45	0	97	0	0	0	14	164	0	0	122	59	501
	VOLUMES	345	5	651	0	0	0	255	1,471	0	0	952	587	4,266
	APPROACH %	34%	0%	65%	0%	0%	0%	15%	85%	0%	0%	62%	38%	
	APP/DEPART	1,001	/	847	0	/	0	1,726	/	2,122	1,539	/	1,297	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	179	3	338	0	0	0	143	775	0	0	472	306	2,216
	APPROACH %	34%	1%	65%	0%	0%	0%	16%	84%	0%	0%	61%	39%	
	PEAK HR FACTOR	0.915			0.000			0.952			0.935			0.954
	APP/DEPART	520	/	452	0	/	0	918	/	1,113	778	/	651	0



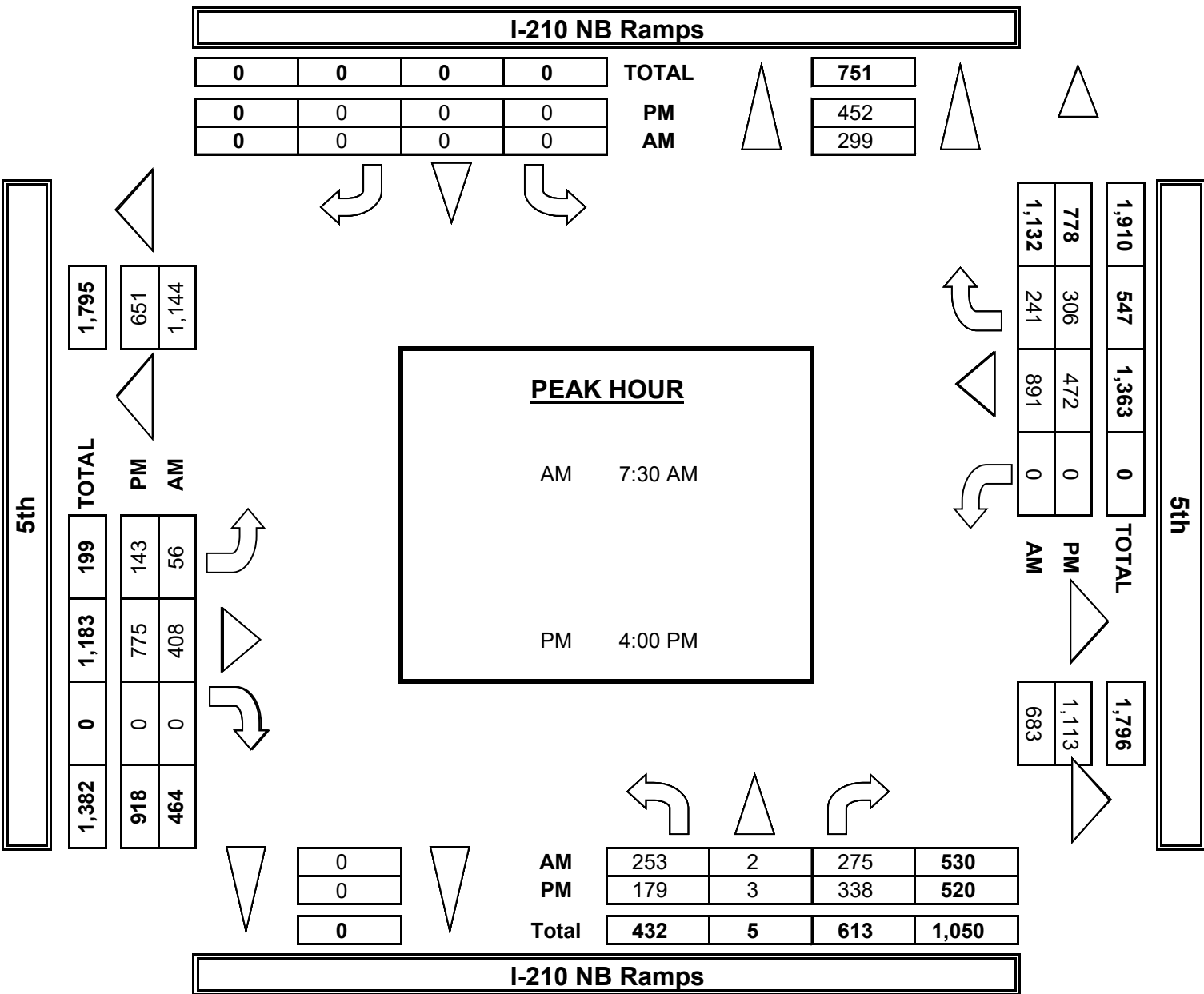
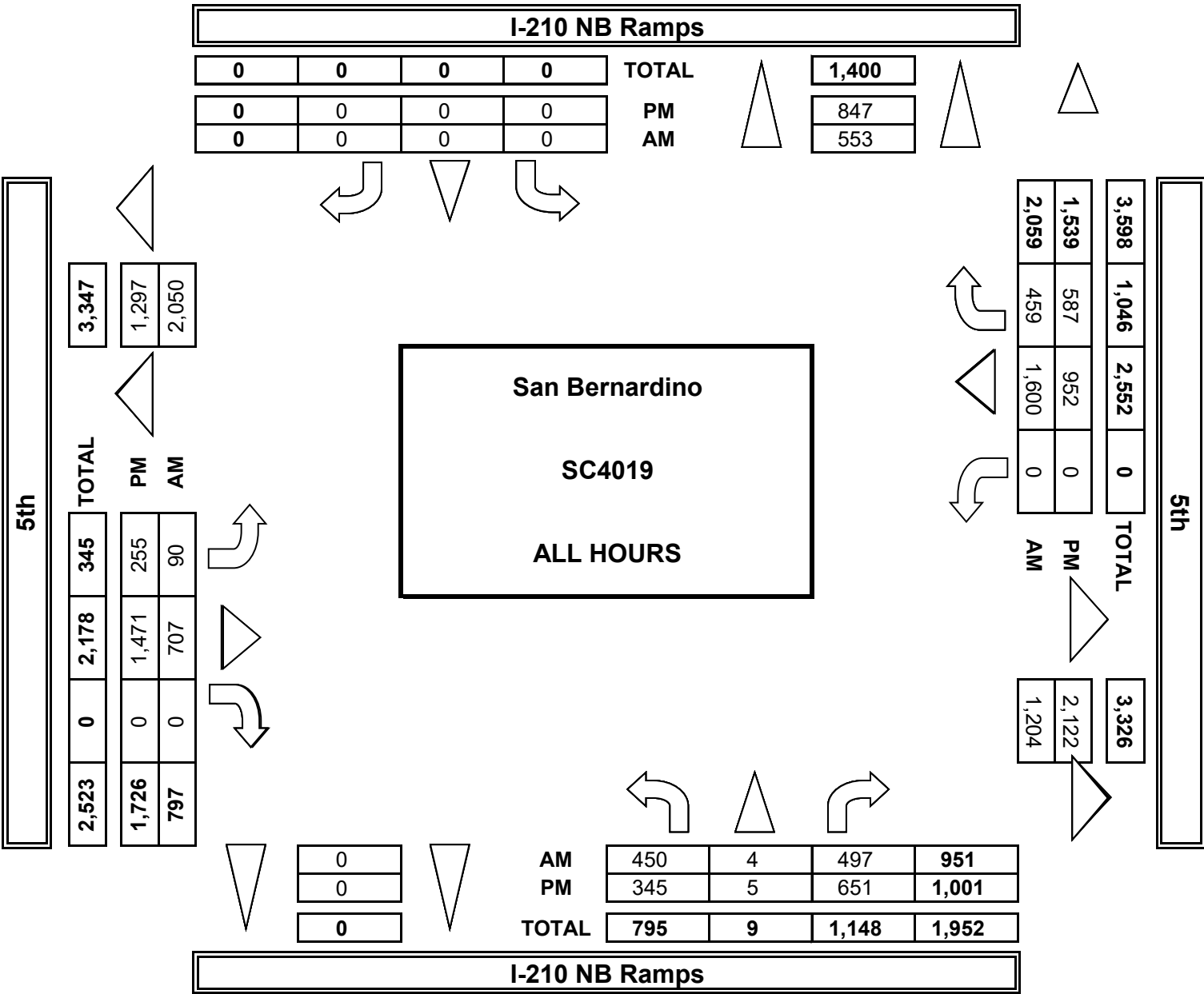
AM	7:00 AM	
	7:15 AM	
	7:30 AM	
	7:45 AM	
	8:00 AM	
	8:15 AM	
	8:30 AM	
	8:45 AM	
PM	TOTAL	
	4:00 PM	
	4:15 PM	
	4:30 PM	
	4:45 PM	
	5:00 PM	
	5:15 PM	
	5:30 PM	
	5:45 PM	
	TOTAL	

ALL PED AND BIKE				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	3	4
0	0	0	0	0
0	0	1	0	1
0	0	0	1	1
0	0	2	4	6
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	2	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	2	1	3

PEDESTRIAN CROSSINGS				
E SIDE	W SIDE	S SIDE	N SIDE	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	2	0	2
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1

BICYCLE CROSSINGS				
ES	WS	SS	NS	TOTAL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	3	3
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	1	1
0	0	0	4	4
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	0	1
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	1	1	2

AimTD LLC
TURNING MOVEMENT COUNTS



INTERSECTION TUR

PREPARED BY: AimTD LI

DATE: 5/18/23 THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
I-210 NB Ramps
5th

	NOTES:				
PCE Adjusted	Class	1	2	3	4
	Factor	1	1.5	2	3

	NORTHBOUND			SOUTHBOUND	
	I-210 NB Ramps			I-210 NB Ramps	
LANES:	NL 1.5	NT 0.5	NR 2	SL X	ST X

AM	7:00 AM	66	0	47	0	0
	7:15 AM	54	1	87	0	0
	7:30 AM	75	0	74	0	0
	7:45 AM	71	1	60	0	0
	8:00 AM	61	0	94	0	0
	8:15 AM	75	1	75	0	0
	8:30 AM	45	0	55	0	0
	8:45 AM	53	1	57	0	0
	VOLUMES	498	4	548	0	0
	APPROACH %	47%	0%	52%	0%	0%
	APP/DEPART	1,049	/	636	0	/
	BEGIN PEAK HR	7:30 AM				
PM	VOLUMES	281	2	303	0	0
	APPROACH %	48%	0%	52%	0%	0%
	PEAK HR FACTOR	0.947			0.000	
	APP/DEPART	586	/	349	0	/
	4:00 PM	45	0	89	0	0
	4:15 PM	46	1	100	0	0
	4:30 PM	40	2	74	0	0
	4:45 PM	61	0	83	0	0
	5:00 PM	47	0	70	0	0
	5:15 PM	38	1	77	0	0
	5:30 PM	46	1	73	0	0
	5:45 PM	48	0	101	0	0
	VOLUMES	370	5	667	0	0
	APPROACH %	36%	0%	64%	0%	0%

APP/DEPART	1,042	/	909	0	/
BEGIN PEAK HR	4:00 PM				
VOLUMES	192	3	346	0	0
APPROACH %	36%	1%	64%	0%	0%
PEAK HR FACTOR	0.919			0.000	
APP/DEPART	541	/	493	0	/

I-2

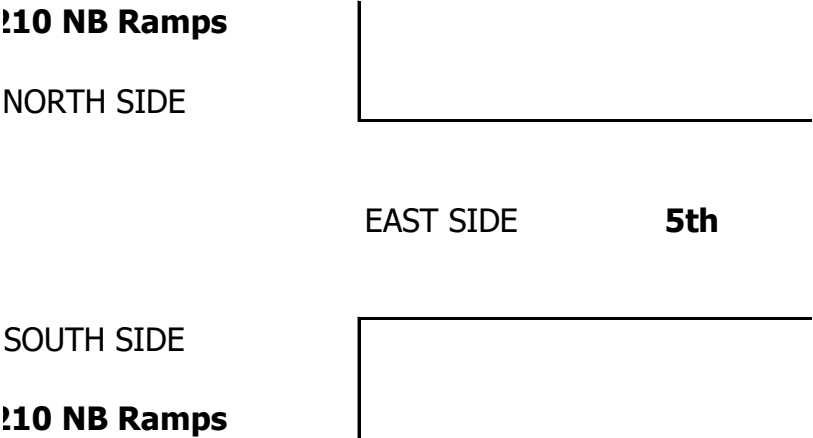
5th

WEST SIDE

I-2

######

0	1,803	/	2,186	1,597	/	1,347	0
0	165	812	0	0	485	325	2,326
0%	17%	83%	0%	0%	60%	40%	
		0.930			0.952		0.956
0	976	/	1,157	810	/	677	0



U-TURNS				
NB	SB	EB	WB	TTL

				0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0
				0
				0
				0
				0
				0
				0
				0
0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
I-210 NB Ramps
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
11
SIGNAL

CLASS 1:
PASSENGER
VEHICLES

NOTES:

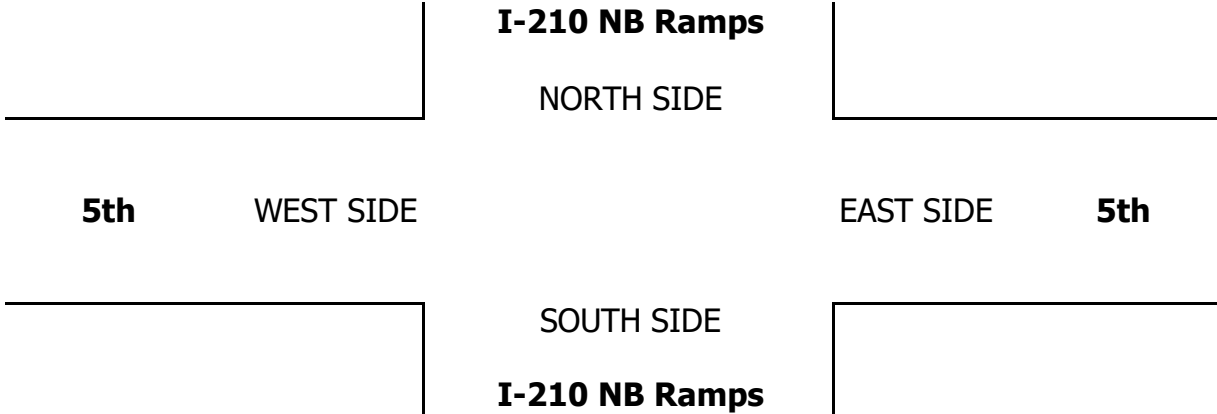
AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 NB Ramps			I-210 NB Ramps			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1.5	0.5	2	X	X	X	1	2	X	X	3	1	

AM	7:00 AM	57	0	36	0	0	0	6	43	0	0	150	51	343
	7:15 AM	49	1	65	0	0	0	0	46	0	0	206	62	429
	7:30 AM	52	0	66	0	0	0	3	81	0	0	215	69	486
	7:45 AM	62	1	51	0	0	0	9	95	0	0	234	53	505
	8:00 AM	50	0	71	0	0	0	13	96	0	0	202	47	479
	8:15 AM	61	1	54	0	0	0	8	93	0	0	205	51	473
	8:30 AM	35	0	50	0	0	0	8	79	0	0	181	57	410
	8:45 AM	37	1	43	0	0	0	7	94	0	0	135	32	349
	VOLUMES	403	4	436	0	0	0	54	627	0	0	1,528	422	3,474
	APPROACH %	48%	0%	52%	0%	0%	0%	8%	92%	0%	0%	78%	22%	
	APP/DEPART	843	/	480	0	/	0	681	/	1,063	1,950	/	1,931	0
	BEGIN PEAK HR	7:30 AM												
PM	VOLUMES	225	2	242	0	0	0	33	365	0	0	856	220	1,943
	APPROACH %	48%	0%	52%	0%	0%	0%	8%	92%	0%	0%	80%	20%	
	PEAK HR FACTOR	0.969			0.000			0.913			0.937			0.962
	APP/DEPART	469	/	255	0	/	0	398	/	607	1,076	/	1,081	0
	4:00 PM	36	0	78	0	0	0	39	177	0	0	100	67	497
	4:15 PM	41	1	95	0	0	0	26	196	0	0	121	63	543
	4:30 PM	34	2	74	0	0	0	22	184	0	0	109	78	503
	4:45 PM	53	0	83	0	0	0	41	183	0	0	125	76	561
	5:00 PM	34	0	63	0	0	0	37	174	0	0	113	69	490
	5:15 PM	32	1	77	0	0	0	30	183	0	0	101	78	502
	5:30 PM	44	1	70	0	0	0	26	159	0	0	130	64	494
	5:45 PM	42	0	93	0	0	0	14	162	0	0	121	55	487
	VOLUMES	316	5	633	0	0	0	235	1,418	0	0	920	550	4,077
	APPROACH %	33%	1%	66%	0%	0%	0%	14%	86%	0%	0%	63%	37%	
	APP/DEPART	954	/	790	0	/	0	1,653	/	2,051	1,470	/	1,236	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	164	3	330	0	0	0	128	740	0	0	455	284	2,104
	APPROACH %	33%	1%	66%	0%	0%	0%	15%	85%	0%	0%	62%	38%	
	PEAK HR FACTOR	0.907			0.000			0.969			0.919			0.938
	APP/DEPART	497	/	415	0	/	0	868	/	1,070	739	/	619	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	X	X	0

24	0	0	18
53	0	0	18
49	0	0	24
34	0	0	24
44	0	0	20
43	0	0	24
39	0	0	19
38	0	0	11
324	0	0	158

170	0	0	92
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

59	0	0	22
62	0	0	30
56	0	0	39
54	0	0	30
40	0	0	29
61	0	0	39
56	0	0	28
51	0	0	37
439	0	0	254

231	0	0	121
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
I-210 NB Ramps
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
11
SIGNAL

CLASS 2:
2-AXLE
WORK
VEHICLES/
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 NB Ramps			I-210 NB Ramps			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1.5	0.5	2	X	X	X	1	2	X	X	3	1	

AM	7:00 AM	2	0	4	0	0	0	0	6	0	0	5	2	19
	7:15 AM	3	0	7	0	0	0	1	1	0	0	8	0	20
	7:30 AM	3	0	2	0	0	0	2	4	0	0	3	5	19
	7:45 AM	4	0	3	0	0	0	2	10	0	0	8	3	30
	8:00 AM	3	0	8	0	0	0	1	5	0	0	9	2	28
	8:15 AM	4	0	6	0	0	0	1	9	0	0	5	1	26
	8:30 AM	1	0	3	0	0	0	4	12	0	0	8	3	31
	8:45 AM	3	0	4	0	0	0	1	5	0	0	7	3	23
	VOLUMES	23	0	37	0	0	0	12	52	0	0	53	19	196
	APPROACH %	38%	0%	62%	0%	0%	0%	19%	81%	0%	0%	74%	26%	
PM	APP/DEPART	60	/	31	0	/	0	64	/	89	72	/	76	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	14	0	19	0	0	0	6	28	0	0	25	11	103
	APPROACH %	42%	0%	58%	0%	0%	0%	18%	82%	0%	0%	69%	31%	
	PEAK HR FACTOR	0.750			0.000			0.708			0.818			0.858
	APP/DEPART	33	/	17	0	/	0	34	/	47	36	/	39	0
	4:00 PM	4	0	1	0	0	0	3	7	0	0	1	7	23
	4:15 PM	0	0	2	0	0	0	2	7	0	0	2	3	16
	4:30 PM	4	0	0	0	0	0	0	2	0	0	5	4	15
	4:45 PM	2	0	0	0	0	0	0	3	0	0	3	2	10
	5:00 PM	3	0	2	0	0	0	1	6	0	0	5	5	22
	5:15 PM	4	0	0	0	0	0	0	3	0	0	2	2	11
	5:30 PM	1	0	2	0	0	0	0	4	0	0	2	1	10
	5:45 PM	2	0	2	0	0	0	0	2	0	0	0	2	8
	VOLUMES	20	0	9	0	0	0	6	34	0	0	20	26	115
	APPROACH %	69%	0%	31%	0%	0%	0%	15%	85%	0%	0%	43%	57%	
	APP/DEPART	29	/	32	0	/	0	40	/	43	46	/	40	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	10	0	3	0	0	0	5	19	0	0	11	16	64
	APPROACH %	77%	0%	23%	0%	0%	0%	21%	79%	0%	0%	41%	59%	
	PEAK HR FACTOR	0.650			0.000			0.600			0.750			0.696
	APP/DEPART	13	/	21	0	/	0	24	/	22	27	/	21	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	X	X	0
2	0	0	0
7	0	0	0
1	0	0	3
3	0	0	2
6	0	0	1
3	0	0	0
2	0	0	0
3	0	0	1
27	0	0	7

13	0	0	6
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

1	0	0	1
1	0	0	1
0	0	0	1
0	0	0	1
1	0	0	2
0	0	0	1
1	0	0	0
2	0	0	0
6	0	0	7

2	0	0	4
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I-210 NB Ramps

NORTH SIDE

5th

WEST SIDE

EAST SIDE

5th

SOUTH SIDE

I-210 NB Ramps

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE:
5/18/23
THURSDAY

LOCATION:
NORTH & SOUTH:
EAST & WEST:

San Bernardino
I-210 NB Ramps
5th

PROJECT #:
LOCATION #:
CONTROL:

SC4019
11
SIGNAL

CLASS 3:
3-AXLE
TRUCKS

NOTES:

AM
PM
MD
OTHER
OTHER

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N
◀ W
S
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E ▶

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 NB Ramps			I-210 NB Ramps			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1.5	0.5	2	X	X	X	1	2	X	X	3	1	

AM	7:00 AM	0	0	1	0	0	0	0	5	0	0	1	1	8
	7:15 AM	0	0	4	0	0	0	1	0	0	0	1	0	6
	7:30 AM	2	0	1	0	0	0	2	3	0	0	1	1	10
	7:45 AM	0	0	2	0	0	0	2	1	0	0	2	0	7
	8:00 AM	3	0	1	0	0	0	3	1	0	0	0	2	10
	8:15 AM	1	0	3	0	0	0	1	3	0	0	3	2	13
	8:30 AM	1	0	0	0	0	0	1	2	0	0	2	1	7
	8:45 AM	4	0	1	0	0	0	0	2	0	0	0	0	7
	VOLUMES	11	0	13	0	0	0	10	17	0	0	10	7	68
	APPROACH %	46%	0%	54%	0%	0%	0%	37%	63%	0%	0%	59%	41%	
PM	APP/DEPART	24	/	17	0	/	0	27	/	30	17	/	21	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	6	0	7	0	0	0	8	8	0	0	6	5	40
	APPROACH %	46%	0%	54%	0%	0%	0%	50%	50%	0%	0%	55%	45%	
	PEAK HR FACTOR	0.813			0.000			0.800			0.550			0.769
	APP/DEPART	13	/	13	0	/	0	16	/	15	11	/	12	0
	4:00 PM	0	0	3	0	0	0	1	1	0	0	2	0	7
	4:15 PM	1	0	1	0	0	0	0	0	0	0	1	0	3
	4:30 PM	0	0	0	0	0	0	0	1	0	0	0	0	1
	4:45 PM	1	0	0	0	0	0	0	0	0	0	1	1	3
	5:00 PM	1	0	2	0	0	0	1	2	0	0	2	0	8
	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	1	0	1
	5:45 PM	0	0	1	0	0	0	0	0	0	0	1	1	3
	VOLUMES	3	0	7	0	0	0	2	4	0	0	8	2	26
	APPROACH %	30%	0%	70%	0%	0%	0%	33%	67%	0%	0%	80%	20%	
	APP/DEPART	10	/	4	0	/	0	6	/	11	10	/	11	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	2	0	4	0	0	0	1	2	0	0	4	1	14
	APPROACH %	33%	0%	67%	0%	0%	0%	33%	67%	0%	0%	80%	20%	
	PEAK HR FACTOR	0.500			0.000			0.375			0.625			0.500
	APP/DEPART	6	/	2	0	/	0	3	/	6	5	/	6	0



U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	X	X	0

1	0	0	1
2	0	0	0
1	0	0	1
1	0	0	0
1	0	0	1
3	0	0	2
0	0	0	1
1	0	0	0
10	0	0	6

6	0	0	4
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

1	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
3	0	0	0

2	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino I-210 NB Ramps 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 11 SIGNAL
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CLASS 4: 4 OR MORE AXLE TRUCKS	NOTES:	AM PM MD OTHER OTHER	◀ W	▲ N S ▼	E ▶
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	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 NB Ramps			I-210 NB Ramps			5th			5th			
LANES:	NL 1.5	NT 0.5	NR 2	SL X	ST X	SR X	EL 1	ET 2	ER X	WL X	WT 3	WR 1	TOTAL

AM	7:00 AM	2	0	1	0	0	0	1	1	0	0	0	2	7
	7:15 AM	0	0	1	0	0	0	0	2	0	0	0	0	3
	7:30 AM	4	0	1	0	0	0	2	3	0	0	2	1	13
	7:45 AM	1	0	0	0	0	0	3	1	0	0	0	1	6
	8:00 AM	0	0	3	0	0	0	0	3	0	0	2	1	9
	8:15 AM	2	0	0	0	0	0	4	0	0	0	0	2	8
	8:30 AM	2	0	0	0	0	0	2	1	0	0	1	4	10
	8:45 AM	1	0	2	0	0	0	2	0	0	0	4	0	9
	VOLUMES	12	0	8	0	0	0	14	11	0	0	9	11	65
	APPROACH %	60%	0%	40%	0%	0%	0%	56%	44%	0%	0%	45%	55%	
PM	APP/DEPART	20	/	25	0	/	0	25	/	19	20	/	21	0
	BEGIN PEAK HR	7:30 AM												
	VOLUMES	7	0	4	0	0	0	9	7	0	0	4	5	36
	APPROACH %	64%	0%	36%	0%	0%	0%	56%	44%	0%	0%	44%	56%	
	PEAK HR FACTOR	0.550			0.000			0.800			0.750			0.692
	APP/DEPART	11	/	14	0	/	0	16	/	11	9	/	11	0
	4:00 PM	1	0	1	0	0	0	2	1	0	0	1	1	7
	4:15 PM	1	0	0	0	0	0	2	5	0	0	0	1	9
	4:30 PM	0	0	0	0	0	0	3	1	0	0	0	3	7
	4:45 PM	1	0	0	0	0	0	2	4	0	0	0	0	7
	5:00 PM	2	0	0	0	0	0	1	0	0	0	0	1	4
	5:15 PM	0	0	0	0	0	0	1	0	0	0	1	1	3
	5:30 PM	0	0	0	0	0	0	1	1	0	0	1	1	4
	5:45 PM	1	0	1	0	0	0	0	0	0	0	0	1	3
	VOLUMES	6	0	2	0	0	0	12	12	0	0	3	9	44
	APPROACH %	75%	0%	25%	0%	0%	0%	50%	50%	0%	0%	25%	75%	
	APP/DEPART	8	/	21	0	/	0	24	/	14	12	/	9	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	3	0	1	0	0	0	9	11	0	0	1	5	30
	APPROACH %	75%	0%	25%	0%	0%	0%	45%	55%	0%	0%	17%	83%	
	PEAK HR FACTOR	0.500			0.000			0.714			0.500			0.833
	APP/DEPART	4	/	14	0	/	0	20	/	12	6	/	4	0

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

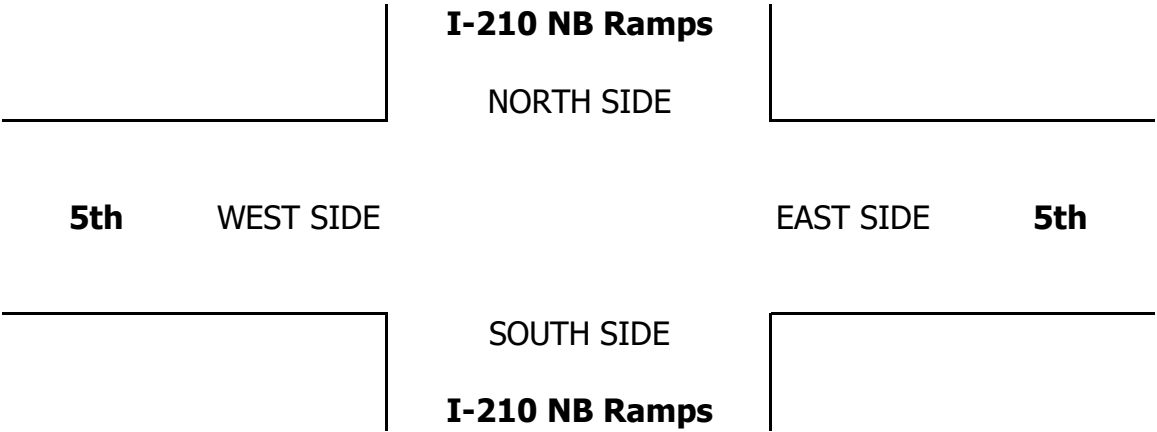
RTOR			
NRR	SRR	ERR	WRR
0	X	X	0
1	0	0	0
1	0	0	0
1	0	0	0
0	0	0	0
2	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
6	0	0	1

3	0	0	0
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0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

1	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
1	0	0	0

1	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino I-210 NB Ramps 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 11 SIGNAL
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CLASS 5:	NOTES:	AM		▲	
RV		PM		N	
		MD	◄ W		E ►
		OTHER		S	
		OTHER		▼	

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	I-210 NB Ramps			I-210 NB Ramps			5th			5th			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1.5	0.5	2	X	X	X	1	2	X	X	3	1	

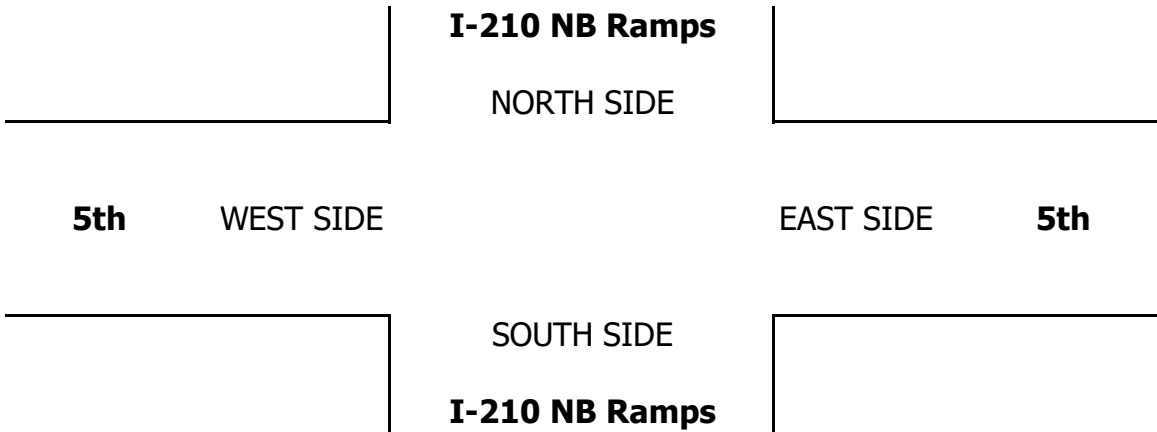
U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	X	X	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

AM	7:00 AM	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
	7:30 AM	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
	8:00 AM	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
	8:30 AM	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
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
PM	APP/DEPART	0	/	0	0	/	0	/	0	0	/	0	0
	BEGIN PEAK HR	7:30 AM											
	VOLUMES	0	0	0	0	0	0	0	0	0	0	0	0
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
	PEAK HR FACTOR	0.000			0.000			0.000			0.000		
	APP/DEPART	0	/	0	0	/	0	0	/	0	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	2	0	0	0	0	2
	4:30 PM	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
PM	5:00 PM	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
	5:30 PM	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
	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0
	BEGIN PEAK HR	4:00 PM											
	VOLUMES	0	0	0	0	0	0	2	0	0	0	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
PM	PEAK HR FACTOR	0.000			0.000			0.250			0.000		
	APP/DEPART	0	/	0	0	/	0	2	/	2	0	/	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	2	0	0	0	0	2
	4:30 PM	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
	5:00 PM	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
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0

0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0



0	0	0	0
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INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: AimTD LLC. tel: 714 253 7888 cs@aimtd.com

DATE: 5/18/23 THURSDAY	LOCATION: NORTH & SOUTH: EAST & WEST:	San Bernardino I-210 NB Ramps 5th	PROJECT #: LOCATION #: CONTROL:	SC4019 11 SIGNAL
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CLASS 6:	NOTES:	AM PM MD OTHER OTHER	▲ N S ▼ ◀ W E ▶
BUSES			

	NORTHBOUND I-210 NB Ramps			SOUTHBOUND I-210 NB Ramps			EASTBOUND 5th			WESTBOUND 5th			
LANES:	NL 1.5	NT 0.5	NR 2	SL X	ST X	SR X	EL 1	ET 2	ER X	WL X	WT 3	WR 1	TOTAL

AM	7:00 AM	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	
	7:30 AM	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	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 AM	0	0	3	0	0	0	0	0	0	0	0	3	
	8:30 AM	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	
	VOLUMES	1	0	3	0	0	0	0	0	0	0	0	0	4
	APPROACH %	25%	0%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
APP/DEPART	4	/	0	0	/	0	0	/	3	0	/	1	0	
BEGIN PEAK HR	7:30 AM													
VOLUMES	1	0	3	0	0	0	0	0	0	0	0	0	4	
APPROACH %	25%	0%	75%	0%	0%	0%	0%	0%	0%	0%	0%	0%		
PEAK HR FACTOR	0.333			0.000			0.000			0.000			0.333	
APP/DEPART	4	/	0	0	/	0	0	/	3	0	/	1	0	
PM	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	
	4:15 PM	0	0	0	0	0	0	0	1	0	0	1	0	2
	4:30 PM	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	
	5:00 PM	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	
	5:30 PM	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	
	VOLUMES	0	0	0	0	0	0	0	1	0	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
	APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	1	0
	BEGIN PEAK HR	4:00 PM												
	VOLUMES	0	0	0	0	0	0	0	1	0	0	1	0	2
	APPROACH %	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	100%	0%	
PEAK HR FACTOR	0.000			0.000			0.250			0.250			0.250	
APP/DEPART	0	/	0	0	/	0	1	/	1	1	/	1	0	

U-TURNS				
NB	SB	EB	WB	TTL
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0
0	0	0	0	0

RTOR			
NRR	SRR	ERR	WRR
0	X	X	0

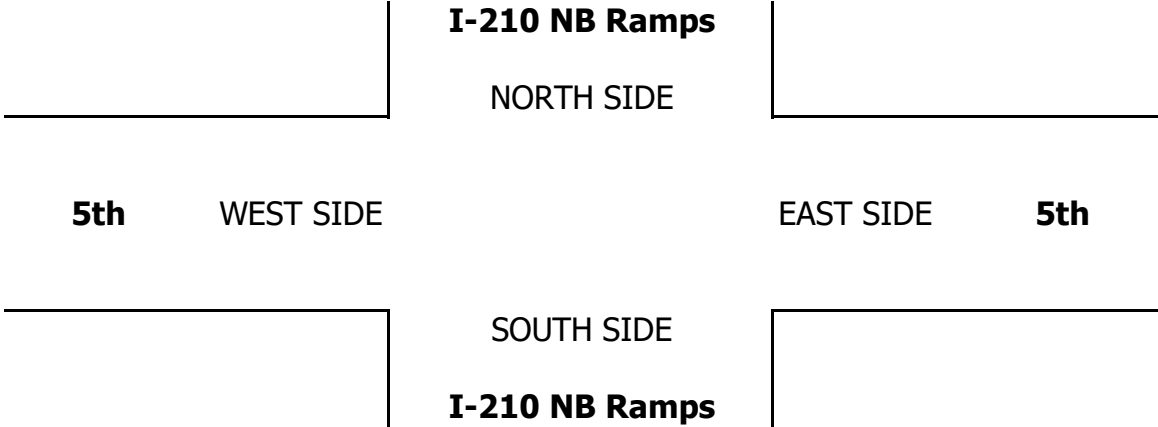
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APPENDIX 3.2: EXISTING (2023) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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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	48	77	18	19	89	17	10	181	16	31	448	45
Future Vol, veh/h	48	77	18	19	89	17	10	181	16	31	448	45
Conflicting Peds, #/hr	0	0	0	0	0	2	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	-	-	-	-	-	-	-	-	-	-	-	200
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	52	83	19	20	96	18	11	195	17	33	482	48
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	718	782	241	575	822	108	530	0	0	212	0	0
Stage 1	548	548	-	226	226	-	-	-	-	-	-	-
Stage 2	170	234	-	349	596	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	320	328	766	405	311	932	1048	-	-	1370	-	-
Stage 1	493	520	-	762	721	-	-	-	-	-	-	-
Stage 2	821	715	-	646	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	227	313	766	304	297	930	1048	-	-	1370	-	-
Mov Cap-2 Maneuver	227	313	-	304	297	-	-	-	-	-	-	-
Stage 1	487	502	-	753	712	-	-	-	-	-	-	-
Stage 2	687	706	-	508	478	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	29.4		23.3		0.4		0.5					
HCM LOS	D		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1048	-	-	297	329	1370	-	-				
HCM Lane V/C Ratio	0.01	-	-	0.518	0.409	0.024	-	-				
HCM Control Delay (s)	8.5	0	-	29.4	23.3	7.7	0.1	-				
HCM Lane LOS	A	A	-	D	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	2.8	1.9	0.1	-	-				

Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	23	92	34	256	2	161	22	390
Future Volume (vph)	23	92	34	256	2	161	22	390
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	54.0	54.0	54.0	54.0	66.0	66.0	66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%	45.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		10.6		10.6	11.9	11.9	11.9	11.9
Actuated g/C Ratio		0.32		0.32	0.36	0.36	0.36	0.36
v/c Ratio		0.16		0.37	0.01	0.16	0.07	0.44
Control Delay		8.7		10.3	7.0	7.4	7.5	9.0
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		8.7		10.3	7.0	7.4	7.5	9.0
LOS		A		B	A	A	A	A
Approach Delay		8.7		10.3		7.4		9.0
Approach LOS		A		B		A		A
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 33.4								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.44								
Intersection Signal Delay: 9.1				Intersection LOS: A				
Intersection Capacity Utilization 50.1%				ICU Level of Service A				
Analysis Period (min) 15								

Splits and Phases: 4: Sterling Av. & 5th St.

	
Ø2	Ø4
66 s	54 s
	
Ø6	Ø8
66 s	54 s

HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

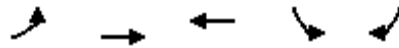
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	92	14	34	256	23	2	161	8	22	390	73
Future Volume (veh/h)	23	92	14	34	256	23	2	161	8	22	390	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	26	106	13	39	294	17	2	185	7	25	448	68
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	259	819	99	202	958	54	410	1096	41	563	972	147
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	319	2547	308	185	2980	167	849	3361	127	1143	2979	450
Grp Volume(v), veh/h	78	0	67	187	0	163	2	94	98	25	256	260
Grp Sat Flow(s),veh/h/ln	1590	0	1583	1727	0	1605	849	1710	1777	1143	1710	1719
Q Serve(g_s), s	0.0	0.0	0.9	0.0	0.0	2.4	0.1	1.2	1.2	0.5	3.6	3.7
Cycle Q Clear(g_c), s	0.9	0.0	0.9	2.4	0.0	2.4	3.7	1.2	1.2	1.7	3.6	3.7
Prop In Lane	0.33		0.19	0.21		0.10	1.00		0.07	1.00		0.26
Lane Grp Cap(c), veh/h	668	0	509	697	0	516	410	558	580	563	558	561
V/C Ratio(X)	0.12	0.00	0.13	0.27	0.00	0.32	0.00	0.17	0.17	0.04	0.46	0.46
Avail Cap(c_a), veh/h	2534	0	2509	2800	0	2545	1811	3381	3514	2449	3381	3399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	7.4	7.9	0.0	7.9	9.7	7.4	7.4	8.0	8.2	8.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.2	0.0	0.3	0.0	0.1	0.1	0.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.5	0.0	0.5	0.0	0.3	0.3	0.1	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	7.5	8.1	0.0	8.2	9.7	7.5	7.5	8.0	8.8	8.8
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		145			350			194			541	
Approach Delay, s/veh		7.5			8.1			7.5			8.7	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.3		15.4		15.3				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		60.6		48.6		60.6		48.6				
Max Q Clear Time (g_c+I1), s		5.7		2.9		5.7		4.4				
Green Ext Time (p_c), s		1.1		0.8		3.3		2.0				
Intersection Summary												
HCM 6th Ctrl Delay			8.2									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	←
Traffic Volume (vph)	140	304	632	92	346
Future Volume (vph)	140	304	632	92	346
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	33.0	86.0	53.0	34.0	33.0
Total Split (%)	27.5%	71.7%	44.2%	28.3%	27.5%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	11.8	38.3	21.7	11.7	29.1
Actuated g/C Ratio	0.19	0.63	0.35	0.19	0.48
v/c Ratio	0.54	0.17	0.66	0.36	0.32
Control Delay	31.0	4.8	19.9	28.7	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	4.8	19.9	28.7	7.5
LOS	C	A	B	C	A
Approach Delay		13.1	19.9	11.9	
Approach LOS		B	B	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 61.2

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 15.7

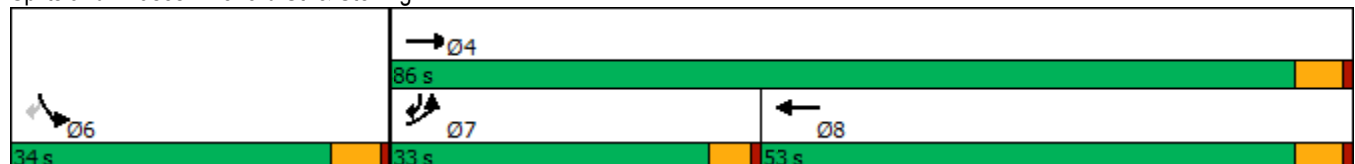
Intersection LOS: B

Intersection Capacity Utilization 49.3%

ICU Level of Service A

Analysis Period (min) 15

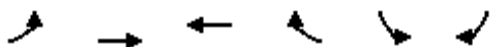
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	140	304	632	30	92	346
Future Volume (veh/h)	140	304	632	30	92	346
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700
Adj Flow Rate, veh/h	169	366	761	36	111	130
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	213	1952	1143	54	334	857
Arrive On Green	0.13	0.57	0.34	0.34	0.21	0.21
Sat Flow, veh/h	1619	3510	3410	157	1619	2536
Grp Volume(v), veh/h	169	366	392	405	111	130
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1767	1619	1268
Q Serve(g_s), s	4.9	2.5	9.4	9.5	2.8	1.7
Cycle Q Clear(g_c), s	4.9	2.5	9.4	9.5	2.8	1.7
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	213	1952	588	608	334	857
V/C Ratio(X)	0.79	0.19	0.67	0.67	0.33	0.15
Avail Cap(c_a), veh/h	949	5690	1680	1736	956	1830
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	5.0	13.5	13.5	16.4	11.2
Incr Delay (d2), s/veh	2.5	0.0	1.3	1.3	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.5	3.0	3.1	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.9	5.0	14.8	14.8	17.0	11.3
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		535	797		241	
Approach Delay, s/veh		10.7	14.8		13.9	
Approach LOS		B	B		B	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			33.0		15.4	11.0
Change Period (Y+Rc), s			5.4		5.4	4.6
Max Green Setting (Gmax), s			80.6		28.6	28.4
Max Q Clear Time (g_c+I1), s			4.5		4.8	6.9
Green Ext Time (p_c), s			2.5		0.8	0.2
Intersection Summary						
HCM 6th Ctrl Delay			13.3			
HCM 6th LOS			B			

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	84	4	8	87	1	5	14	2	6	31	21
Future Vol, veh/h	16	84	4	8	87	1	5	14	2	6	31	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	18	93	4	9	97	1	6	16	2	7	34	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	98	0	0	97	0	0	273	245	93	256	249	98
Stage 1	-	-	-	-	-	-	129	129	-	116	116	-
Stage 2	-	-	-	-	-	-	144	116	-	140	133	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1508	-	-	1509	-	-	684	661	970	701	657	963
Stage 1	-	-	-	-	-	-	880	793	-	894	803	-
Stage 2	-	-	-	-	-	-	864	803	-	868	790	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1508	-	-	1509	-	-	631	648	970	676	645	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	631	648	-	676	645	-
Stage 1	-	-	-	-	-	-	869	783	-	882	798	-
Stage 2	-	-	-	-	-	-	802	798	-	838	780	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.6			10.6			10.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	665	1508	-	-	1509	-	-	737				
HCM Lane V/C Ratio	0.035	0.012	-	-	0.006	-	-	0.087				
HCM Control Delay (s)	10.6	7.4	0	-	7.4	0	-	10.4				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	5	113	0	3	299	5	0	11	6	9	17	17
Future Vol, veh/h	5	113	0	3	299	5	0	11	6	9	17	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	138	0	4	365	6	0	13	7	11	21	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	371	0	0	138	0	0	547	529	138	536	526	368
Stage 1	-	-	-	-	-	-	150	150	-	376	376	-
Stage 2	-	-	-	-	-	-	397	379	-	160	150	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1199	-	-	1458	-	-	451	458	916	459	460	682
Stage 1	-	-	-	-	-	-	857	777	-	649	620	-
Stage 2	-	-	-	-	-	-	633	618	-	847	777	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1199	-	-	1458	-	-	419	454	916	442	456	682
Mov Cap-2 Maneuver	-	-	-	-	-	-	419	454	-	442	456	-
Stage 1	-	-	-	-	-	-	853	773	-	646	618	-
Stage 2	-	-	-	-	-	-	591	616	-	822	773	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			11.7			12.7		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	454	916	1199	-	-	1458	-	-	521			
HCM Lane V/C Ratio	0.03	0.008	0.005	-	-	0.003	-	-	0.101			
HCM Control Delay (s)	13.2	9	8	0	-	7.5	0	-	12.7			
HCM Lane LOS	B	A	A	A	-	A	A	-	B			
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0.3			

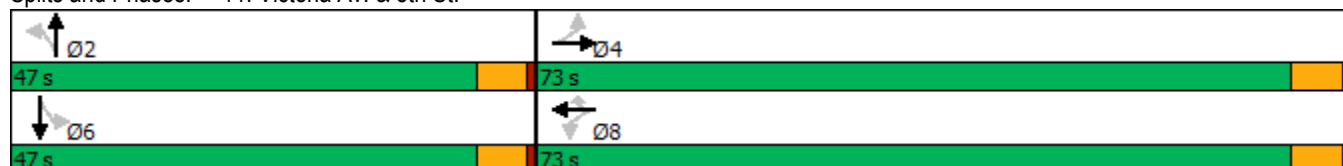
Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	20	101	248	277	74	1	86	72	293
Future Volume (vph)	20	101	248	277	74	1	86	72	293
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	73.0	73.0	73.0	73.0	73.0	47.0	47.0	47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%	60.8%	60.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	19.3	19.3	19.3	19.3	19.3		13.9		13.9
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.43		0.31		0.31
v/c Ratio	0.06	0.09	0.60	0.42	0.13		0.15		0.51
Control Delay	8.2	7.4	16.0	10.9	2.8		10.3		16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	8.2	7.4	16.0	10.9	2.8		10.3		16.1
LOS	A	A	B	B	A		B		B
Approach Delay		7.5		12.0			10.3		16.1
Approach LOS		A		B			B		B
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 45.1									
Natural Cycle: 60									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.60									
Intersection Signal Delay: 12.7					Intersection LOS: B				
Intersection Capacity Utilization 55.9%					ICU Level of Service B				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	101	8	248	277	74	1	86	36	72	293	29
Future Volume (veh/h)	20	101	8	248	277	74	1	86	36	72	293	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	24	119	8	292	326	79	1	101	38	85	345	32
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	440	1241	83	644	687	574	108	705	250	257	757	69
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	940	3254	217	1212	1800	1504	6	2415	858	396	2596	237
Grp Volume(v), veh/h	24	62	65	292	326	79	74	0	66	247	0	215
Grp Sat Flow(s),veh/h/ln	940	1710	1761	1212	1800	1504	1796	0	1483	1634	0	1595
Q Serve(g_s), s	0.7	0.8	0.8	7.0	4.7	1.2	0.0	0.0	1.1	1.4	0.0	3.8
Cycle Q Clear(g_c), s	5.4	0.8	0.8	7.8	4.7	1.2	1.0	0.0	1.1	4.1	0.0	3.8
Prop In Lane	1.00		0.12	1.00		1.00	0.01		0.58	0.34		0.15
Lane Grp Cap(c), veh/h	440	652	672	644	687	574	630	0	433	618	0	465
V/C Ratio(X)	0.05	0.10	0.10	0.45	0.47	0.14	0.12	0.00	0.15	0.40	0.00	0.46
Avail Cap(c_a), veh/h	1925	3352	3452	2558	3529	2949	2273	0	1800	2069	0	1936
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.0	6.8	6.8	9.3	8.0	6.9	9.0	0.0	9.0	10.0	0.0	9.9
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.5	0.5	0.1	0.1	0.0	0.2	0.4	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.2	1.1	1.0	0.2	0.3	0.0	0.3	1.0	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	6.9	6.9	9.8	8.5	7.0	9.1	0.0	9.2	10.4	0.0	10.7
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h	151			697			140			462		
Approach Delay, s/veh	7.4			8.9			9.1			10.5		
Approach LOS	A			A			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	15.4			18.9			15.4			18.9		
Change Period (Y+Rc), s	5.4			5.8			5.4			5.8		
Max Green Setting (Gmax), s	41.6			67.2			41.6			67.2		
Max Q Clear Time (g_c+I1), s	3.1			7.4			6.1			9.8		
Green Ext Time (p_c), s	0.8			0.8			2.8			3.3		
Intersection Summary												
HCM 6th Ctrl Delay	9.3											
HCM 6th LOS	A											

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	8	198	1	568	36	2	1	43	0
Future Volume (vph)	8	198	1	568	36	2	1	43	0
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	9.6	22.8	22.8	9.6	31.4	9.6	29.4
Total Split (s)	12.0	54.0	12.0	54.0	54.0	12.0	34.0	20.0	42.0
Total Split (%)	10.0%	45.0%	10.0%	45.0%	45.0%	10.0%	28.3%	16.7%	35.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effect Green (s)	5.6	16.5	5.4	16.4	16.4	5.4	10.9	6.7	15.8
Actuated g/C Ratio	0.12	0.35	0.11	0.35	0.35	0.11	0.23	0.14	0.34
v/c Ratio	0.05	0.20	0.01	0.56	0.07	0.01	0.00	0.22	0.06
Control Delay	26.2	12.4	27.0	15.7	0.2	27.0	23.0	25.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.2	12.4	27.0	15.7	0.2	27.0	23.0	25.3	0.2
LOS	C	B	C	B	A	C	C	C	A
Approach Delay		12.9		14.8			25.7		13.2
Approach LOS		B		B			C		B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 47

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.56

Intersection Signal Delay: 14.2

Intersection LOS: B

Intersection Capacity Utilization 35.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.

 Ø1	 Ø2	 Ø3	 Ø4
20 s	34 s	12 s	54 s
 Ø5	 Ø6	 Ø7	 Ø8
12 s	42 s	12 s	54 s

HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	198	6	1	568	36	2	1	0	43	0	40
Future Volume (veh/h)	8	198	6	1	568	36	2	1	0	43	0	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	9	233	7	1	668	42	2	1	0	51	0	15
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	19	1079	32	3	1053	458	4	373	0	83	0	385
Arrive On Green	0.01	0.32	0.32	0.00	0.31	0.31	0.00	0.21	0.00	0.05	0.00	0.26
Sat Flow, veh/h	1619	3390	102	1619	3420	1489	1619	1800	0	1619	0	1506
Grp Volume(v), veh/h	9	117	123	1	668	42	2	1	0	51	0	15
Grp Sat Flow(s),veh/h/ln	1619	1710	1782	1619	1710	1489	1619	1800	0	1619	0	1506
Q Serve(g_s), s	0.3	2.4	2.4	0.0	8.1	1.0	0.1	0.0	0.0	1.5	0.0	0.4
Cycle Q Clear(g_c), s	0.3	2.4	2.4	0.0	8.1	1.0	0.1	0.0	0.0	1.5	0.0	0.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	19	544	567	3	1053	458	4	373	0	83	0	385
V/C Ratio(X)	0.47	0.22	0.22	0.30	0.63	0.09	0.45	0.00	0.00	0.61	0.00	0.04
Avail Cap(c_a), veh/h	248	1706	1777	248	3412	1486	248	1065	0	516	0	1141
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	12.1	12.1	24.1	14.4	11.9	24.1	15.2	0.0	22.5	0.0	13.5
Incr Delay (d2), s/veh	6.6	0.2	0.2	17.4	0.6	0.1	24.3	0.0	0.0	2.7	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.7	0.8	0.0	2.5	0.3	0.1	0.0	0.0	0.6	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.3	12.3	12.3	41.5	15.0	12.0	48.4	15.2	0.0	25.2	0.0	13.6
LnGrp LOS	C	B	B	D	B	B	D	B	A	C	A	B
Approach Vol, veh/h	249			711			3			66		
Approach Delay, s/veh	12.9			14.9			37.3			22.5		
Approach LOS	B			B			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	15.4	4.7	21.2	4.7	17.7	5.2	20.7				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	15.4	28.6	7.4	48.2	7.4	36.6	7.4	48.2				
Max Q Clear Time (g_c+I1), s	3.5	2.0	2.0	4.4	2.1	2.4	2.3	10.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	4.8				
Intersection Summary												
HCM 6th Ctrl Delay	15.0											
HCM 6th LOS	B											

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	12	187	255	460	49	175	132	384
Future Volume (vph)	12	187	255	460	49	175	132	384
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	9.6	32.8	32.0	55.2	14.4	34.2	21.0	40.8
Total Split (%)	8.0%	27.3%	26.7%	46.0%	12.0%	28.5%	17.5%	34.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	5.2	12.0	17.8	33.1	7.2	12.5	11.3	21.5
Actuated g/C Ratio	0.07	0.16	0.24	0.44	0.10	0.17	0.15	0.29
v/c Ratio	0.12	0.48	0.71	0.39	0.34	0.49	0.58	0.48
Control Delay	42.6	30.0	38.3	15.7	42.3	20.8	42.2	26.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	30.0	38.3	15.7	42.3	20.8	42.2	26.6
LOS	D	C	D	B	D	C	D	C
Approach Delay		30.6		22.9		23.9		30.2
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 75.1

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 26.2

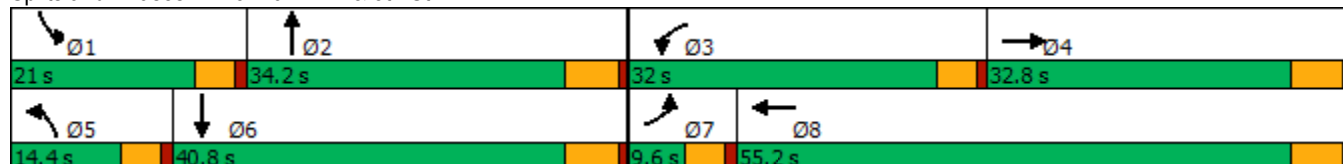
Intersection LOS: C

Intersection Capacity Utilization 58.9%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	187	63	255	460	81	49	175	123	132	384	55
Future Volume (veh/h)	12	187	63	255	460	81	49	175	123	132	384	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	13	199	52	271	489	75	52	186	75	140	409	33
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	26	457	117	321	1043	159	79	414	161	175	741	60
Arrive On Green	0.02	0.17	0.17	0.20	0.35	0.35	0.05	0.17	0.17	0.11	0.23	0.23
Sat Flow, veh/h	1619	2698	688	1619	2968	453	1619	2406	936	1619	3206	258
Grp Volume(v), veh/h	13	124	127	271	281	283	52	130	131	140	217	225
Grp Sat Flow(s),veh/h/ln	1619	1710	1676	1619	1710	1711	1619	1710	1632	1619	1710	1753
Q Serve(g_s), s	0.5	3.8	4.0	9.5	7.5	7.6	1.9	4.0	4.3	5.0	6.6	6.7
Cycle Q Clear(g_c), s	0.5	3.8	4.0	9.5	7.5	7.6	1.9	4.0	4.3	5.0	6.6	6.7
Prop In Lane	1.00		0.41	1.00		0.26	1.00		0.57	1.00		0.15
Lane Grp Cap(c), veh/h	26	290	284	321	601	601	79	294	280	175	396	406
V/C Ratio(X)	0.49	0.43	0.45	0.84	0.47	0.47	0.66	0.44	0.47	0.80	0.55	0.55
Avail Cap(c_a), veh/h	137	782	767	752	1432	1432	269	823	785	450	1014	1040
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.8	21.9	22.0	22.8	14.9	14.9	27.6	21.9	22.0	25.7	20.0	20.0
Incr Delay (d2), s/veh	5.2	1.0	1.1	2.4	0.6	0.6	3.5	1.0	1.2	3.2	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.4	1.5	3.3	2.5	2.5	0.7	1.5	1.5	1.8	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	22.9	23.1	25.2	15.4	15.5	31.1	22.9	23.2	28.9	21.2	21.2
LnGrp LOS	C	C	C	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		264			835			313			582	
Approach Delay, s/veh		23.6			18.6			24.4			23.0	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	15.9	16.3	15.8	7.5	19.4	5.6	26.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	28.4	27.4	27.0	9.8	35.0	5.0	49.4				
Max Q Clear Time (g_c+I1), s	7.0	6.3	11.5	6.0	3.9	8.7	2.5	9.6				
Green Ext Time (p_c), s	0.1	1.3	0.3	1.2	0.0	2.4	0.0	3.3				
Intersection Summary												
HCM 6th Ctrl Delay			21.5									
HCM 6th LOS			C									

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	23	525	841	116	54
Future Volume (vph)	23	525	841	116	54
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	14.0	82.0	68.0	38.0	38.0
Total Split (%)	11.7%	68.3%	56.7%	31.7%	31.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	5.9	31.1	27.4	11.8	11.8
Actuated g/C Ratio	0.11	0.58	0.51	0.22	0.22
v/c Ratio	0.14	0.29	0.58	0.35	0.15
Control Delay	28.5	5.9	11.8	23.6	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.5	5.9	11.8	23.6	8.6
LOS	C	A	B	C	A
Approach Delay		6.9	11.8	18.9	
Approach LOS		A	B	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 53.8

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 10.9

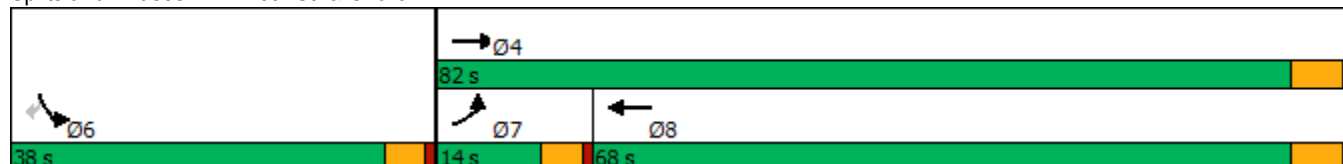
Intersection LOS: B

Intersection Capacity Utilization 44.9%

ICU Level of Service A

Analysis Period (min) 15

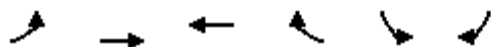
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	23	525	841	88	116	54	
Future Volume (veh/h)	23	525	841	88	116	54	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	25	565	904	82	125	54	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	48	1926	1360	123	326	307	
Arrive On Green	0.03	0.56	0.43	0.43	0.20	0.20	
Sat Flow, veh/h	1619	3510	3260	288	1619	1525	
Grp Volume(v), veh/h	25	565	488	498	125	54	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1748	1619	1525	
Q Serve(g_s), s	0.7	3.8	10.1	10.1	3.0	1.3	
Cycle Q Clear(g_c), s	0.7	3.8	10.1	10.1	3.0	1.3	
Prop In Lane	1.00			0.16	1.00	1.00	
Lane Grp Cap(c), veh/h	48	1926	734	750	326	307	
V/C Ratio(X)	0.52	0.29	0.66	0.66	0.38	0.18	
Avail Cap(c_a), veh/h	345	5902	2409	2462	1225	1154	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	21.1	5.0	10.1	10.1	15.3	14.6	
Incr Delay (d2), s/veh	3.1	0.1	1.0	1.0	0.7	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.6	2.6	2.6	0.9	1.2	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.2	5.1	11.1	11.1	16.0	14.9	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		590	986	179			
Approach Delay, s/veh		5.9	11.1	15.7			
Approach LOS		A	B	B			
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				30.7	13.5	5.9	24.7
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				76.2	33.4	9.4	62.2
Max Q Clear Time (g_c+I1), s				5.8	5.0	2.7	12.1
Green Ext Time (p_c), s				3.8	0.5	0.0	6.9
Intersection Summary							
HCM 6th Ctrl Delay			9.8				
HCM 6th LOS			A				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↗
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↗
Traffic Volume (vph)	311	330	517	706	44	223
Future Volume (vph)	311	330	517	706	44	223
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	34.0	34.0	40.0	74.0	46.0	46.0
Total Split (%)	28.3%	28.3%	33.3%	61.7%	38.3%	38.3%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	15.3	15.3	19.9	40.1	21.1	21.1
Actuated g/C Ratio	0.21	0.21	0.27	0.54	0.29	0.29
v/c Ratio	0.49	0.61	0.72	0.42	0.66	0.44
Control Delay	30.5	8.5	31.4	11.2	31.6	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	8.5	31.4	11.2	31.6	10.2
LOS	C	A	C	B	C	B
Approach Delay	19.2			19.7	22.3	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 73.6

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 20.2

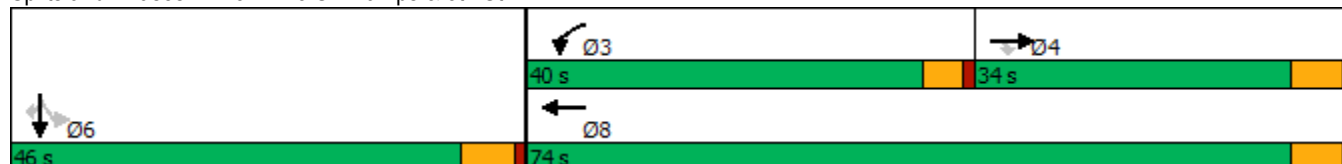
Intersection LOS: C

Intersection Capacity Utilization 69.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↗	↗↗	↑↑						↗	↗
Traffic Volume (veh/h)	0	311	330	517	706	0	0	0	0	249	44	223
Future Volume (veh/h)	0	311	330	517	706	0	0	0	0	249	44	223
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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	346	204	574	784	0				277	49	121
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	711	317	708	1822	0				370	66	385
Arrive On Green	0.00	0.21	0.21	0.24	0.53	0.00				0.25	0.25	0.25
Sat Flow, veh/h	0	3510	1523	2956	3510	0				1467	260	1525
Grp Volume(v), veh/h	0	346	204	574	784	0				326	0	121
Grp Sat Flow(s),veh/h/ln	0	1710	1523	1478	1710	0				1727	0	1525
Q Serve(g_s), s	0.0	4.8	6.6	9.9	7.5	0.0				9.4	0.0	3.5
Cycle Q Clear(g_c), s	0.0	4.8	6.6	9.9	7.5	0.0				9.4	0.0	3.5
Prop In Lane	0.00		1.00	1.00		0.00				0.85		1.00
Lane Grp Cap(c), veh/h	0	711	317	708	1822	0				436	0	385
V/C Ratio(X)	0.00	0.49	0.64	0.81	0.43	0.00				0.75	0.00	0.31
Avail Cap(c_a), veh/h	0	1787	796	1939	4321	0				1286	0	1136
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.8	19.5	19.4	7.6	0.0				18.6	0.0	16.4
Incr Delay (d2), s/veh	0.0	0.5	2.2	0.9	0.2	0.0				2.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	2.2	2.9	1.8	0.0				3.4	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.4	21.7	20.2	7.8	0.0				21.2	0.0	16.8
LnGrp LOS	A	B	C	C	A	A				C	A	B
Approach Vol, veh/h		550			1358						447	
Approach Delay, s/veh		20.2			13.1						20.0	
Approach LOS		C			B						C	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			17.5	17.0		19.4			34.6			
Change Period (Y+Rc), s			4.6	5.8		5.8			5.8			
Max Green Setting (Gmax), s			35.4	28.2		40.2			68.2			
Max Q Clear Time (g_c+I1), s			11.9	8.6		11.4			9.5			
Green Ext Time (p_c), s			1.0	2.6		2.2			5.8			
Intersection Summary												
HCM 6th Ctrl Delay			16.1									
HCM 6th LOS			B									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations		 	  			 	  
Traffic Volume (vph)	93	467	933	270	290	2	313
Future Volume (vph)	93	467	933	270	290	2	313
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	27.0	80.0	53.0	53.0	40.0	40.0	40.0
Total Split (%)	22.5%	66.7%	44.2%	44.2%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	8.8	32.7	22.2	22.2	13.9	13.9	13.9
Actuated g/C Ratio	0.15	0.55	0.37	0.37	0.23	0.23	0.23
v/c Ratio	0.40	0.25	0.52	0.38	0.41	0.40	0.38
Control Delay	32.4	6.9	16.6	4.0	26.9	26.3	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	6.9	16.6	4.0	26.9	26.3	4.7
LOS	C	A	B	A	C	C	A
Approach Delay		11.2	13.8			15.2	
Approach LOS		B	B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 59.3

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 13.5

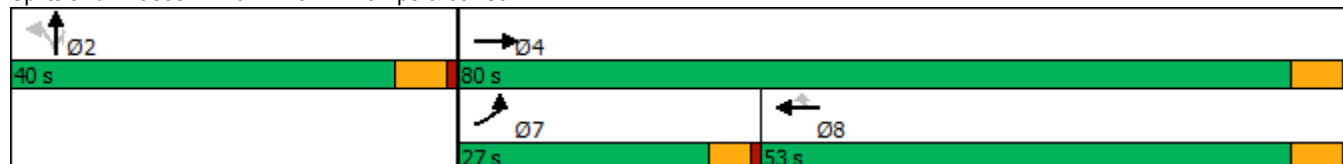
Intersection LOS: B

Intersection Capacity Utilization 69.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	93	467	0	0	933	270	290	2	313	0	0	0
Future Volume (veh/h)	93	467	0	0	933	270	290	2	313	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	96	481	0	0	962	173	300	0	123			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	123	1851	0	0	1807	553	688	0	612			
Arrive On Green	0.08	0.54	0.00	0.00	0.37	0.37	0.21	0.00	0.21			
Sat Flow, veh/h	1619	3510	0	0	5076	1504	3238	0	2881			
Grp Volume(v), veh/h	96	481	0	0	962	173	300	0	123			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1504	1619	0	1441			
Q Serve(g_s), s	2.7	3.5	0.0	0.0	7.2	3.9	3.8	0.0	1.7			
Cycle Q Clear(g_c), s	2.7	3.5	0.0	0.0	7.2	3.9	3.8	0.0	1.7			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	123	1851	0	0	1807	553	688	0	612			
V/C Ratio(X)	0.78	0.26	0.00	0.00	0.53	0.31	0.44	0.00	0.20			
Avail Cap(c_a), veh/h	770	5388	0	0	4925	1508	2351	0	2092			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	21.4	5.8	0.0	0.0	11.7	10.6	16.1	0.0	15.3			
Incr Delay (d2), s/veh	4.0	0.1	0.0	0.0	0.2	0.3	0.4	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.0	0.7	0.0	0.0	1.9	1.0	1.2	0.0	0.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	5.8	0.0	0.0	11.9	11.0	16.5	0.0	15.4			
LnGrp LOS	C	A	A	A	B	B	B	A	B			
Approach Vol, veh/h	577			1135			423					
Approach Delay, s/veh	9.1			11.8			16.2					
Approach LOS	A			B			B					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	15.8			31.3			8.2			23.1		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	34.2			74.2			22.4			47.2		
Max Q Clear Time (g_c+I1), s	5.8			5.5			4.7			9.2		
Green Ext Time (p_c), s	1.5			3.2			0.1			8.1		
Intersection Summary												
HCM 6th Ctrl Delay	11.9											
HCM 6th LOS	B											
Notes												

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕			↕↕	↗
Traffic Vol, veh/h	31	78	18	15	65	22	15	445	23	23	267	19
Future Vol, veh/h	31	78	18	15	65	22	15	445	23	23	267	19
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	-	-	-	-	-	-	-	-	-	-	-	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	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	33	82	19	16	68	23	16	468	24	24	281	20
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	629	853	141	742	861	246	301	0	0	492	0	0
Stage 1	329	329	-	512	512	-	-	-	-	-	-	-
Stage 2	300	524	-	230	349	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	371	299	888	308	295	760	1272	-	-	1082	-	-
Stage 1	664	650	-	518	540	-	-	-	-	-	-	-
Stage 2	690	533	-	758	637	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	283	286	888	227	282	760	1272	-	-	1082	-	-
Mov Cap-2 Maneuver	283	286	-	227	282	-	-	-	-	-	-	-
Stage 1	653	632	-	509	531	-	-	-	-	-	-	-
Stage 2	573	524	-	628	620	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	24.6		22.4			0.3			0.7			
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1272	-	-	315	313	1082	-	-				
HCM Lane V/C Ratio	0.012	-	-	0.424	0.343	0.022	-	-				
HCM Control Delay (s)	7.9	0.1	-	24.6	22.4	8.4	0.1	-				
HCM Lane LOS	A	A	-	C	C	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	2	1.5	0.1	-	-				

Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	93	281	19	148	5	368	17	243
Future Volume (vph)	93	281	19	148	5	368	17	243
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	65.0	65.0	65.0	65.0	55.0	55.0	55.0	55.0
Total Split (%)	54.2%	54.2%	54.2%	54.2%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		11.6		11.6	10.8	10.8	10.8	10.8
Actuated g/C Ratio		0.35		0.35	0.32	0.32	0.32	0.32
v/c Ratio		0.46		0.19	0.02	0.37	0.06	0.27
Control Delay		9.8		7.4	8.6	10.0	9.2	8.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		9.8		7.4	8.6	10.0	9.2	8.9
LOS		A		A	A	A	A	A
Approach Delay		9.8		7.4		10.0		8.9
Approach LOS		A		A		A		A
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 33.3								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.46								
Intersection Signal Delay: 9.3				Intersection LOS: A				
Intersection Capacity Utilization 50.8%				ICU Level of Service A				
Analysis Period (min) 15								

Splits and Phases: 4: Sterling Av. & 5th St.

			
Ø2		Ø4	
55 s		65 s	
			
Ø6		Ø8	
55 s		65 s	

HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

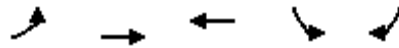
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	281	60	19	148	23	5	368	27	17	243	40
Future Volume (veh/h)	93	281	60	19	148	23	5	368	27	17	243	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	97	293	39	20	154	15	5	383	25	18	253	25
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	319	772	101	187	931	87	514	1059	69	454	1021	100
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	471	2381	310	144	2872	269	1056	3260	212	938	3142	308
Grp Volume(v), veh/h	231	0	198	101	0	88	5	200	208	18	137	141
Grp Sat Flow(s),veh/h/ln	1585	0	1577	1700	0	1585	1056	1710	1762	938	1710	1740
Q Serve(g_s), s	0.6	0.0	3.0	0.0	0.0	1.2	0.1	2.8	2.8	0.5	1.8	1.8
Cycle Q Clear(g_c), s	3.2	0.0	3.0	1.2	0.0	1.2	1.9	2.8	2.8	3.2	1.8	1.8
Prop In Lane	0.42		0.20	0.20		0.17	1.00		0.12	1.00		0.18
Lane Grp Cap(c), veh/h	680	0	511	692	0	514	514	555	572	454	555	565
V/C Ratio(X)	0.34	0.00	0.39	0.15	0.00	0.17	0.01	0.36	0.36	0.04	0.25	0.25
Avail Cap(c_a), veh/h	3114	0	3053	3242	0	3069	1873	2755	2839	1660	2755	2803
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	0.0	8.0	7.4	0.0	7.4	8.4	7.9	8.0	9.2	7.6	7.6
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.1	0.0	0.2	0.0	0.4	0.4	0.0	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.6	0.3	0.0	0.3	0.0	0.6	0.6	0.1	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	0.0	8.5	7.5	0.0	7.6	8.4	8.3	8.3	9.2	7.9	7.9
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		429			189			413			296	
Approach Delay, s/veh		8.4			7.6			8.3			7.9	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.4		15.4		15.4				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		49.6		59.6		49.6		59.6				
Max Q Clear Time (g_c+I1), s		4.8		5.2		5.2		3.2				
Green Ext Time (p_c), s		2.4		2.7		1.7		1.1				
Intersection Summary												
HCM 6th Ctrl Delay			8.2									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	346	955	271	155	167
Future Volume (vph)	346	955	271	155	167
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	55.0	85.0	30.0	35.0	55.0
Total Split (%)	45.8%	70.8%	25.0%	29.2%	45.8%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	19.8	37.5	12.9	13.3	38.8
Actuated g/C Ratio	0.32	0.60	0.21	0.21	0.62
v/c Ratio	0.71	0.49	0.49	0.48	0.11
Control Delay	27.8	7.8	25.2	29.1	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	7.8	25.2	29.1	1.0
LOS	C	A	C	C	A
Approach Delay		13.1	25.2	14.5	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 62.1

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 15.4

Intersection LOS: B

Intersection Capacity Utilization 53.6%

ICU Level of Service A

Analysis Period (min) 15

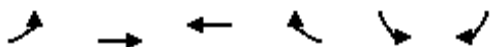
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	346	955	271	54	155	167	
Future Volume (veh/h)	346	955	271	54	155	167	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700	
Adj Flow Rate, veh/h	368	1016	288	39	165	62	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	431	1945	628	84	336	1200	
Arrive On Green	0.27	0.57	0.21	0.21	0.21	0.21	
Sat Flow, veh/h	1619	3510	3121	406	1619	2536	
Grp Volume(v), veh/h	368	1016	161	166	165	62	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1727	1619	1268	
Q Serve(g_s), s	10.4	8.8	4.0	4.1	4.3	0.6	
Cycle Q Clear(g_c), s	10.4	8.8	4.0	4.1	4.3	0.6	
Prop In Lane	1.00			0.24	1.00	1.00	
Lane Grp Cap(c), veh/h	431	1945	355	358	336	1200	
V/C Ratio(X)	0.85	0.52	0.45	0.46	0.49	0.05	
Avail Cap(c_a), veh/h	1692	5645	872	881	994	2231	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.8	6.4	16.7	16.8	16.9	6.9	
Incr Delay (d2), s/veh	1.9	0.2	0.9	0.9	1.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.3	1.8	1.4	1.4	1.4	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.7	6.6	17.6	17.7	18.0	6.9	
LnGrp LOS	B	A	B	B	B	A	
Approach Vol, veh/h		1384	327	227			
Approach Delay, s/veh		9.8	17.7	14.9			
Approach LOS		A	B	B			
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				32.8	15.4	17.4	15.4
Change Period (Y+Rc), s				5.4	5.4	4.6	5.4
Max Green Setting (Gmax), s				79.6	29.6	50.4	24.6
Max Q Clear Time (g_c+I1), s				10.8	6.3	12.4	6.1
Green Ext Time (p_c), s				8.8	0.6	0.5	1.6
Intersection Summary							
HCM 6th Ctrl Delay			11.7				
HCM 6th LOS			B				

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	33	87	5	2	85	15	3	32	12	5	27	12
Future Vol, veh/h	33	87	5	2	85	15	3	32	12	5	27	12
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	35	94	5	2	91	16	3	34	13	5	29	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	108	0	0	99	0	0	289	276	94	294	273	101
Stage 1	-	-	-	-	-	-	164	164	-	104	104	-
Stage 2	-	-	-	-	-	-	125	112	-	190	169	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1495	-	-	1507	-	-	667	635	968	662	637	960
Stage 1	-	-	-	-	-	-	843	766	-	907	813	-
Stage 2	-	-	-	-	-	-	884	807	-	816	763	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1494	-	-	1507	-	-	622	618	968	612	620	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	622	618	-	612	620	-
Stage 1	-	-	-	-	-	-	822	747	-	883	811	-
Stage 2	-	-	-	-	-	-	839	805	-	749	744	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2			0.1			10.7			10.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	681	1494	-	-	1507	-	-	685				
HCM Lane V/C Ratio	0.074	0.024	-	-	0.001	-	-	0.069				
HCM Control Delay (s)	10.7	7.5	0	-	7.4	0	-	10.6				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	11	305	8	2	169	4	9	32	6	6	19	9
Future Vol, veh/h	11	305	8	2	169	4	9	32	6	6	19	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	324	9	2	180	4	10	34	6	6	20	10
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	184	0	0	333	0	0	555	541	329	559	543	183
Stage 1	-	-	-	-	-	-	353	353	-	186	186	-
Stage 2	-	-	-	-	-	-	202	188	-	373	357	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1403	-	-	1238	-	-	445	451	717	443	450	865
Stage 1	-	-	-	-	-	-	668	634	-	820	750	-
Stage 2	-	-	-	-	-	-	805	748	-	652	632	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1403	-	-	1238	-	-	420	445	717	409	444	864
Mov Cap-2 Maneuver	-	-	-	-	-	-	420	445	-	409	444	-
Stage 1	-	-	-	-	-	-	661	627	-	811	749	-
Stage 2	-	-	-	-	-	-	772	747	-	604	625	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			13.6			12.7		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	439	717	1403	-	-	1238	-	-	501			
HCM Lane V/C Ratio	0.099	0.009	0.008	-	-	0.002	-	-	0.072			
HCM Control Delay (s)	14.1	10.1	7.6	0	-	7.9	0	-	12.7			
HCM Lane LOS	B	B	A	A	-	A	A	-	B			
HCM 95th %tile Q(veh)	0.3	0	0	-	-	0	-	-	0.2			

Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	68	239	66	151	133	6	431	52	212
Future Volume (vph)	68	239	66	151	133	6	431	52	212
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	46.0	46.0	46.0	46.0	46.0	74.0	74.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	61.7%	61.7%	61.7%	61.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	10.6	10.6	10.6	10.6	10.6		13.4		13.4
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30		0.38		0.38
v/c Ratio	0.22	0.26	0.23	0.30	0.26		0.53		0.30
Control Delay	12.3	10.7	12.8	12.3	4.3		9.0		8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	12.3	10.7	12.8	12.3	4.3		9.0		8.2
LOS	B	B	B	B	A		A		A
Approach Delay		11.1		9.3			9.0		8.2
Approach LOS		B		A			A		A
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 35.3									
Natural Cycle: 55									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.53									
Intersection Signal Delay: 9.3					Intersection LOS: A				
Intersection Capacity Utilization 62.3%					ICU Level of Service B				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	239	10	66	151	133	6	431	172	52	212	18
Future Volume (veh/h)	68	239	10	66	151	133	6	431	172	52	212	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	72	254	11	70	161	134	6	459	170	55	226	16
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	471	1026	44	489	553	462	116	833	304	240	817	59
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1040	3340	144	1069	1800	1504	9	2394	873	252	2350	171
Grp Volume(v), veh/h	72	130	135	70	161	134	347	0	288	147	0	150
Grp Sat Flow(s),veh/h/ln	1040	1710	1774	1069	1800	1504	1795	0	1481	1171	0	1602
Q Serve(g_s), s	1.8	1.8	1.9	1.7	2.2	2.2	0.0	0.0	5.1	0.3	0.0	2.2
Cycle Q Clear(g_c), s	4.0	1.8	1.9	3.6	2.2	2.2	5.1	0.0	5.1	5.4	0.0	2.2
Prop In Lane	1.00		0.08	1.00		1.00	0.02		0.59	0.37		0.11
Lane Grp Cap(c), veh/h	471	526	545	489	553	462	737	0	515	560	0	557
V/C Ratio(X)	0.15	0.25	0.25	0.14	0.29	0.29	0.47	0.00	0.56	0.26	0.00	0.27
Avail Cap(c_a), veh/h	1438	2116	2196	1484	2228	1861	3882	0	3128	2739	0	3384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.1	8.4	8.4	9.8	8.6	8.6	8.6	0.0	8.6	7.6	0.0	7.6
Incr Delay (d2), s/veh	0.1	0.2	0.2	0.1	0.3	0.3	0.5	0.0	1.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.4	0.4	0.3	0.5	0.4	1.2	0.0	1.0	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.2	8.7	8.7	9.9	8.8	8.9	9.0	0.0	9.5	7.8	0.0	7.9
LnGrp LOS	B	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		337			365			635			297	
Approach Delay, s/veh		9.0			9.1			9.3			7.9	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.7		15.8		16.7		15.8				
Change Period (Y+Rc), s		5.4		5.8		5.4		5.8				
Max Green Setting (Gmax), s		68.6		40.2		68.6		40.2				
Max Q Clear Time (g_c+I1), s		7.1		6.0		7.4		5.6				
Green Ext Time (p_c), s		4.2		1.7		2.0		1.6				
Intersection Summary												
HCM 6th Ctrl Delay				8.9								
HCM 6th LOS				A								

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	Ø3
Lane Configurations									
Traffic Volume (vph)	52	410	333	80	1	2	53	2	
Future Volume (vph)	52	410	333	80	1	2	53	2	
Turn Type	Prot	NA	NA	Perm	Prot	NA	Prot	NA	
Protected Phases	7	4	8		5	2	1	6	3
Permitted Phases				8					
Detector Phase	7	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	22.8	22.8	22.8	9.6	31.4	9.6	29.4	9.6
Total Split (s)	23.0	53.4	40.0	40.0	13.0	33.0	24.0	44.0	9.6
Total Split (%)	19.2%	44.5%	33.3%	33.3%	10.8%	27.5%	20.0%	36.7%	8%
Yellow Time (s)	3.6	4.8	4.8	4.8	3.6	4.4	3.6	4.4	3.6
All-Red Time (s)	1.0	1.0	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	0.0	
Total Lost Time (s)	4.6	5.8	5.8	5.8	4.6	5.4	4.6	5.4	
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min	None
Act Effect Green (s)	6.9	18.2	12.3	12.3	5.5	11.0	6.9	15.5	
Actuated g/C Ratio	0.15	0.38	0.26	0.26	0.12	0.23	0.15	0.33	
v/c Ratio	0.23	0.32	0.38	0.16	0.01	0.02	0.23	0.05	
Control Delay	25.3	11.1	18.9	0.6	26.0	16.1	25.3	8.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	25.3	11.1	18.9	0.6	26.0	16.1	25.3	8.7	
LOS	C	B	B	A	C	B	C	A	
Approach Delay		12.7	15.3			17.4		19.6	
Approach LOS		B	B			B		B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 47.5

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 14.4

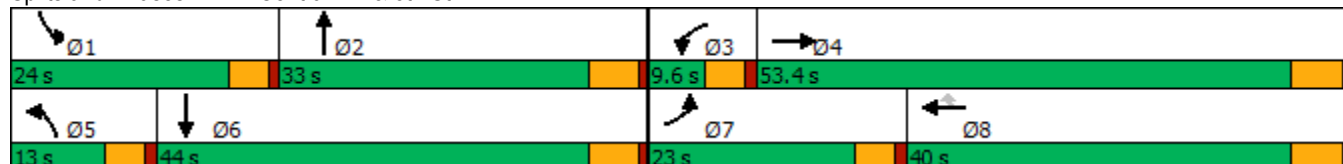
Intersection LOS: B

Intersection Capacity Utilization 39.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.



HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	410	0	0	333	80	1	2	5	53	2	25
Future Volume (veh/h)	52	410	0	0	333	80	1	2	5	53	2	25
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	53	418	0	0	340	71	1	2	2	54	2	13
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	87	1297	0	4	768	340	4	181	181	88	57	368
Arrive On Green	0.05	0.38	0.00	0.00	0.22	0.22	0.00	0.22	0.22	0.05	0.27	0.27
Sat Flow, veh/h	1619	3510	0	1619	3420	1515	1619	826	826	1619	208	1349
Grp Volume(v), veh/h	53	418	0	0	340	71	1	0	4	54	0	15
Grp Sat Flow(s),veh/h/ln	1619	1710	0	1619	1710	1515	1619	0	1651	1619	0	1557
Q Serve(g_s), s	1.5	3.9	0.0	0.0	3.9	1.7	0.0	0.0	0.1	1.5	0.0	0.3
Cycle Q Clear(g_c), s	1.5	3.9	0.0	0.0	3.9	1.7	0.0	0.0	0.1	1.5	0.0	0.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.50	1.00		0.87
Lane Grp Cap(c), veh/h	87	1297	0	4	768	340	4	0	363	88	0	424
V/C Ratio(X)	0.61	0.32	0.00	0.00	0.44	0.21	0.28	0.00	0.01	0.61	0.00	0.04
Avail Cap(c_a), veh/h	654	3575	0	178	2568	1138	299	0	1001	690	0	1320
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.1	10.0	0.0	0.0	15.2	14.4	22.7	0.0	13.9	21.1	0.0	12.2
Incr Delay (d2), s/veh	2.6	0.1	0.0	0.0	0.4	0.3	15.2	0.0	0.0	2.6	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	0.0	0.0	1.2	0.5	0.0	0.0	0.0	0.5	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	10.1	0.0	0.0	15.6	14.7	37.9	0.0	13.9	23.6	0.0	12.2
LnGrp LOS	C	B	A	A	B	B	D	A	B	C	A	B
Approach Vol, veh/h		471			411			5			69	
Approach Delay, s/veh		11.7			15.4			18.7			21.1	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	15.4	0.0	23.1	4.7	17.8	7.0	16.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	19.4	27.6	5.0	47.6	8.4	38.6	18.4	34.2				
Max Q Clear Time (g_c+I1), s	3.5	2.1	0.0	5.9	2.0	2.3	3.5	5.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.7	0.0	0.0	0.0	2.3				
Intersection Summary												
HCM 6th Ctrl Delay			14.0									
HCM 6th LOS			B									

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	45	376	186	287	95	478	139	306
Future Volume (vph)	45	376	186	287	95	478	139	306
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	14.2	32.8	26.0	44.6	19.3	40.2	21.0	41.9
Total Split (%)	11.8%	27.3%	21.7%	37.2%	16.1%	33.5%	17.5%	34.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	7.5	20.2	16.6	32.0	10.7	28.2	13.2	33.8
Actuated g/C Ratio	0.08	0.20	0.17	0.32	0.11	0.28	0.13	0.34
v/c Ratio	0.40	0.72	0.75	0.42	0.60	0.82	0.71	0.33
Control Delay	60.1	43.8	60.7	25.6	61.6	39.1	63.7	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	43.8	60.7	25.6	61.6	39.1	63.7	27.8
LOS	E	D	E	C	E	D	E	C
Approach Delay		45.3		36.3		41.7		38.2
Approach LOS		D		D		D		D

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 99.9

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 40.4

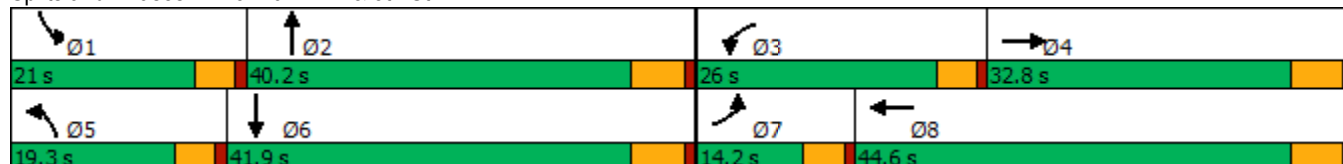
Intersection LOS: D

Intersection Capacity Utilization 73.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

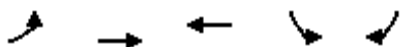
5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	376	75	186	287	136	95	478	246	139	306	36
Future Volume (veh/h)	45	376	75	186	287	136	95	478	246	139	306	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	49	409	50	202	312	125	103	520	228	151	333	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	567	69	239	694	272	129	662	289	184	1036	74
Arrive On Green	0.04	0.18	0.18	0.15	0.29	0.29	0.08	0.29	0.29	0.11	0.32	0.32
Sat Flow, veh/h	1619	3065	372	1619	2388	935	1619	2316	1011	1619	3236	232
Grp Volume(v), veh/h	49	227	232	202	221	216	103	383	365	151	175	182
Grp Sat Flow(s),veh/h/ln	1619	1710	1727	1619	1710	1614	1619	1710	1617	1619	1710	1758
Q Serve(g_s), s	2.3	9.7	9.8	9.4	8.2	8.5	4.9	16.0	16.1	7.1	6.0	6.1
Cycle Q Clear(g_c), s	2.3	9.7	9.8	9.4	8.2	8.5	4.9	16.0	16.1	7.1	6.0	6.1
Prop In Lane	1.00		0.22	1.00		0.58	1.00		0.63	1.00		0.13
Lane Grp Cap(c), veh/h	68	316	319	239	497	469	129	489	462	184	547	563
V/C Ratio(X)	0.72	0.72	0.73	0.84	0.45	0.46	0.80	0.78	0.79	0.82	0.32	0.32
Avail Cap(c_a), veh/h	200	595	601	446	855	807	307	758	716	342	795	818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.7	29.7	29.8	32.2	22.4	22.5	35.1	25.5	25.6	33.6	20.0	20.0
Incr Delay (d2), s/veh	5.2	3.1	3.2	3.1	0.6	0.7	4.3	2.9	3.2	3.4	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	3.9	4.0	3.6	3.1	3.0	1.9	6.2	6.0	2.8	2.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	32.8	32.9	35.4	23.1	23.3	39.4	28.5	28.8	37.1	20.3	20.3
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		508			639			851			508	
Approach Delay, s/veh		33.7			27.0			29.9			25.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	28.0	16.1	20.2	10.8	30.6	7.9	28.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	34.4	21.4	27.0	14.7	36.1	9.6	38.8				
Max Q Clear Time (g_c+I1), s	9.1	18.1	11.4	11.8	6.9	8.1	4.3	10.5				
Green Ext Time (p_c), s	0.1	3.9	0.2	2.1	0.1	1.9	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay			29.0									
HCM 6th LOS			C									

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023

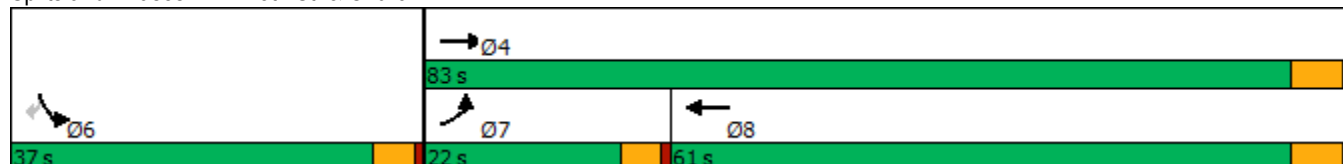


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	←
Traffic Volume (vph)	54	738	587	81	37
Future Volume (vph)	54	738	587	81	37
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	22.0	83.0	61.0	37.0	37.0
Total Split (%)	18.3%	69.2%	50.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	6.9	31.7	25.2	10.9	10.9
Actuated g/C Ratio	0.15	0.67	0.53	0.23	0.23
v/c Ratio	0.25	0.35	0.42	0.24	0.10
Control Delay	24.1	5.5	11.6	20.7	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	5.5	11.6	20.7	8.7
LOS	C	A	B	C	A
Approach Delay		6.8	11.6	17.0	
Approach LOS		A	B	B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 47.3
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.42
 Intersection Signal Delay: 9.6
 Intersection LOS: A
 Intersection Capacity Utilization 45.5%
 ICU Level of Service A
 Analysis Period (min) 15

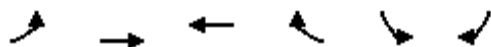
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	54	738	587	99	81	37	
Future Volume (veh/h)	54	738	587	99	81	37	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	59	802	638	94	88	11	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	100	1857	1062	156	280	264	
Arrive On Green	0.06	0.54	0.36	0.36	0.17	0.17	
Sat Flow, veh/h	1619	3510	3071	439	1619	1525	
Grp Volume(v), veh/h	59	802	365	367	88	11	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1710	1619	1525	
Q Serve(g_s), s	1.3	5.1	6.4	6.4	1.7	0.2	
Cycle Q Clear(g_c), s	1.3	5.1	6.4	6.4	1.7	0.2	
Prop In Lane	1.00			0.26	1.00	1.00	
Lane Grp Cap(c), veh/h	100	1857	609	609	280	264	
V/C Ratio(X)	0.59	0.43	0.60	0.60	0.31	0.04	
Avail Cap(c_a), veh/h	768	7201	2574	2574	1431	1348	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.8	5.0	9.7	9.7	13.3	12.6	
Incr Delay (d2), s/veh	2.1	0.2	1.0	1.0	0.6	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	0.6	1.6	1.6	0.5	0.2	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.8	5.2	10.6	10.6	13.9	12.7	
LnGrp LOS	B	A	B	B	B	B	
Approach Vol, veh/h		861	732		99		
Approach Delay, s/veh		6.1	10.6		13.8		
Approach LOS		A	B		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				25.7	11.0	6.9	18.9
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				77.2	32.4	17.4	55.2
Max Q Clear Time (g_c+I1), s				7.1	3.7	3.3	8.4
Green Ext Time (p_c), s				6.0	0.2	0.0	4.6
Intersection Summary							
HCM 6th Ctrl Delay			8.5				
HCM 6th LOS			A				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↘
Traffic Volume (vph)	610	209	208	501	4	185
Future Volume (vph)	610	209	208	501	4	185
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	42.0	42.0	22.0	64.0	56.0	56.0
Total Split (%)	35.0%	35.0%	18.3%	53.3%	46.7%	46.7%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	22.5	22.5	10.9	38.4	25.4	25.4
Actuated g/C Ratio	0.30	0.30	0.14	0.50	0.33	0.33
v/c Ratio	0.64	0.38	0.52	0.31	0.71	0.31
Control Delay	27.9	8.1	38.4	12.5	30.9	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.9	8.1	38.4	12.5	30.9	5.5
LOS	C	A	D	B	C	A
Approach Delay	22.9			20.1	22.6	
Approach LOS	C			C	C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 76.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 21.9

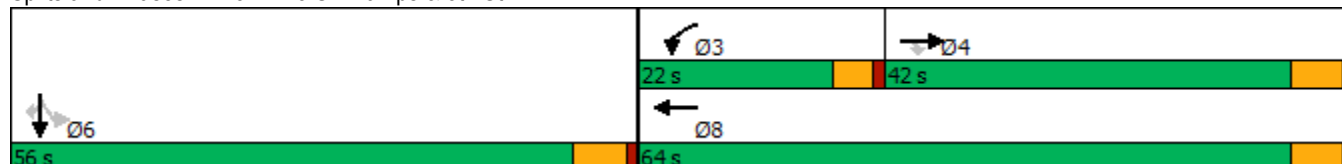
Intersection LOS: C

Intersection Capacity Utilization 60.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	610	209	208	501	0	0	0	0	379	4	185
Future Volume (veh/h)	0	610	209	208	501	0	0	0	0	379	4	185
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	649	149	221	533	0				403	4	92
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	989	435	325	1653	0				517	5	464
Arrive On Green	0.00	0.29	0.29	0.11	0.48	0.00				0.30	0.30	0.30
Sat Flow, veh/h	0	3510	1504	2956	3510	0				1698	17	1525
Grp Volume(v), veh/h	0	649	149	221	533	0				407	0	92
Grp Sat Flow(s),veh/h/ln	0	1710	1504	1478	1710	0				1715	0	1525
Q Serve(g_s), s	0.0	9.1	4.3	3.9	5.2	0.0				11.8	0.0	2.4
Cycle Q Clear(g_c), s	0.0	9.1	4.3	3.9	5.2	0.0				11.8	0.0	2.4
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	989	435	325	1653	0				522	0	464
V/C Ratio(X)	0.00	0.66	0.34	0.68	0.32	0.00				0.78	0.00	0.20
Avail Cap(c_a), veh/h	0	2267	997	942	3645	0				1577	0	1402
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.0	15.3	23.4	8.6	0.0				17.3	0.0	14.1
Incr Delay (d2), s/veh	0.0	0.7	0.5	0.9	0.1	0.0				2.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.0	1.2	1.2	1.4	0.0				4.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.8	15.8	24.3	8.7	0.0				19.9	0.0	14.3
LnGrp LOS	A	B	B	C	A	A				B	A	B
Approach Vol, veh/h		798			754						499	
Approach Delay, s/veh		17.4			13.3						18.9	
Approach LOS		B			B						B	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			10.6	21.6		22.4		32.2				
Change Period (Y+Rc), s			4.6	5.8		5.8		5.8				
Max Green Setting (Gmax), s			17.4	36.2		50.2		58.2				
Max Q Clear Time (g_c+I1), s			5.9	11.1		13.8		7.2				
Green Ext Time (p_c), s			0.3	4.7		2.8		3.6				
Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	168	821	505	334	204	3	349
Future Volume (vph)	168	821	505	334	204	3	349
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	36.0	83.0	47.0	47.0	37.0	37.0	37.0
Total Split (%)	30.0%	69.2%	39.2%	39.2%	30.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	10.8	29.5	13.9	13.9	11.7	11.7	11.7
Actuated g/C Ratio	0.20	0.56	0.26	0.26	0.22	0.22	0.22
v/c Ratio	0.54	0.46	0.41	0.54	0.33	0.30	0.45
Control Delay	26.6	7.9	17.9	6.0	22.4	21.9	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	7.9	17.9	6.0	22.4	21.9	6.0
LOS	C	A	B	A	C	C	A
Approach Delay		11.1	13.1			12.0	
Approach LOS		B	B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 53.1

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 12.0

Intersection LOS: B

Intersection Capacity Utilization 60.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	168	821	0	0	505	334	204	3	349	0	0	0
Future Volume (veh/h)	168	821	0	0	505	334	204	3	349	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	177	864	0	0	532	220	217	0	119			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	224	1748	0	0	1321	405	733	0	652			
Arrive On Green	0.14	0.51	0.00	0.00	0.27	0.27	0.23	0.00	0.23			
Sat Flow, veh/h	1619	3510	0	0	5076	1506	3238	0	2881			
Grp Volume(v), veh/h	177	864	0	0	532	220	217	0	119			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1506	1619	0	1441			
Q Serve(g_s), s	4.7	7.3	0.0	0.0	3.9	5.5	2.5	0.0	1.5			
Cycle Q Clear(g_c), s	4.7	7.3	0.0	0.0	3.9	5.5	2.5	0.0	1.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	224	1748	0	0	1321	405	733	0	652			
V/C Ratio(X)	0.79	0.49	0.00	0.00	0.40	0.54	0.30	0.00	0.18			
Avail Cap(c_a), veh/h	1151	5976	0	0	4582	1404	2287	0	2035			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	18.4	7.1	0.0	0.0	13.2	13.8	14.2	0.0	13.8			
Incr Delay (d2), s/veh	2.4	0.2	0.0	0.0	0.2	1.1	0.2	0.0	0.1			
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	1.5	1.5	0.0	0.0	1.1	1.5	0.7	0.0	0.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	7.3	0.0	0.0	13.4	15.0	14.4	0.0	13.9			
LnGrp LOS	C	A	A	A	B	B	B	A	B			
Approach Vol, veh/h	1041			752			336					
Approach Delay, s/veh	9.6			13.9			14.2					
Approach LOS	A			B			B					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	15.8			28.4			10.7			17.7		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	31.2			77.2			31.4			41.2		
Max Q Clear Time (g_c+I1), s	4.5			9.3			6.7			7.5		
Green Ext Time (p_c), s	1.2			6.6			0.2			4.4		
Intersection Summary												
HCM 6th Ctrl Delay	11.8											
HCM 6th LOS	B											
Notes												

APPENDIX 3.3: EXISTING (2023) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Existing (2023) Conditions - Weekday AM Peak Hour**

Major Street Name = **Sterling Av.**

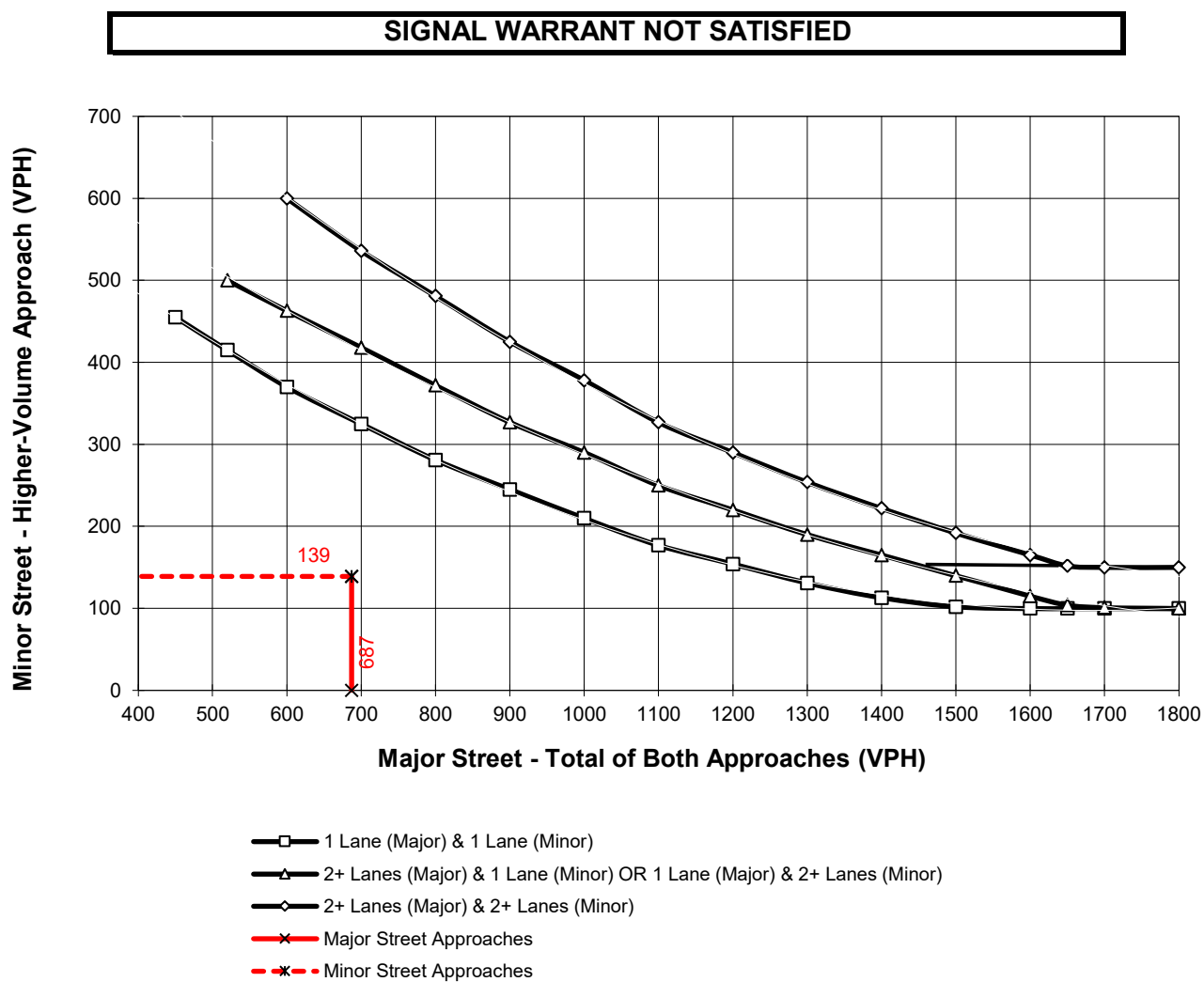
Total of Both Approaches (VPH) = **687**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **5th St.**

High Volume Approach (VPH) = **139**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **Existing (2023) Conditions - Weekday AM Peak Hour**

Major Street Name = **6th St.**

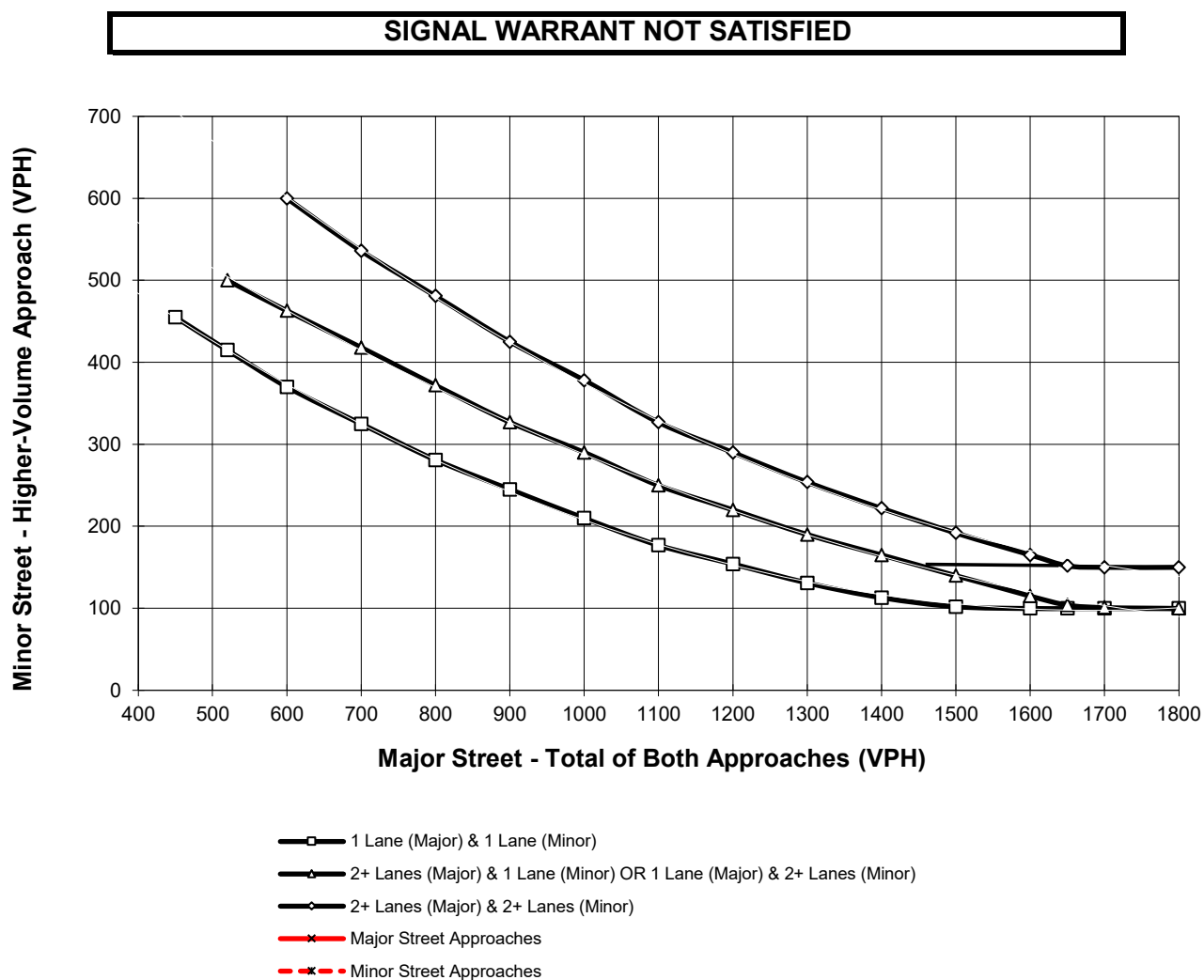
Total of Both Approaches (VPH) = **187**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **57**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

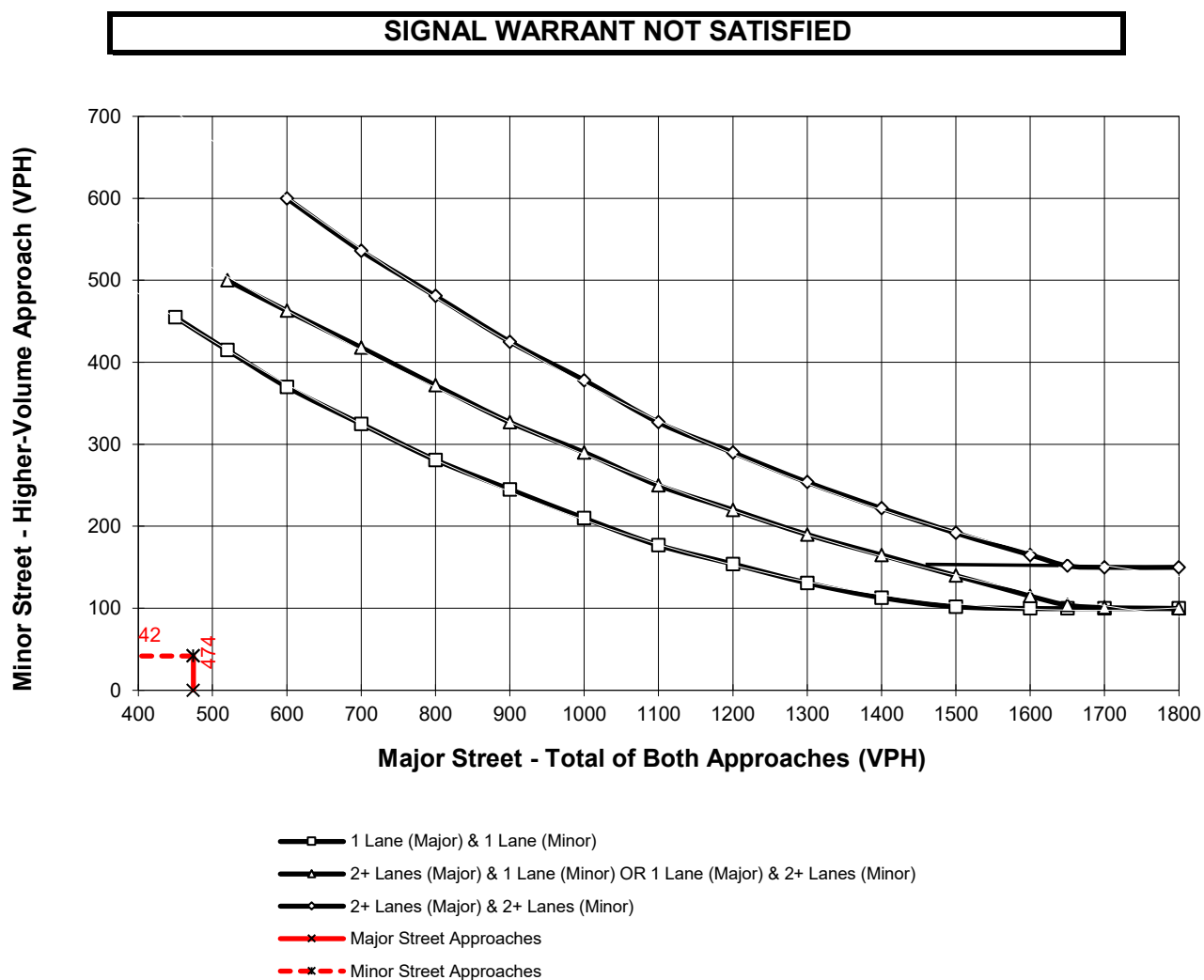
Traffic Conditions = **Existing (2023) Conditions - Weekday PM Peak Hour**

Major Street Name = **5th St.**

Total of Both Approaches (VPH) = **474**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **42**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

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APPENDIX 3.4: EXISTING (2023) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.

	→	↘	↙	←	↓	↗
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	346	367	574	784	326	248
v/c Ratio	0.49	0.61	0.72	0.42	0.66	0.44
Control Delay	30.5	8.5	31.4	11.2	31.6	10.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.5	8.5	31.4	11.2	31.6	10.2
Queue Length 50th (ft)	70	0	115	97	122	22
Queue Length 95th (ft)	152	80	232	192	271	96
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1397	833	1513	3041	1005	966
Starvation Cap Reductn	0	0	0	303	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.44	0.38	0.29	0.32	0.26
Intersection Summary						

Queues

5th & Sterling TA (JN:14057)

09/13/2023

16: I-215 NB Ramps & 5th St.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	96	481	962	278	149	152	323
v/c Ratio	0.40	0.25	0.52	0.38	0.41	0.40	0.38
Control Delay	32.4	6.9	16.6	4.0	26.9	26.3	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	6.9	16.6	4.0	26.9	26.3	4.7
Queue Length 50th (ft)	31	37	95	0	48	49	0
Queue Length 95th (ft)	92	78	177	46	125	126	33
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	663	3336	3919	1259	961	1021	1714
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.14	0.25	0.22	0.16	0.15	0.19
Intersection Summary							

Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.

	→	↘	↙	←	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	649	222	221	533	407	197
v/c Ratio	0.64	0.38	0.52	0.31	0.71	0.31
Control Delay	27.9	8.1	38.4	12.5	30.9	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.9	8.1	38.4	12.5	30.9	5.5
Queue Length 50th (ft)	133	10	48	70	157	4
Queue Length 95th (ft)	260	73	112	145	331	51
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1734	858	719	2692	1206	1131
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.26	0.31	0.20	0.34	0.17
Intersection Summary						

Queues

5th & Sterling TA (JN:14057)

09/13/2023

16: I-215 NB Ramps & 5th St.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	177	864	532	352	110	108	367
v/c Ratio	0.54	0.46	0.41	0.54	0.33	0.30	0.45
Control Delay	26.6	7.9	17.9	6.0	22.4	21.9	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.6	7.9	17.9	6.0	22.4	21.9	6.0
Queue Length 50th (ft)	47	67	47	0	29	28	5
Queue Length 95th (ft)	118	127	93	56	84	81	40
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	980	3420	3913	1275	925	983	1664
Starvation Cap Reductn	0	79	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.26	0.14	0.28	0.12	0.11	0.22
Intersection Summary							

APPENDIX 5.1: E+P CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	48	77	18	19	89	17	10	181	16	31	449	45
Future Vol, veh/h	48	77	18	19	89	17	10	181	16	31	449	45
Conflicting Peds, #/hr	0	0	0	0	0	2	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	-	-	-	-	-	-	100	-	-	-	-	200
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	52	83	19	20	96	18	11	195	17	33	483	48

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	719	783	242	575	823	108	531	0	0	212	0	0
Stage 1	549	549	-	226	226	-	-	-	-	-	-	-
Stage 2	170	234	-	349	597	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	320	328	765	405	311	932	1047	-	-	1370	-	-
Stage 1	493	520	-	762	721	-	-	-	-	-	-	-
Stage 2	821	715	-	646	495	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	228	313	765	304	297	930	1047	-	-	1370	-	-
Mov Cap-2 Maneuver	228	313	-	304	297	-	-	-	-	-	-	-
Stage 1	488	502	-	754	713	-	-	-	-	-	-	-
Stage 2	688	707	-	508	478	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	29.3		23.3		0.4		0.5	
HCM LOS	D		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1047	-	-	298	329	1370	-
HCM Lane V/C Ratio	0.01	-	-	0.516	0.409	0.024	-
HCM Control Delay (s)	8.5	-	-	29.3	23.3	7.7	0.1
HCM Lane LOS	A	-	-	D	C	A	A
HCM 95th %tile Q(veh)	0	-	-	2.8	1.9	0.1	-

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	207	7	1	485
Future Vol, veh/h	1	0	207	7	1	485
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	225	8	1	527

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	495	117	0	0	233
Stage 1	229	-	-	-	-
Stage 2	266	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	509	919	-	-	1346
Stage 1	793	-	-	-	-
Stage 2	760	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	508	919	-	-	1346
Mov Cap-2 Maneuver	651	-	-	-	-
Stage 1	793	-	-	-	-
Stage 2	759	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	651	1346
HCM Lane V/C Ratio	-	-	0.002	0.001
HCM Control Delay (s)	-	-	10.5	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	214	12	0	486
Future Vol, veh/h	2	0	214	12	0	486
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	0	233	13	0	528
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	504	123	0	0	246	0
Stage 1	240	-	-	-	-	-
Stage 2	264	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	502	911	-	-	1332	-
Stage 1	783	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	502	911	-	-	1332	-
Mov Cap-2 Maneuver	647	-	-	-	-	-
Stage 1	783	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.6	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	647		1332	-	
HCM Lane V/C Ratio	-	0.003		-	-	
HCM Control Delay (s)	-	10.6		0	-	
HCM Lane LOS	-	B		A	-	
HCM 95th %tile Q(veh)	-	0		0	-	

Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	24	96	34	259	2	162	25	390
Future Volume (vph)	24	96	34	259	2	162	25	390
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	54.0	54.0	54.0	54.0	66.0	66.0	66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%	45.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		10.7		10.7	12.0	12.0	12.0	12.0
Actuated g/C Ratio		0.32		0.32	0.36	0.36	0.36	0.36
v/c Ratio		0.17		0.39	0.01	0.16	0.08	0.44
Control Delay		8.8		10.4	7.0	7.5	7.7	9.1
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		8.8		10.4	7.0	7.5	7.7	9.1
LOS		A		B	A	A	A	A
Approach Delay		8.8		10.4		7.5		9.0
Approach LOS		A		B		A		A
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 33.6								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.44								
Intersection Signal Delay: 9.2					Intersection LOS: A			
Intersection Capacity Utilization 53.8%					ICU Level of Service A			
Analysis Period (min) 15								

Splits and Phases: 4: Sterling Av. & 5th St.

	
Ø2	Ø4
66 s	54 s
	
Ø6	Ø8
66 s	54 s

HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

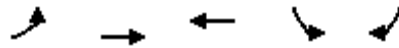
09/13/2023

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↕↔		↗	↕↔	
Traffic Volume (veh/h)	24	96	14	34	259	39	2	162	8	25	390	73
Future Volume (veh/h)	24	96	14	34	259	39	2	162	8	25	390	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	28	110	13	39	298	36	2	186	7	29	448	68
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	265	814	95	196	903	105	409	1095	41	561	971	147
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	332	2528	296	174	2805	327	849	3361	126	1142	2979	450
Grp Volume(v), veh/h	81	0	70	200	0	173	2	94	99	29	256	260
Grp Sat Flow(s),veh/h/ln	1570	0	1585	1731	0	1574	849	1710	1777	1142	1710	1719
Q Serve(g_s), s	0.0	0.0	1.0	0.0	0.0	2.6	0.1	1.2	1.2	0.6	3.6	3.7
Cycle Q Clear(g_c), s	1.0	0.0	1.0	2.6	0.0	2.6	3.7	1.2	1.2	1.8	3.6	3.7
Prop In Lane	0.34		0.19	0.20		0.21	1.00		0.07	1.00		0.26
Lane Grp Cap(c), veh/h	663	0	511	698	0	507	409	557	579	561	557	560
V/C Ratio(X)	0.12	0.00	0.14	0.29	0.00	0.34	0.00	0.17	0.17	0.05	0.46	0.46
Avail Cap(c_a), veh/h	2497	0	2510	2805	0	2493	1809	3377	3510	2444	3377	3395
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	7.4	7.9	0.0	7.9	9.7	7.4	7.4	8.0	8.2	8.2
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.2	0.0	0.4	0.0	0.1	0.1	0.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.6	0.0	0.5	0.0	0.3	0.3	0.1	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	7.5	8.2	0.0	8.3	9.7	7.5	7.5	8.1	8.8	8.8
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		151			373			195			545	
Approach Delay, s/veh		7.5			8.2			7.5			8.8	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.3		15.4		15.3				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		60.6		48.6		60.6		48.6				
Max Q Clear Time (g_c+I1), s		5.7		3.0		5.7		4.6				
Green Ext Time (p_c), s		1.1		0.9		3.3		2.2				
Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	141	304	632	92	346
Future Volume (vph)	141	304	632	92	346
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	33.0	86.0	53.0	34.0	33.0
Total Split (%)	27.5%	71.7%	44.2%	28.3%	27.5%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	11.9	38.5	21.8	11.7	29.2
Actuated g/C Ratio	0.19	0.63	0.36	0.19	0.48
v/c Ratio	0.54	0.17	0.66	0.36	0.32
Control Delay	31.0	4.8	19.9	28.7	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	4.8	19.9	28.7	7.5
LOS	C	A	B	C	A
Approach Delay		13.1	19.9	11.9	
Approach LOS		B	B	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 61.4

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 15.7

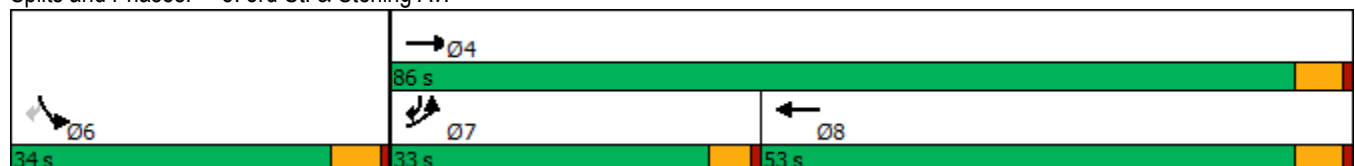
Intersection LOS: B

Intersection Capacity Utilization 49.3%

ICU Level of Service A

Analysis Period (min) 15

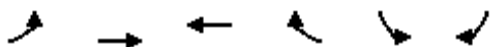
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	141	304	632	30	92	346
Future Volume (veh/h)	141	304	632	30	92	346
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700
Adj Flow Rate, veh/h	170	366	761	36	111	130
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	214	1953	1142	54	334	858
Arrive On Green	0.13	0.57	0.34	0.34	0.21	0.21
Sat Flow, veh/h	1619	3510	3410	157	1619	2536
Grp Volume(v), veh/h	170	366	392	405	111	130
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1767	1619	1268
Q Serve(g_s), s	4.9	2.5	9.5	9.5	2.8	1.7
Cycle Q Clear(g_c), s	4.9	2.5	9.5	9.5	2.8	1.7
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	214	1953	588	608	334	858
V/C Ratio(X)	0.79	0.19	0.67	0.67	0.33	0.15
Avail Cap(c_a), veh/h	948	5684	1678	1734	955	1831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.4	5.0	13.5	13.5	16.4	11.2
Incr Delay (d2), s/veh	2.5	0.0	1.3	1.3	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	0.5	3.0	3.1	0.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.9	5.0	14.8	14.8	17.0	11.3
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		536	797		241	
Approach Delay, s/veh		10.7	14.8		13.9	
Approach LOS		B	B		B	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			33.1		15.4	11.0
Change Period (Y+Rc), s			5.4		5.4	4.6
Max Green Setting (Gmax), s			80.6		28.6	28.4
Max Q Clear Time (g_c+I1), s			4.5		4.8	6.9
Green Ext Time (p_c), s			2.5		0.8	0.2
Intersection Summary						
HCM 6th Ctrl Delay			13.3			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑			↗
Traffic Vol, veh/h	0	127	329	5	0	2
Future Vol, veh/h	0	127	329	5	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	138	358	5	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	182
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	836
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	836
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		9.3		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	836		
HCM Lane V/C Ratio	-	-	-	0.003		
HCM Control Delay (s)	-	-	-	9.3		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0		

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑	↘	
Traffic Vol, veh/h	104	0	3	113	0	1
Future Vol, veh/h	104	0	3	113	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	113	0	3	123	0	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	113	0	242	57
Stage 1	-	-	-	-	113	-
Stage 2	-	-	-	-	129	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1489	-	741	1004
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1489	-	740	1004
Mov Cap-2 Maneuver	-	-	-	-	750	-
Stage 1	-	-	-	-	905	-
Stage 2	-	-	-	-	900	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.2		8.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	1004	-	-	1489	-	
HCM Lane V/C Ratio	0.001	-	-	0.002	-	
HCM Control Delay (s)	8.6	-	-	7.4	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	121	336	13	13	0
Future Vol, veh/h	4	121	336	13	13	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	132	365	14	14	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	379	0	-	0	512	190
Stage 1	-	-	-	-	372	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1191	-	-	-	511	826
Stage 1	-	-	-	-	673	-
Stage 2	-	-	-	-	892	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1191	-	-	-	509	826
Mov Cap-2 Maneuver	-	-	-	-	569	-
Stage 1	-	-	-	-	671	-
Stage 2	-	-	-	-	892	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.3	0		11.5		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1191	-	-	-	569	
HCM Lane V/C Ratio	0.004	-	-	-	0.025	
HCM Control Delay (s)	8	-	-	-	11.5	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	84	4	8	87	1	5	14	2	6	31	24
Future Vol, veh/h	17	84	4	8	87	1	5	14	2	6	31	24
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	19	93	4	9	97	1	6	16	2	7	34	27
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	98	0	0	97	0	0	277	247	93	258	251	98
Stage 1	-	-	-	-	-	-	131	131	-	116	116	-
Stage 2	-	-	-	-	-	-	146	116	-	142	135	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1508	-	-	1509	-	-	679	659	970	699	656	963
Stage 1	-	-	-	-	-	-	877	792	-	894	803	-
Stage 2	-	-	-	-	-	-	861	803	-	866	789	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1508	-	-	1509	-	-	624	646	970	675	644	963
Mov Cap-2 Maneuver	-	-	-	-	-	-	624	646	-	675	644	-
Stage 1	-	-	-	-	-	-	866	782	-	882	798	-
Stage 2	-	-	-	-	-	-	796	798	-	836	779	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			0.6			10.6			10.3		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	661	1508	-	-	1509	-	-	744				
HCM Lane V/C Ratio	0.035	0.013	-	-	0.006	-	-	0.091				
HCM Control Delay (s)	10.6	7.4	0	-	7.4	0	-	10.3				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	5	129	0	3	332	5	0	11	6	9	17	17
Future Vol, veh/h	5	129	0	3	332	5	0	11	6	9	17	17
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	157	0	4	405	6	0	13	7	11	21	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	411	0	0	157	0	0	606	588	157	595	585	408
Stage 1	-	-	-	-	-	-	169	169	-	416	416	-
Stage 2	-	-	-	-	-	-	437	419	-	179	169	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1159	-	-	1435	-	-	412	424	894	419	426	648
Stage 1	-	-	-	-	-	-	838	763	-	618	595	-
Stage 2	-	-	-	-	-	-	602	593	-	827	763	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1159	-	-	1435	-	-	381	420	894	402	422	648
Mov Cap-2 Maneuver	-	-	-	-	-	-	381	420	-	402	422	-
Stage 1	-	-	-	-	-	-	833	758	-	614	593	-
Stage 2	-	-	-	-	-	-	560	591	-	801	758	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			12.2			13.3		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	420	894	1159	-	-	1435	-	-	484			
HCM Lane V/C Ratio	0.032	0.008	0.005	-	-	0.003	-	-	0.108			
HCM Control Delay (s)	13.9	9.1	8.1	0	-	7.5	0	-	13.3			
HCM Lane LOS	B	A	A	A	-	A	A	-	B			
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0.4			

Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	20	116	248	309	74	1	86	72	293
Future Volume (vph)	20	116	248	309	74	1	86	72	293
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	73.0	73.0	73.0	73.0	73.0	47.0	47.0	47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%	60.8%	60.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effect Green (s)	19.6	19.6	19.6	19.6	19.6		14.0		14.0
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.43		0.31		0.31
v/c Ratio	0.06	0.10	0.61	0.47	0.12		0.15		0.51
Control Delay	8.2	7.5	16.2	11.5	2.8		10.4		16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	8.2	7.5	16.2	11.5	2.8		10.4		16.2
LOS	A	A	B	B	A		B		B
Approach Delay		7.6		12.3			10.4		16.2
Approach LOS		A		B			B		B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 45.5

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 12.8

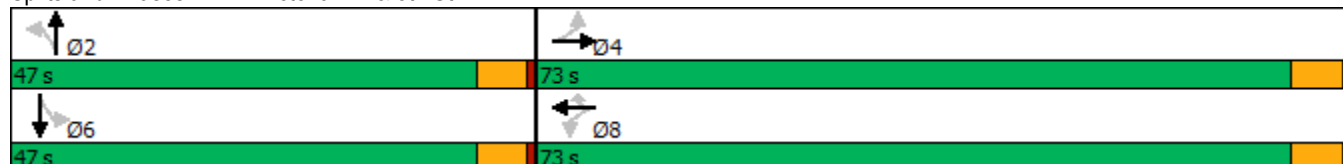
Intersection LOS: B

Intersection Capacity Utilization 64.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	116	8	248	309	74	1	86	36	72	293	30
Future Volume (veh/h)	20	116	8	248	309	74	1	86	36	72	293	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	24	136	8	292	364	79	1	101	38	85	345	33
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	423	1288	75	643	706	590	106	692	246	253	741	70
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.29	0.29	0.29	0.29	0.29	0.29
Sat Flow, veh/h	908	3284	192	1194	1800	1505	6	2415	858	398	2586	244
Grp Volume(v), veh/h	24	70	74	292	364	79	74	0	66	247	0	216
Grp Sat Flow(s),veh/h/ln	908	1710	1765	1194	1800	1505	1796	0	1483	1634	0	1594
Q Serve(g_s), s	0.7	0.9	0.9	7.2	5.4	1.2	0.0	0.0	1.2	1.5	0.0	3.9
Cycle Q Clear(g_c), s	6.1	0.9	0.9	8.1	5.4	1.2	1.1	0.0	1.2	4.2	0.0	3.9
Prop In Lane	1.00		0.11	1.00		1.00	0.01		0.58	0.34		0.15
Lane Grp Cap(c), veh/h	423	671	692	643	706	590	619	0	425	607	0	457
V/C Ratio(X)	0.06	0.10	0.11	0.45	0.52	0.13	0.12	0.00	0.15	0.41	0.00	0.47
Avail Cap(c_a), veh/h	1816	3294	3401	2475	3468	2899	2234	0	1769	2033	0	1901
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.4	6.7	6.7	9.3	8.1	6.8	9.3	0.0	9.3	10.3	0.0	10.3
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.5	0.6	0.1	0.1	0.0	0.2	0.4	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.2	1.1	1.2	0.2	0.3	0.0	0.3	1.1	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	6.8	6.8	9.8	8.7	6.9	9.3	0.0	9.5	10.8	0.0	11.0
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h	168			735			140			463		
Approach Delay, s/veh	7.3			8.9			9.4			10.9		
Approach LOS	A			A			A			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	15.4			19.5			15.4			19.5		
Change Period (Y+Rc), s	5.4			5.8			5.4			5.8		
Max Green Setting (Gmax), s	41.6			67.2			41.6			67.2		
Max Q Clear Time (g_c+I1), s	3.2			8.1			6.2			10.1		
Green Ext Time (p_c), s	0.8			0.9			2.8			3.6		
Intersection Summary												
HCM 6th Ctrl Delay	9.4											
HCM 6th LOS	A											

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	8	213	1	598	36	2	1	43	0
Future Volume (vph)	8	213	1	598	36	2	1	43	0
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	9.6	22.8	22.8	9.6	31.4	9.6	29.4
Total Split (s)	12.0	54.0	12.0	54.0	54.0	12.0	34.0	20.0	42.0
Total Split (%)	10.0%	45.0%	10.0%	45.0%	45.0%	10.0%	28.3%	16.7%	35.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effect Green (s)	5.6	17.1	5.4	17.0	17.0	5.5	10.9	6.8	15.8
Actuated g/C Ratio	0.12	0.36	0.11	0.36	0.36	0.12	0.23	0.14	0.33
v/c Ratio	0.05	0.21	0.01	0.58	0.07	0.01	0.00	0.22	0.07
Control Delay	26.8	12.3	27.0	15.8	0.2	27.0	23.0	25.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	12.3	27.0	15.8	0.2	27.0	23.0	25.7	0.2
LOS	C	B	C	B	A	C	C	C	A
Approach Delay		12.8		14.9			25.7		13.3
Approach LOS		B		B			C		B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 47.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 14.3

Intersection LOS: B

Intersection Capacity Utilization 36.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.

			
Ø1	Ø2	Ø3	Ø4
20 s	34 s	12 s	54 s
			
Ø5	Ø6	Ø7	Ø8
12 s	42 s	12 s	54 s

HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	213	6	1	598	36	2	1	0	43	0	41
Future Volume (veh/h)	8	213	6	1	598	36	2	1	0	43	0	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	9	251	3	1	704	11	2	1	0	51	0	16
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	19	1137	14	3	1088	474	4	367	0	83	0	379
Arrive On Green	0.01	0.33	0.33	0.00	0.32	0.32	0.00	0.20	0.00	0.05	0.00	0.25
Sat Flow, veh/h	1619	3461	41	1619	3420	1490	1619	1800	0	1619	0	1506
Grp Volume(v), veh/h	9	124	130	1	704	11	2	1	0	51	0	16
Grp Sat Flow(s),veh/h/ln	1619	1710	1793	1619	1710	1490	1619	1800	0	1619	0	1506
Q Serve(g_s), s	0.3	2.6	2.6	0.0	8.7	0.2	0.1	0.0	0.0	1.5	0.0	0.4
Cycle Q Clear(g_c), s	0.3	2.6	2.6	0.0	8.7	0.2	0.1	0.0	0.0	1.5	0.0	0.4
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	19	562	589	3	1088	474	4	367	0	83	0	379
V/C Ratio(X)	0.47	0.22	0.22	0.30	0.65	0.02	0.45	0.00	0.00	0.62	0.00	0.04
Avail Cap(c_a), veh/h	244	1679	1760	244	3357	1462	244	1048	0	508	0	1122
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.1	11.9	11.9	24.5	14.4	11.5	24.4	15.6	0.0	22.8	0.0	13.9
Incr Delay (d2), s/veh	6.6	0.2	0.2	18.0	0.7	0.0	24.3	0.0	0.0	2.8	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.8	0.8	0.0	2.6	0.1	0.1	0.0	0.0	0.6	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.7	12.1	12.1	42.5	15.0	11.5	48.8	15.6	0.0	25.6	0.0	13.9
LnGrp LOS	C	B	B	D	B	B	D	B	A	C	A	B
Approach Vol, veh/h		263			716			3			67	
Approach Delay, s/veh		12.8			15.0			37.7			22.8	
Approach LOS		B			B			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	15.4	4.7	21.9	4.7	17.8	5.2	21.4				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	15.4	28.6	7.4	48.2	7.4	36.6	7.4	48.2				
Max Q Clear Time (g_c+I1), s	3.5	2.0	2.0	4.6	2.1	2.4	2.3	10.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	0.0	0.0	4.9				
Intersection Summary												
HCM 6th Ctrl Delay			15.0									
HCM 6th LOS			B									

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	13	200	255	485	52	175	132	384
Future Volume (vph)	13	200	255	485	52	175	132	384
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	9.6	32.8	32.0	55.2	14.4	34.2	21.0	40.8
Total Split (%)	8.0%	27.3%	26.7%	46.0%	12.0%	28.5%	17.5%	34.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	5.2	12.3	17.9	33.5	7.3	12.6	11.3	21.6
Actuated g/C Ratio	0.07	0.16	0.24	0.44	0.10	0.17	0.15	0.29
v/c Ratio	0.13	0.50	0.71	0.40	0.35	0.49	0.58	0.49
Control Delay	43.2	30.8	38.8	15.9	43.0	20.9	42.9	26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.2	30.8	38.8	15.9	43.0	20.9	42.9	26.9
LOS	D	C	D	B	D	C	D	C
Approach Delay		31.4		23.0		24.2		30.6
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 75.7

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 26.5

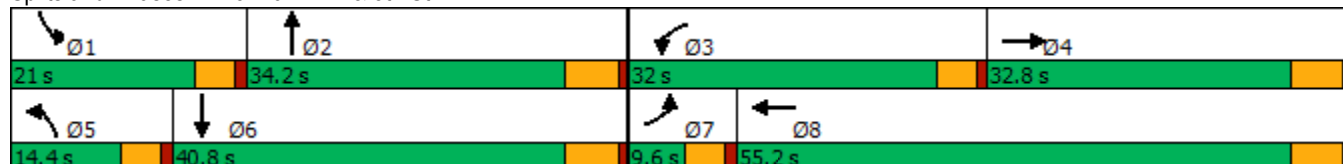
Intersection LOS: C

Intersection Capacity Utilization 59.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	200	65	255	485	81	52	175	123	132	384	57
Future Volume (veh/h)	13	200	65	255	485	81	52	175	123	132	384	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	14	213	54	271	516	75	55	186	75	140	409	35
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	28	460	114	321	1048	152	81	414	161	175	732	62
Arrive On Green	0.02	0.17	0.17	0.20	0.35	0.35	0.05	0.17	0.17	0.11	0.23	0.23
Sat Flow, veh/h	1619	2716	673	1619	2992	433	1619	2406	936	1619	3189	272
Grp Volume(v), veh/h	14	132	135	271	294	297	55	130	131	140	218	226
Grp Sat Flow(s),veh/h/ln	1619	1710	1679	1619	1710	1715	1619	1710	1632	1619	1710	1751
Q Serve(g_s), s	0.5	4.1	4.3	9.5	8.0	8.0	2.0	4.0	4.3	5.0	6.7	6.7
Cycle Q Clear(g_c), s	0.5	4.1	4.3	9.5	8.0	8.0	2.0	4.0	4.3	5.0	6.7	6.7
Prop In Lane	1.00		0.40	1.00		0.25	1.00		0.57	1.00		0.16
Lane Grp Cap(c), veh/h	28	290	285	321	599	601	81	294	280	175	393	402
V/C Ratio(X)	0.50	0.46	0.47	0.84	0.49	0.49	0.67	0.44	0.47	0.80	0.56	0.56
Avail Cap(c_a), veh/h	137	782	768	752	1432	1436	269	823	785	450	1014	1038
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	22.1	22.1	22.8	15.0	15.1	27.5	21.9	22.0	25.7	20.1	20.1
Incr Delay (d2), s/veh	5.0	1.1	1.2	2.4	0.6	0.6	3.6	1.0	1.2	3.2	1.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.5	1.6	3.3	2.6	2.6	0.8	1.5	1.5	1.8	2.4	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	23.2	23.3	25.2	15.7	15.7	31.1	22.9	23.2	28.9	21.3	21.3
LnGrp LOS	C	C	C	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h	281		862				316		584			
Approach Delay, s/veh	23.8		18.7				24.5		23.1			
Approach LOS	C		B				C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	15.9	16.3	15.8	7.6	19.3	5.6	26.5				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	28.4	27.4	27.0	9.8	35.0	5.0	49.4				
Max Q Clear Time (g_c+I1), s	7.0	6.3	11.5	6.3	4.0	8.7	2.5	10.0				
Green Ext Time (p_c), s	0.1	1.3	0.3	1.3	0.0	2.4	0.0	3.5				
Intersection Summary												
HCM 6th Ctrl Delay	21.5											
HCM 6th LOS	C											

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↰	↱↱	↰↱	↰	↰
Traffic Volume (vph)	23	538	866	116	54
Future Volume (vph)	23	538	866	116	54
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	14.0	82.0	68.0	38.0	38.0
Total Split (%)	11.7%	68.3%	56.7%	31.7%	31.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	6.0	32.0	28.3	11.8	11.8
Actuated g/C Ratio	0.11	0.59	0.52	0.22	0.22
v/c Ratio	0.14	0.29	0.59	0.36	0.16
Control Delay	29.0	5.9	11.9	24.2	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.0	5.9	11.9	24.2	8.7
LOS	C	A	B	C	A
Approach Delay		6.9	11.9	19.3	
Approach LOS		A	B	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 54.7

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 11.0

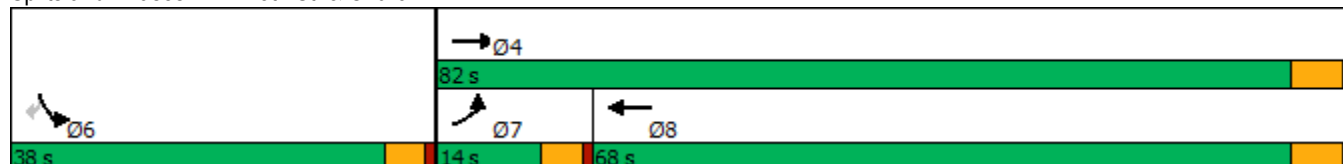
Intersection LOS: B

Intersection Capacity Utilization 45.6%

ICU Level of Service A

Analysis Period (min) 15

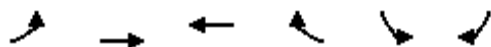
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	23	538	866	88	116	54	
Future Volume (veh/h)	23	538	866	88	116	54	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	25	578	931	82	125	54	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	48	1948	1390	122	322	303	
Arrive On Green	0.03	0.57	0.44	0.44	0.20	0.20	
Sat Flow, veh/h	1619	3510	3269	280	1619	1525	
Grp Volume(v), veh/h	25	578	501	512	125	54	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1749	1619	1525	
Q Serve(g_s), s	0.7	3.9	10.5	10.5	3.0	1.3	
Cycle Q Clear(g_c), s	0.7	3.9	10.5	10.5	3.0	1.3	
Prop In Lane	1.00			0.16	1.00	1.00	
Lane Grp Cap(c), veh/h	48	1948	748	765	322	303	
V/C Ratio(X)	0.52	0.30	0.67	0.67	0.39	0.18	
Avail Cap(c_a), veh/h	339	5805	2369	2423	1204	1135	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	21.5	5.0	10.1	10.1	15.6	14.9	
Incr Delay (d2), s/veh	3.2	0.1	1.0	1.0	0.8	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.7	2.7	2.7	1.0	1.2	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	24.6	5.1	11.1	11.1	16.4	15.2	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		603	1013		179		
Approach Delay, s/veh		5.9	11.1		16.0		
Approach LOS		A	B		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				31.4	13.5	5.9	25.4
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				76.2	33.4	9.4	62.2
Max Q Clear Time (g_c+I1), s				5.9	5.0	2.7	12.5
Green Ext Time (p_c), s				4.0	0.5	0.0	7.2
Intersection Summary							
HCM 6th Ctrl Delay			9.8				
HCM 6th LOS			A				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↗
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↗
Traffic Volume (vph)	316	337	517	722	44	232
Future Volume (vph)	316	337	517	722	44	232
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	34.0	34.0	40.0	74.0	46.0	46.0
Total Split (%)	28.3%	28.3%	33.3%	61.7%	38.3%	38.3%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	15.4	15.4	20.0	40.3	21.1	21.1
Actuated g/C Ratio	0.21	0.21	0.27	0.55	0.29	0.29
v/c Ratio	0.49	0.61	0.72	0.43	0.66	0.46
Control Delay	30.6	8.5	31.5	11.3	31.7	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	8.5	31.5	11.3	31.7	11.7
LOS	C	A	C	B	C	B
Approach Delay	19.2			19.7	22.8	
Approach LOS	B			B	C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 73.8

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 20.3

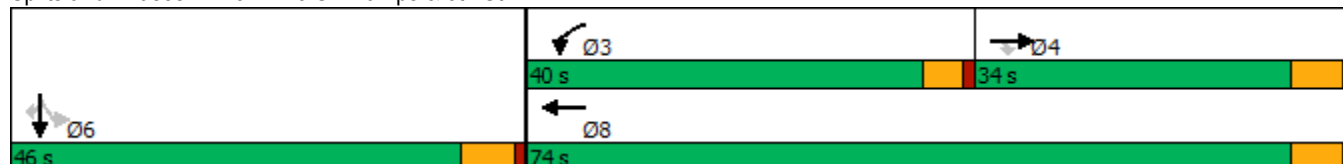
Intersection LOS: C

Intersection Capacity Utilization 70.2%

ICU Level of Service C

Analysis Period (min) 15

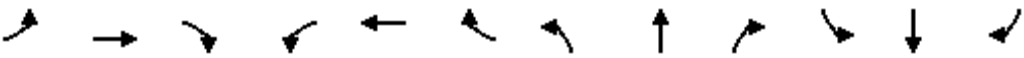
Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	316	337	517	722	0	0	0	0	249	44	232
Future Volume (veh/h)	0	316	337	517	722	0	0	0	0	249	44	232
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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	351	211	574	802	0				277	49	131
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	725	323	706	1830	0				370	65	385
Arrive On Green	0.00	0.21	0.21	0.24	0.54	0.00				0.25	0.25	0.25
Sat Flow, veh/h	0	3510	1523	2956	3510	0				1467	260	1525
Grp Volume(v), veh/h	0	351	211	574	802	0				326	0	131
Grp Sat Flow(s),veh/h/ln	0	1710	1523	1478	1710	0				1727	0	1525
Q Serve(g_s), s	0.0	4.9	6.9	10.0	7.8	0.0				9.5	0.0	3.8
Cycle Q Clear(g_c), s	0.0	4.9	6.9	10.0	7.8	0.0				9.5	0.0	3.8
Prop In Lane	0.00		1.00	1.00		0.00				0.85		1.00
Lane Grp Cap(c), veh/h	0	725	323	706	1830	0				436	0	385
V/C Ratio(X)	0.00	0.48	0.65	0.81	0.44	0.00				0.75	0.00	0.34
Avail Cap(c_a), veh/h	0	1767	787	1917	4273	0				1271	0	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.9	19.7	19.6	7.7	0.0				18.8	0.0	16.7
Incr Delay (d2), s/veh	0.0	0.5	2.2	0.9	0.2	0.0				2.6	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	2.3	2.9	1.9	0.0				3.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.4	21.9	20.5	7.9	0.0				21.4	0.0	17.2
LnGrp LOS	A	B	C	C	A	A				C	A	B
Approach Vol, veh/h		562			1376						457	
Approach Delay, s/veh		20.3			13.1						20.2	
Approach LOS		C			B						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			17.6	17.4		19.6		35.0				
Change Period (Y+Rc), s			4.6	5.8		5.8		5.8				
Max Green Setting (Gmax), s			35.4	28.2		40.2		68.2				
Max Q Clear Time (g_c+I1), s			12.0	8.9		11.5		9.8				
Green Ext Time (p_c), s			1.0	2.6		2.3		5.9				
Intersection Summary												
HCM 6th Ctrl Delay			16.2									
HCM 6th LOS			B									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	97	468	935	270	304	2	313
Future Volume (vph)	97	468	935	270	304	2	313
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	27.0	80.0	53.0	53.0	40.0	40.0	40.0
Total Split (%)	22.5%	66.7%	44.2%	44.2%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	9.1	33.2	22.5	22.5	14.4	14.4	14.4
Actuated g/C Ratio	0.15	0.55	0.37	0.37	0.24	0.24	0.24
v/c Ratio	0.41	0.26	0.53	0.38	0.43	0.41	0.38
Control Delay	33.1	7.1	17.0	4.1	27.1	26.5	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	7.1	17.0	4.1	27.1	26.5	4.6
LOS	C	A	B	A	C	C	A
Approach Delay		11.6	14.1			15.6	
Approach LOS		B	B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 60.3

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 13.9

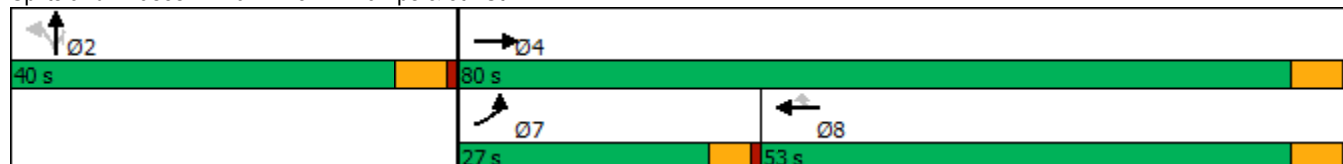
Intersection LOS: B

Intersection Capacity Utilization 70.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	97	468	0	0	935	270	304	2	313	0	0	0	
Future Volume (veh/h)	97	468	0	0	935	270	304	2	313	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700				
Adj Flow Rate, veh/h	100	482	0	0	964	173	314	0	123				
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97				
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0				
Cap, veh/h	125	1856	0	0	1808	553	686	0	610				
Arrive On Green	0.08	0.54	0.00	0.00	0.37	0.37	0.21	0.00	0.21				
Sat Flow, veh/h	1619	3510	0	0	5076	1504	3238	0	2881				
Grp Volume(v), veh/h	100	482	0	0	964	173	314	0	123				
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1504	1619	0	1441				
Q Serve(g_s), s	2.9	3.5	0.0	0.0	7.3	3.9	4.0	0.0	1.7				
Cycle Q Clear(g_c), s	2.9	3.5	0.0	0.0	7.3	3.9	4.0	0.0	1.7				
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00				
Lane Grp Cap(c), veh/h	125	1856	0	0	1808	553	686	0	610				
V/C Ratio(X)	0.80	0.26	0.00	0.00	0.53	0.31	0.46	0.00	0.20				
Avail Cap(c_a), veh/h	768	5373	0	0	4911	1503	2345	0	2086				
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	1.00	1.00	0.00	1.00				
Uniform Delay (d), s/veh	21.4	5.7	0.0	0.0	11.7	10.7	16.2	0.0	15.3				
Incr Delay (d2), s/veh	4.4	0.1	0.0	0.0	0.2	0.3	0.5	0.0	0.2				
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
%ile BackOfQ(50%),veh/ln	1.1	0.7	0.0	0.0	1.9	1.0	1.2	0.0	0.4				
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	25.8	5.8	0.0	0.0	12.0	11.0	16.7	0.0	15.5				
LnGrp LOS	C	A	A	A	B	B	B	A	B				
Approach Vol, veh/h	582		1137				437						
Approach Delay, s/veh	9.3		11.8				16.4						
Approach LOS	A		B				B						
Timer - Assigned Phs	2		4				7		8				
Phs Duration (G+Y+Rc), s	15.8		31.4				8.3		23.2				
Change Period (Y+Rc), s	5.8		5.8				4.6		5.8				
Max Green Setting (Gmax), s	34.2		74.2				22.4		47.2				
Max Q Clear Time (g_c+I1), s	6.0		5.5				4.9		9.3				
Green Ext Time (p_c), s	1.5		3.2				0.1		8.1				
Intersection Summary													
HCM 6th Ctrl Delay			12.1										
HCM 6th LOS			B										
Notes													

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	31	78	18	15	65	22	15	447	23	23	268	19
Future Vol, veh/h	31	78	18	15	65	22	15	447	23	23	268	19
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	-	-	-	-	-	-	100	-	-	-	-	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	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	33	82	19	16	68	23	16	471	24	24	282	20

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	632	857	141	745	865	248	302	0	0	495	0	0
Stage 1	330	330	-	515	515	-	-	-	-	-	-	-
Stage 2	302	527	-	230	350	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	369	297	888	306	294	758	1270	-	-	1079	-	-
Stage 1	663	649	-	516	538	-	-	-	-	-	-	-
Stage 2	688	532	-	758	636	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	282	285	888	226	282	758	1270	-	-	1079	-	-
Mov Cap-2 Maneuver	282	285	-	226	282	-	-	-	-	-	-	-
Stage 1	654	631	-	509	531	-	-	-	-	-	-	-
Stage 2	574	525	-	628	619	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	24.7		22.4		0.2		0.7	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1270	-	-	314	313	1079	-
HCM Lane V/C Ratio	0.012	-	-	0.426	0.343	0.022	-
HCM Control Delay (s)	7.9	-	-	24.7	22.4	8.4	0.1
HCM Lane LOS	A	-	-	C	C	A	A
HCM 95th %tile Q(veh)	0	-	-	2	1.5	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	2	483	3	1	300
Future Vol, veh/h	9	2	483	3	1	300
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	10	2	525	3	1	326
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	692	264	0	0	528	0
Stage 1	527	-	-	-	-	-
Stage 2	165	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	382	741	-	-	1049	-
Stage 1	562	-	-	-	-	-
Stage 2	853	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	382	741	-	-	1049	-
Mov Cap-2 Maneuver	517	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.7	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	547	1049	-	
HCM Lane V/C Ratio	-	-	0.022	0.001	-	
HCM Control Delay (s)	-	-	11.7	8.4	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	0	486	5	0	309
Future Vol, veh/h	15	0	486	5	0	309
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	0	528	5	0	336
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	699	267	0	0	533	0
Stage 1	531	-	-	-	-	-
Stage 2	168	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	378	737	-	-	1045	-
Stage 1	560	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	378	737	-	-	1045	-
Mov Cap-2 Maneuver	515	-	-	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	850	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	12.2	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 515		1045	-	
HCM Lane V/C Ratio	-	- 0.032		-	-	
HCM Control Delay (s)	-	- 12.2		0	-	
HCM Lane LOS	-	- B		A	-	
HCM 95th %tile Q(veh)	-	- 0.1		0	-	

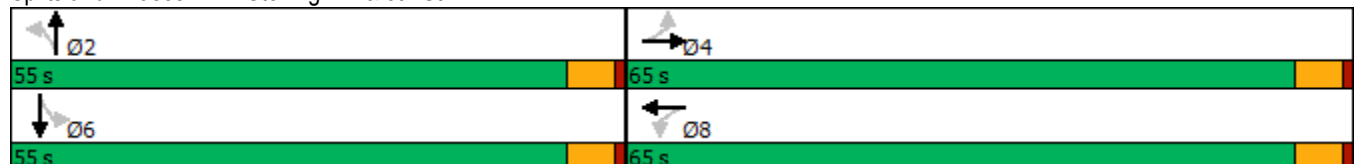
Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	94	283	19	151	5	369	37	245
Future Volume (vph)	94	283	19	151	5	369	37	245
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	65.0	65.0	65.0	65.0	55.0	55.0	55.0	55.0
Total Split (%)	54.2%	54.2%	54.2%	54.2%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		11.7		11.7	10.8	10.8	10.8	10.8
Actuated g/C Ratio		0.35		0.35	0.32	0.32	0.32	0.32
v/c Ratio		0.46		0.20	0.02	0.37	0.14	0.27
Control Delay		9.9		7.3	8.6	10.0	10.2	8.9
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		9.9		7.3	8.6	10.0	10.2	8.9
LOS		A		A	A	B	B	A
Approach Delay		9.9		7.3		10.0		9.1
Approach LOS		A		A		A		A
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 33.4								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.46								
Intersection Signal Delay: 9.3					Intersection LOS: A			
Intersection Capacity Utilization 59.6%					ICU Level of Service B			
Analysis Period (min) 15								

Splits and Phases: 4: Sterling Av. & 5th St.



HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

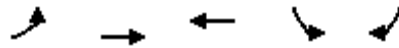
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↕↕		↗	↕↕	
Traffic Volume (veh/h)	94	283	60	19	151	30	5	369	27	37	245	42
Future Volume (veh/h)	94	283	60	19	151	30	5	369	27	37	245	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	98	295	39	20	157	22	5	384	25	39	255	27
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	319	771	100	182	899	120	512	1059	69	453	1013	106
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	471	2377	308	132	2770	371	1053	3260	211	937	3119	327
Grp Volume(v), veh/h	232	0	200	106	0	93	5	201	208	39	139	143
Grp Sat Flow(s),veh/h/ln	1578	0	1578	1708	0	1566	1053	1710	1762	937	1710	1736
Q Serve(g_s), s	0.6	0.0	3.0	0.0	0.0	1.3	0.1	2.8	2.8	1.0	1.8	1.9
Cycle Q Clear(g_c), s	3.2	0.0	3.0	1.3	0.0	1.3	2.0	2.8	2.8	3.8	1.8	1.9
Prop In Lane	0.42		0.20	0.19		0.24	1.00		0.12	1.00		0.19
Lane Grp Cap(c), veh/h	678	0	512	693	0	508	512	555	572	453	555	564
V/C Ratio(X)	0.34	0.00	0.39	0.15	0.00	0.18	0.01	0.36	0.36	0.09	0.25	0.25
Avail Cap(c_a), veh/h	3098	0	3054	3258	0	3030	1866	2755	2838	1658	2755	2797
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.1	0.0	8.0	7.5	0.0	7.5	8.4	8.0	8.0	9.4	7.6	7.7
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.1	0.0	0.2	0.0	0.4	0.4	0.1	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.6	0.3	0.0	0.3	0.0	0.6	0.6	0.1	0.4	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	0.0	8.5	7.6	0.0	7.6	8.4	8.3	8.3	9.5	7.9	7.9
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		432			199			414			321	
Approach Delay, s/veh		8.4			7.6			8.3			8.1	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.4		15.4		15.4				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		49.6		59.6		49.6		59.6				
Max Q Clear Time (g_c+I1), s		4.8		5.2		5.8		3.3				
Green Ext Time (p_c), s		2.4		2.7		1.8		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			8.2									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	347	955	271	155	169
Future Volume (vph)	347	955	271	155	169
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	55.0	85.0	30.0	35.0	55.0
Total Split (%)	45.8%	70.8%	25.0%	29.2%	45.8%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	19.9	37.6	12.9	13.3	38.9
Actuated g/C Ratio	0.32	0.60	0.21	0.21	0.63
v/c Ratio	0.72	0.49	0.49	0.48	0.11
Control Delay	27.7	7.8	25.2	29.1	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.7	7.8	25.2	29.1	1.0
LOS	C	A	C	C	A
Approach Delay		13.1	25.2	14.5	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 62.2

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 15.3

Intersection LOS: B

Intersection Capacity Utilization 53.6%

ICU Level of Service A

Analysis Period (min) 15

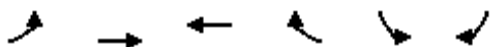
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	347	955	271	54	155	169	
Future Volume (veh/h)	347	955	271	54	155	169	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700	
Adj Flow Rate, veh/h	369	1016	288	39	165	64	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	432	1946	628	84	335	1201	
Arrive On Green	0.27	0.57	0.21	0.21	0.21	0.21	
Sat Flow, veh/h	1619	3510	3121	406	1619	2536	
Grp Volume(v), veh/h	369	1016	161	166	165	64	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1727	1619	1268	
Q Serve(g_s), s	10.4	8.8	4.0	4.1	4.3	0.7	
Cycle Q Clear(g_c), s	10.4	8.8	4.0	4.1	4.3	0.7	
Prop In Lane	1.00			0.24	1.00	1.00	
Lane Grp Cap(c), veh/h	432	1946	354	358	335	1201	
V/C Ratio(X)	0.85	0.52	0.46	0.46	0.49	0.05	
Avail Cap(c_a), veh/h	1691	5640	872	880	993	2231	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.8	6.4	16.7	16.8	16.9	6.9	
Incr Delay (d2), s/veh	1.9	0.2	0.9	0.9	1.1	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.3	1.8	1.4	1.4	1.4	0.7	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.7	6.6	17.7	17.7	18.0	6.9	
LnGrp LOS	B	A	B	B	B	A	
Approach Vol, veh/h		1385	327	229			
Approach Delay, s/veh		9.8	17.7	14.9			
Approach LOS		A	B	B			
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				32.9	15.4	17.5	15.4
Change Period (Y+Rc), s				5.4	5.4	4.6	5.4
Max Green Setting (Gmax), s				79.6	29.6	50.4	24.6
Max Q Clear Time (g_c+I1), s				10.8	6.3	12.4	6.1
Green Ext Time (p_c), s				8.8	0.7	0.5	1.6
Intersection Summary							
HCM 6th Ctrl Delay			11.7				
HCM 6th LOS			B				

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑			↗
Traffic Vol, veh/h	0	347	198	2	0	1
Future Vol, veh/h	0	347	198	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	377	215	2	0	1
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	109
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	930
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	930
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		8.9		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	930		
HCM Lane V/C Ratio	-	-	-	0.001		
HCM Control Delay (s)	-	-	-	8.9		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0		

Intersection						
Int Delay, s/veh	0.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↱	↑	↲	
Traffic Vol, veh/h	125	0	1	100	0	3
Future Vol, veh/h	125	0	1	100	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	136	0	1	109	0	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	136	0	247	68
Stage 1	-	-	-	-	136	-
Stage 2	-	-	-	-	111	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1461	-	736	988
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	919	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1461	-	735	988
Mov Cap-2 Maneuver	-	-	-	-	745	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	918	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		8.7	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	988	-	-	1461	-	
HCM Lane V/C Ratio	0.003	-	-	0.001	-	
HCM Control Delay (s)	8.7	-	-	7.5	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	344	196	6	12	2
Future Vol, veh/h	2	344	196	6	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	374	213	7	13	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	220	0	0 595 110
Stage 1	-	-	- 217 -
Stage 2	-	-	- 378 -
Critical Hdwy	4.1	-	- 6.6 6.9
Critical Hdwy Stg 1	-	-	- 5.8 -
Critical Hdwy Stg 2	-	-	- 5.4 -
Follow-up Hdwy	2.2	-	- 3.5 3.3
Pot Cap-1 Maneuver	1361	-	- 455 929
Stage 1	-	-	- 804 -
Stage 2	-	-	- 697 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1361	-	- 455 929
Mov Cap-2 Maneuver	-	-	- 546 -
Stage 1	-	-	- 803 -
Stage 2	-	-	- 697 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1361	-	-	-	580
HCM Lane V/C Ratio	0.002	-	-	-	0.026
HCM Control Delay (s)	7.6	-	-	-	11.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

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	36	87	5	2	85	15	3	32	12	5	27	13
Future Vol, veh/h	36	87	5	2	85	15	3	32	12	5	27	13
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	39	94	5	2	91	16	3	34	13	5	29	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	108	0	0	99	0	0	298	284	94	302	281	101
Stage 1	-	-	-	-	-	-	172	172	-	104	104	-
Stage 2	-	-	-	-	-	-	126	112	-	198	177	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1495	-	-	1507	-	-	658	628	968	654	631	960
Stage 1	-	-	-	-	-	-	835	760	-	907	813	-
Stage 2	-	-	-	-	-	-	883	807	-	808	756	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1494	-	-	1507	-	-	611	609	968	604	612	958
Mov Cap-2 Maneuver	-	-	-	-	-	-	611	609	-	604	612	-
Stage 1	-	-	-	-	-	-	812	739	-	881	811	-
Stage 2	-	-	-	-	-	-	837	805	-	739	735	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			0.1			10.8			10.7		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	673	1494	-	-	1507	-	-	682				
HCM Lane V/C Ratio	0.075	0.026	-	-	0.001	-	-	0.071				
HCM Control Delay (s)	10.8	7.5	0	-	7.4	0	-	10.7				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.2				

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	11	338	8	2	184	4	9	32	6	6	19	9
Future Vol, veh/h	11	338	8	2	184	4	9	32	6	6	19	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	12	360	9	2	196	4	10	34	6	6	20	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	200	0	0	369	0	0	607	593	365	611	595	199
Stage 1	-	-	-	-	-	-	389	389	-	202	202	-
Stage 2	-	-	-	-	-	-	218	204	-	409	393	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1384	-	-	1201	-	-	411	421	685	409	420	847
Stage 1	-	-	-	-	-	-	639	612	-	805	738	-
Stage 2	-	-	-	-	-	-	789	737	-	623	609	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1384	-	-	1201	-	-	387	416	685	376	415	846
Mov Cap-2 Maneuver	-	-	-	-	-	-	387	416	-	376	415	-
Stage 1	-	-	-	-	-	-	632	605	-	796	737	-
Stage 2	-	-	-	-	-	-	756	736	-	576	602	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.1	14.3	13.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	409	685	1384	-	-	1201	-	-	470
HCM Lane V/C Ratio	0.107	0.009	0.008	-	-	0.002	-	-	0.077
HCM Control Delay (s)	14.9	10.3	7.6	0	-	8	0	-	13.3
HCM Lane LOS	B	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	0	-	-	0	-	-	0.2

Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	70	270	66	165	133	6	431	52	212
Future Volume (vph)	70	270	66	165	133	6	431	52	212
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	46.0	46.0	46.0	46.0	46.0	74.0	74.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	61.7%	61.7%	61.7%	61.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	10.7	10.7	10.7	10.7	10.7		13.6		13.6
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30		0.38		0.38
v/c Ratio	0.22	0.29	0.24	0.33	0.26		0.52		0.30
Control Delay	12.5	11.0	13.0	12.6	4.2		9.0		8.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	12.5	11.0	13.0	12.6	4.2		9.0		8.2
LOS	B	B	B	B	A		A		A
Approach Delay		11.3		9.6			9.0		8.2
Approach LOS		B		A			A		A
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 35.6									
Natural Cycle: 55									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.52									
Intersection Signal Delay: 9.5					Intersection LOS: A				
Intersection Capacity Utilization 63.2%					ICU Level of Service B				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	270	10	66	165	133	6	431	172	52	212	19
Future Volume (veh/h)	70	270	10	66	165	133	6	431	172	52	212	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	74	287	11	70	176	134	6	459	170	55	226	17
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	460	1033	39	473	553	462	116	833	304	240	815	63
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1026	3359	128	1037	1800	1504	9	2394	873	252	2342	181
Grp Volume(v), veh/h	74	146	152	70	176	134	347	0	288	148	0	150
Grp Sat Flow(s),veh/h/ln	1026	1710	1777	1037	1800	1504	1795	0	1481	1174	0	1600
Q Serve(g_s), s	1.9	2.1	2.1	1.8	2.4	2.2	0.0	0.0	5.1	0.3	0.0	2.2
Cycle Q Clear(g_c), s	4.4	2.1	2.1	3.9	2.4	2.2	5.1	0.0	5.1	5.4	0.0	2.2
Prop In Lane	1.00		0.07	1.00		1.00	0.02		0.59	0.37		0.11
Lane Grp Cap(c), veh/h	460	526	546	473	553	462	737	0	515	561	0	557
V/C Ratio(X)	0.16	0.28	0.28	0.15	0.32	0.29	0.47	0.00	0.56	0.26	0.00	0.27
Avail Cap(c_a), veh/h	1414	2116	2199	1438	2227	1861	3881	0	3127	2742	0	3379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	8.5	8.5	10.0	8.6	8.6	8.6	0.0	8.6	7.6	0.0	7.6
Incr Delay (d2), s/veh	0.2	0.3	0.3	0.1	0.3	0.3	0.5	0.0	1.0	0.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.5	0.5	0.3	0.6	0.4	1.2	0.0	1.0	0.4	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	8.8	8.8	10.1	9.0	8.9	9.0	0.0	9.5	7.8	0.0	7.9
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		372			380			635			298	
Approach Delay, s/veh		9.1			9.2			9.3			7.9	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		16.7		15.8		16.7		15.8				
Change Period (Y+Rc), s		5.4		5.8		5.4		5.8				
Max Green Setting (Gmax), s		68.6		40.2		68.6		40.2				
Max Q Clear Time (g_c+I1), s		7.1		6.4		7.4		5.9				
Green Ext Time (p_c), s		4.2		1.9		2.0		1.7				
Intersection Summary												
HCM 6th Ctrl Delay				9.0								
HCM 6th LOS				A								

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	Ø3
Lane Configurations									
Traffic Volume (vph)	54	439	347	80	1	2	53	2	
Future Volume (vph)	54	439	347	80	1	2	53	2	
Turn Type	Prot	NA	NA	Perm	Prot	NA	Prot	NA	
Protected Phases	7	4	8		5	2	1	6	3
Permitted Phases				8					
Detector Phase	7	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	22.8	22.8	22.8	9.6	31.4	9.6	29.4	9.6
Total Split (s)	23.0	53.4	40.0	40.0	13.0	33.0	24.0	44.0	9.6
Total Split (%)	19.2%	44.5%	33.3%	33.3%	10.8%	27.5%	20.0%	36.7%	8%
Yellow Time (s)	3.6	4.8	4.8	4.8	3.6	4.4	3.6	4.4	3.6
All-Red Time (s)	1.0	1.0	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	0.0	
Total Lost Time (s)	4.6	5.8	5.8	5.8	4.6	5.4	4.6	5.4	
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min	None
Act Effect Green (s)	7.0	18.5	12.5	12.5	5.5	11.0	7.0	15.6	
Actuated g/C Ratio	0.15	0.39	0.26	0.26	0.12	0.23	0.15	0.33	
v/c Ratio	0.24	0.34	0.40	0.16	0.01	0.02	0.23	0.06	
Control Delay	25.6	11.2	18.9	0.6	26.0	16.3	25.5	8.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	25.6	11.2	18.9	0.6	26.0	16.3	25.5	8.7	
LOS	C	B	B	A	C	B	C	A	
Approach Delay		12.8	15.5			17.5		19.7	
Approach LOS		B	B			B		B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 47.8

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.40

Intersection Signal Delay: 14.5

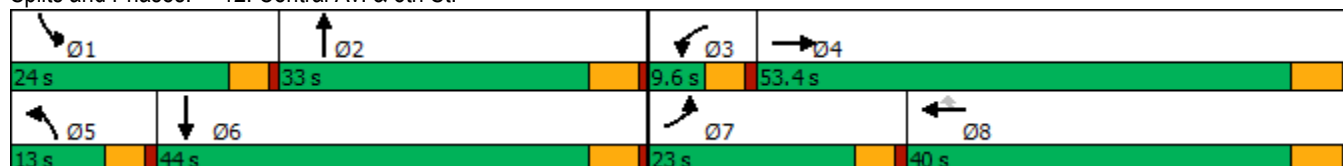
Intersection LOS: B

Intersection Capacity Utilization 40.2%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.



HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	439	0	0	347	80	1	2	5	53	2	26
Future Volume (veh/h)	54	439	0	0	347	80	1	2	5	53	2	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	55	448	0	0	354	71	1	2	2	54	2	14
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	89	1300	0	4	767	340	4	181	181	88	53	370
Arrive On Green	0.06	0.38	0.00	0.00	0.22	0.22	0.00	0.22	0.22	0.05	0.27	0.27
Sat Flow, veh/h	1619	3510	0	1619	3420	1515	1619	826	826	1619	194	1361
Grp Volume(v), veh/h	55	448	0	0	354	71	1	0	4	54	0	16
Grp Sat Flow(s),veh/h/ln	1619	1710	0	1619	1710	1515	1619	0	1651	1619	0	1555
Q Serve(g_s), s	1.5	4.3	0.0	0.0	4.1	1.7	0.0	0.0	0.1	1.5	0.0	0.3
Cycle Q Clear(g_c), s	1.5	4.3	0.0	0.0	4.1	1.7	0.0	0.0	0.1	1.5	0.0	0.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.50	1.00		0.88
Lane Grp Cap(c), veh/h	89	1300	0	4	767	340	4	0	362	88	0	423
V/C Ratio(X)	0.62	0.34	0.00	0.00	0.46	0.21	0.28	0.00	0.01	0.61	0.00	0.04
Avail Cap(c_a), veh/h	653	3569	0	177	2565	1136	298	0	999	689	0	1316
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.1	10.1	0.0	0.0	15.3	14.4	22.7	0.0	13.9	21.1	0.0	12.2
Incr Delay (d2), s/veh	2.6	0.2	0.0	0.0	0.4	0.3	15.2	0.0	0.0	2.6	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.1	0.0	0.0	1.3	0.5	0.0	0.0	0.0	0.5	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	10.2	0.0	0.0	15.7	14.7	38.0	0.0	13.9	23.7	0.0	12.2
LnGrp LOS	C	B	A	A	B	B	D	A	B	C	A	B
Approach Vol, veh/h		503			425			5			70	
Approach Delay, s/veh		11.7			15.6			18.8			21.1	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	15.4	0.0	23.1	4.7	17.8	7.1	16.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	19.4	27.6	5.0	47.6	8.4	38.6	18.4	34.2				
Max Q Clear Time (g_c+I1), s	3.5	2.1	0.0	6.3	2.0	2.3	3.5	6.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.9	0.0	0.0	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay			14.0									
HCM 6th LOS			B									

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	47	400	186	299	96	478	139	306
Future Volume (vph)	47	400	186	299	96	478	139	306
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	14.2	32.8	26.0	44.6	19.3	40.2	21.0	41.9
Total Split (%)	11.8%	27.3%	21.7%	37.2%	16.1%	33.5%	17.5%	34.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	7.6	21.0	16.7	32.8	10.8	28.3	13.3	33.9
Actuated g/C Ratio	0.08	0.21	0.17	0.33	0.11	0.28	0.13	0.34
v/c Ratio	0.42	0.74	0.76	0.43	0.60	0.82	0.71	0.33
Control Delay	61.2	44.6	61.7	26.1	62.4	39.7	64.6	28.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.2	44.6	61.7	26.1	62.4	39.7	64.6	28.2
LOS	E	D	E	C	E	D	E	C
Approach Delay		46.1		36.8		42.4		38.7
Approach LOS		D		D		D		D

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 100.9

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 41.0

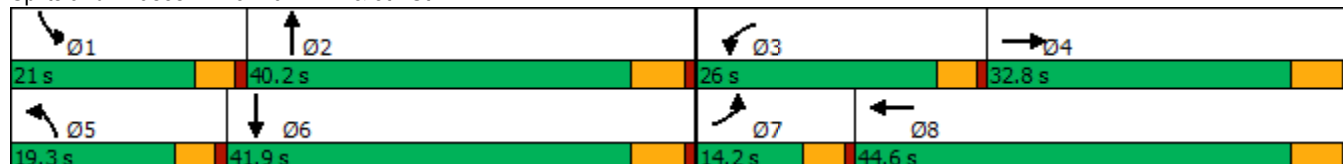
Intersection LOS: D

Intersection Capacity Utilization 74.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

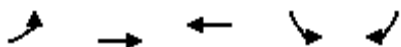
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	400	78	186	299	136	96	478	246	139	306	37
Future Volume (veh/h)	47	400	78	186	299	136	96	478	246	139	306	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	51	435	53	202	325	125	104	520	228	151	333	25
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	69	591	72	239	719	271	130	658	287	184	1024	76
Arrive On Green	0.04	0.19	0.19	0.15	0.30	0.30	0.08	0.28	0.28	0.11	0.32	0.32
Sat Flow, veh/h	1619	3066	371	1619	2418	911	1619	2316	1011	1619	3225	241
Grp Volume(v), veh/h	51	242	246	202	228	222	104	383	365	151	176	182
Grp Sat Flow(s),veh/h/ln	1619	1710	1727	1619	1710	1619	1619	1710	1617	1619	1710	1756
Q Serve(g_s), s	2.5	10.5	10.6	9.6	8.6	8.9	5.0	16.4	16.5	7.2	6.2	6.3
Cycle Q Clear(g_c), s	2.5	10.5	10.6	9.6	8.6	8.9	5.0	16.4	16.5	7.2	6.2	6.3
Prop In Lane	1.00		0.22	1.00		0.56	1.00		0.63	1.00		0.14
Lane Grp Cap(c), veh/h	69	329	333	239	509	481	130	486	459	184	543	558
V/C Ratio(X)	0.74	0.73	0.74	0.85	0.45	0.46	0.80	0.79	0.79	0.82	0.32	0.33
Avail Cap(c_a), veh/h	196	583	588	437	837	793	300	742	702	335	779	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.5	30.1	30.1	32.9	22.6	22.7	35.8	26.2	26.2	34.3	20.6	20.6
Incr Delay (d2), s/veh	5.7	3.2	3.2	3.2	0.6	0.7	4.3	3.2	3.6	3.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	4.3	4.4	3.7	3.2	3.2	2.0	6.5	6.2	2.8	2.3	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.2	33.2	33.4	36.1	23.2	23.4	40.1	29.4	29.8	37.8	20.9	20.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h		539			652			852			509	
Approach Delay, s/veh		34.2			27.3			30.9			25.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.6	28.3	16.3	21.1	10.9	31.0	8.0	29.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	34.4	21.4	27.0	14.7	36.1	9.6	38.8				
Max Q Clear Time (g_c+I1), s	9.2	18.5	11.6	12.6	7.0	8.3	4.5	10.9				
Green Ext Time (p_c), s	0.1	3.9	0.2	2.2	0.1	1.9	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay				29.7								
HCM 6th LOS				C								

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↰	↑↑	↑↑	↰	↱
Traffic Volume (vph)	54	762	599	81	37
Future Volume (vph)	54	762	599	81	37
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	22.0	83.0	61.0	37.0	37.0
Total Split (%)	18.3%	69.2%	50.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	6.9	32.1	25.6	10.9	10.9
Actuated g/C Ratio	0.14	0.67	0.54	0.23	0.23
v/c Ratio	0.25	0.36	0.42	0.24	0.10
Control Delay	24.4	5.5	11.6	21.0	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.4	5.5	11.6	21.0	8.7
LOS	C	A	B	C	A
Approach Delay		6.8	11.6	17.1	
Approach LOS		A	B	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 47.7

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 9.6

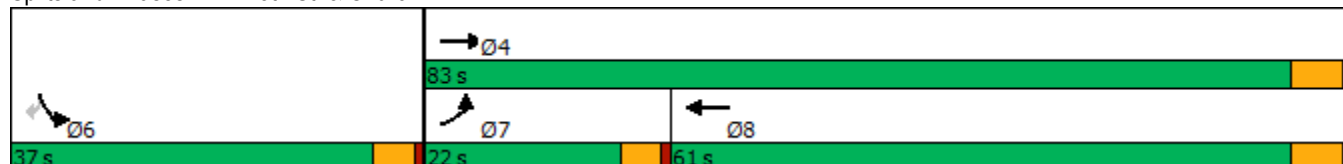
Intersection LOS: A

Intersection Capacity Utilization 45.8%

ICU Level of Service A

Analysis Period (min) 15

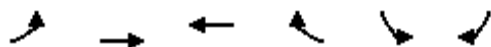
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	54	762	599	99	81	37	
Future Volume (veh/h)	54	762	599	99	81	37	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	59	828	651	94	88	11	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	100	1867	1077	155	280	263	
Arrive On Green	0.06	0.55	0.36	0.36	0.17	0.17	
Sat Flow, veh/h	1619	3510	3080	431	1619	1525	
Grp Volume(v), veh/h	59	828	372	373	88	11	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1711	1619	1525	
Q Serve(g_s), s	1.3	5.4	6.6	6.6	1.8	0.2	
Cycle Q Clear(g_c), s	1.3	5.4	6.6	6.6	1.8	0.2	
Prop In Lane	1.00			0.25	1.00	1.00	
Lane Grp Cap(c), veh/h	100	1867	616	616	280	263	
V/C Ratio(X)	0.59	0.44	0.60	0.61	0.31	0.04	
Avail Cap(c_a), veh/h	762	7143	2554	2556	1419	1337	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.9	5.0	9.7	9.7	13.4	12.7	
Incr Delay (d2), s/veh	2.1	0.2	1.0	1.0	0.6	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	0.6	1.6	1.6	0.5	0.2	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	19.0	5.2	10.6	10.6	14.0	12.8	
LnGrp LOS	B	A	B	B	B	B	
Approach Vol, veh/h							
		887	745	99			
Approach Delay, s/veh							
		6.1	10.6	13.9			
Approach LOS							
		A	B	B			
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				26.0	11.0	6.9	19.1
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				77.2	32.4	17.4	55.2
Max Q Clear Time (g_c+I1), s				7.4	3.8	3.3	8.6
Green Ext Time (p_c), s				6.2	0.2	0.0	4.7
Intersection Summary							
HCM 6th Ctrl Delay			8.5				
HCM 6th LOS			A				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↗
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↗
Traffic Volume (vph)	621	222	208	508	4	189
Future Volume (vph)	621	222	208	508	4	189
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	42.0	42.0	22.0	64.0	56.0	56.0
Total Split (%)	35.0%	35.0%	18.3%	53.3%	46.7%	46.7%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	22.9	22.9	10.9	38.8	25.5	25.5
Actuated g/C Ratio	0.30	0.30	0.14	0.51	0.33	0.33
v/c Ratio	0.65	0.40	0.53	0.31	0.71	0.32
Control Delay	28.0	8.3	38.8	12.5	31.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	8.3	38.8	12.5	31.1	5.6
LOS	C	A	D	B	C	A
Approach Delay	22.8			20.1	22.7	
Approach LOS	C			C	C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 76.7

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 21.9

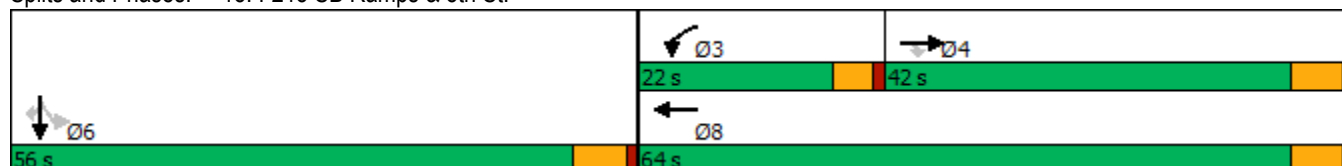
Intersection LOS: C

Intersection Capacity Utilization 61.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	621	222	208	508	0	0	0	0	379	4	189
Future Volume (veh/h)	0	621	222	208	508	0	0	0	0	379	4	189
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	661	163	221	540	0				403	4	96
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1003	441	324	1663	0				516	5	463
Arrive On Green	0.00	0.29	0.29	0.11	0.49	0.00				0.30	0.30	0.30
Sat Flow, veh/h	0	3510	1504	2956	3510	0				1698	17	1525
Grp Volume(v), veh/h	0	661	163	221	540	0				407	0	96
Grp Sat Flow(s),veh/h/ln	0	1710	1504	1478	1710	0				1715	0	1525
Q Serve(g_s), s	0.0	9.3	4.7	4.0	5.3	0.0				12.0	0.0	2.6
Cycle Q Clear(g_c), s	0.0	9.3	4.7	4.0	5.3	0.0				12.0	0.0	2.6
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	1003	441	324	1663	0				521	0	463
V/C Ratio(X)	0.00	0.66	0.37	0.68	0.32	0.00				0.78	0.00	0.21
Avail Cap(c_a), veh/h	0	2243	987	932	3606	0				1560	0	1387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	17.1	15.5	23.7	8.7	0.0				17.5	0.0	14.3
Incr Delay (d2), s/veh	0.0	0.7	0.5	1.0	0.1	0.0				2.6	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.1	1.4	1.2	1.4	0.0				4.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	17.8	16.0	24.6	8.8	0.0				20.1	0.0	14.5
LnGrp LOS	A	B	B	C	A	A				C	A	B
Approach Vol, veh/h		824			761						503	
Approach Delay, s/veh		17.5			13.4						19.1	
Approach LOS		B			B						B	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			10.6	22.0		22.6		32.6				
Change Period (Y+Rc), s			4.6	5.8		5.8		5.8				
Max Green Setting (Gmax), s			17.4	36.2		50.2		58.2				
Max Q Clear Time (g_c+I1), s			6.0	11.3		14.0		7.3				
Green Ext Time (p_c), s			0.3	4.8		2.8		3.6				
Intersection Summary												
HCM 6th Ctrl Delay			16.4									
HCM 6th LOS			B									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	177	823	506	334	210	3	349
Future Volume (vph)	177	823	506	334	210	3	349
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	36.0	83.0	47.0	47.0	37.0	37.0	37.0
Total Split (%)	30.0%	69.2%	39.2%	39.2%	30.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	11.2	30.0	14.1	14.1	11.9	11.9	11.9
Actuated g/C Ratio	0.21	0.56	0.26	0.26	0.22	0.22	0.22
v/c Ratio	0.55	0.45	0.42	0.54	0.33	0.31	0.45
Control Delay	27.0	7.9	18.2	6.0	22.9	22.3	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	7.9	18.2	6.0	22.9	22.3	6.1
LOS	C	A	B	A	C	C	A
Approach Delay		11.3	13.4			12.3	
Approach LOS		B	B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 53.8

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 12.2

Intersection LOS: B

Intersection Capacity Utilization 61.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	177	823	0	0	506	334	210	3	349	0	0	0
Future Volume (veh/h)	177	823	0	0	506	334	210	3	349	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	186	866	0	0	533	220	223	0	119			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	234	1764	0	0	1316	403	726	0	646			
Arrive On Green	0.14	0.52	0.00	0.00	0.27	0.27	0.22	0.00	0.22			
Sat Flow, veh/h	1619	3510	0	0	5076	1506	3238	0	2881			
Grp Volume(v), veh/h	186	866	0	0	533	220	223	0	119			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1506	1619	0	1441			
Q Serve(g_s), s	5.0	7.3	0.0	0.0	4.0	5.6	2.6	0.0	1.5			
Cycle Q Clear(g_c), s	5.0	7.3	0.0	0.0	4.0	5.6	2.6	0.0	1.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	234	1764	0	0	1316	403	726	0	646			
V/C Ratio(X)	0.79	0.49	0.00	0.00	0.40	0.55	0.31	0.00	0.18			
Avail Cap(c_a), veh/h	1140	5919	0	0	4539	1391	2265	0	2015			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	18.4	7.0	0.0	0.0	13.4	14.0	14.4	0.0	14.0			
Incr Delay (d2), s/veh	2.3	0.2	0.0	0.0	0.2	1.2	0.2	0.0	0.1			
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	1.6	1.4	0.0	0.0	1.1	1.5	0.7	0.0	0.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.7	7.2	0.0	0.0	13.6	15.2	14.7	0.0	14.1			
LnGrp LOS	C	A	A	A	B	B	B	A	B			
Approach Vol, veh/h	1052			753			342					
Approach Delay, s/veh	9.6			14.1			14.5					
Approach LOS	A			B			B					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	15.8			28.8			11.1			17.7		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	31.2			77.2			31.4			41.2		
Max Q Clear Time (g_c+I1), s	4.6			9.3			7.0			7.6		
Green Ext Time (p_c), s	1.2			6.6			0.2			4.4		
Intersection Summary												
HCM 6th Ctrl Delay	11.9											
HCM 6th LOS	B											
Notes												

APPENDIX 5.2: E+P CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **E+P Conditions - Weekday AM Peak Hour**

Major Street Name = **Sterling Av.**

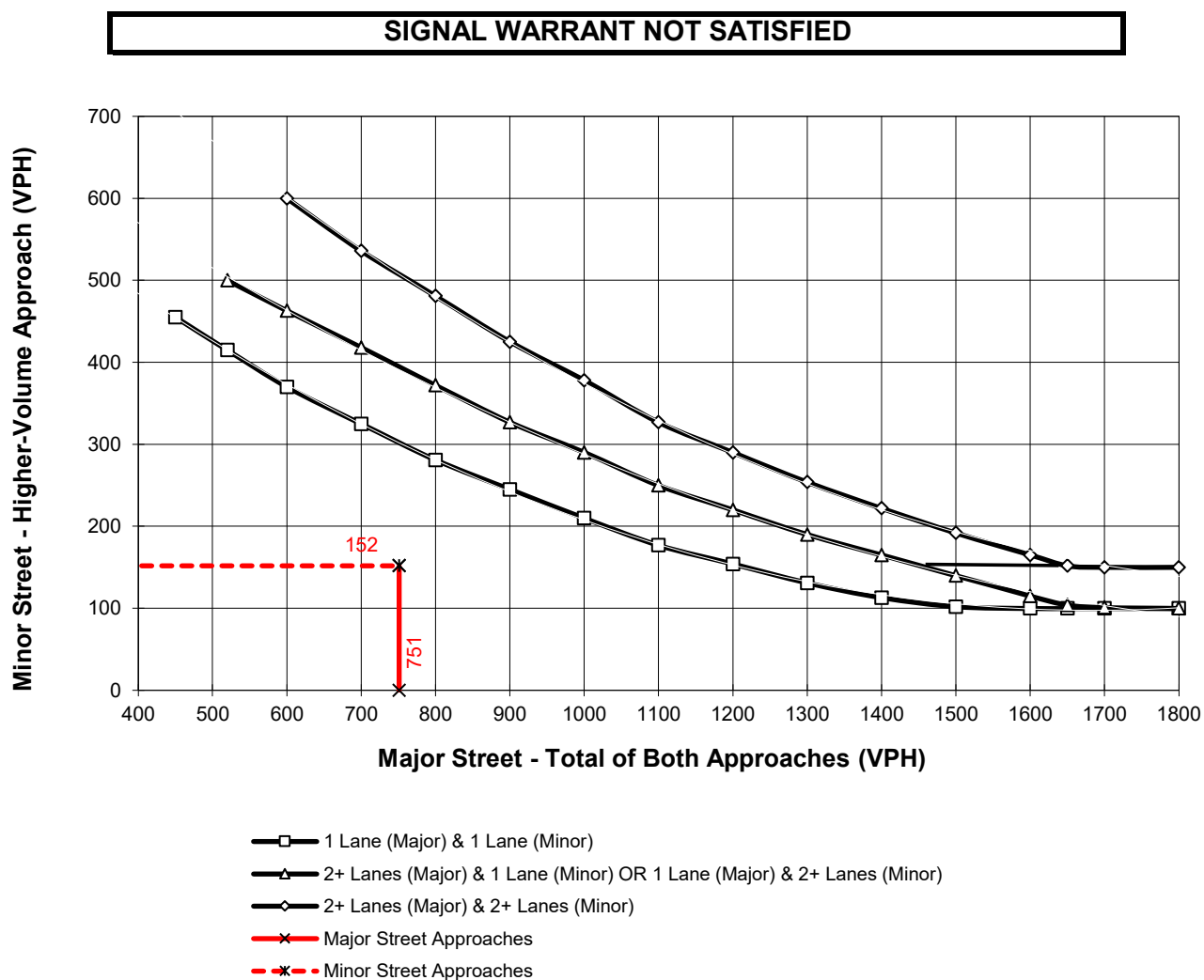
Total of Both Approaches (VPH) = **751**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **5th St.**

High Volume Approach (VPH) = **152**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **E+P Conditions - Weekday AM Peak Hour**

Major Street Name = **6th St.**

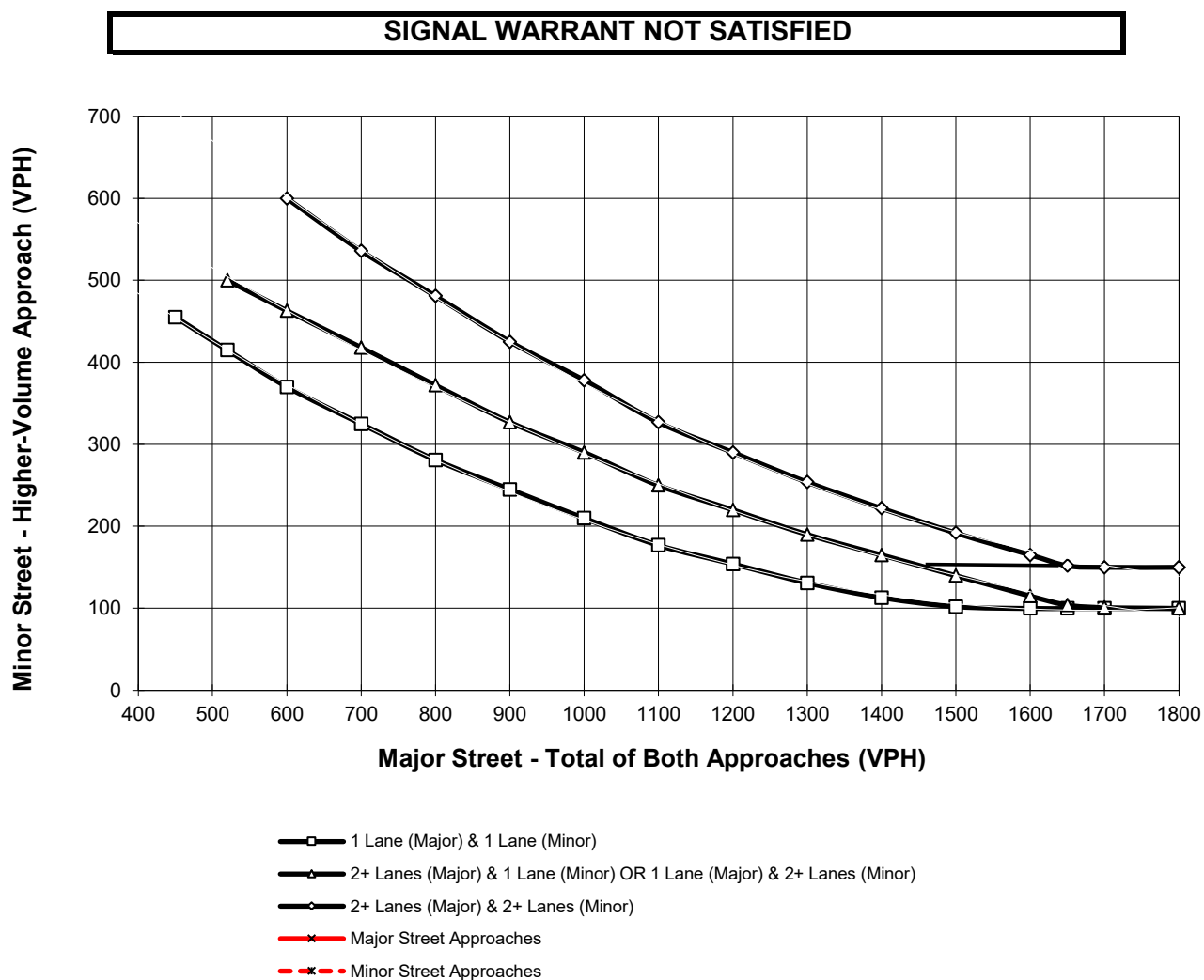
Total of Both Approaches (VPH) = **188**

Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **59**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

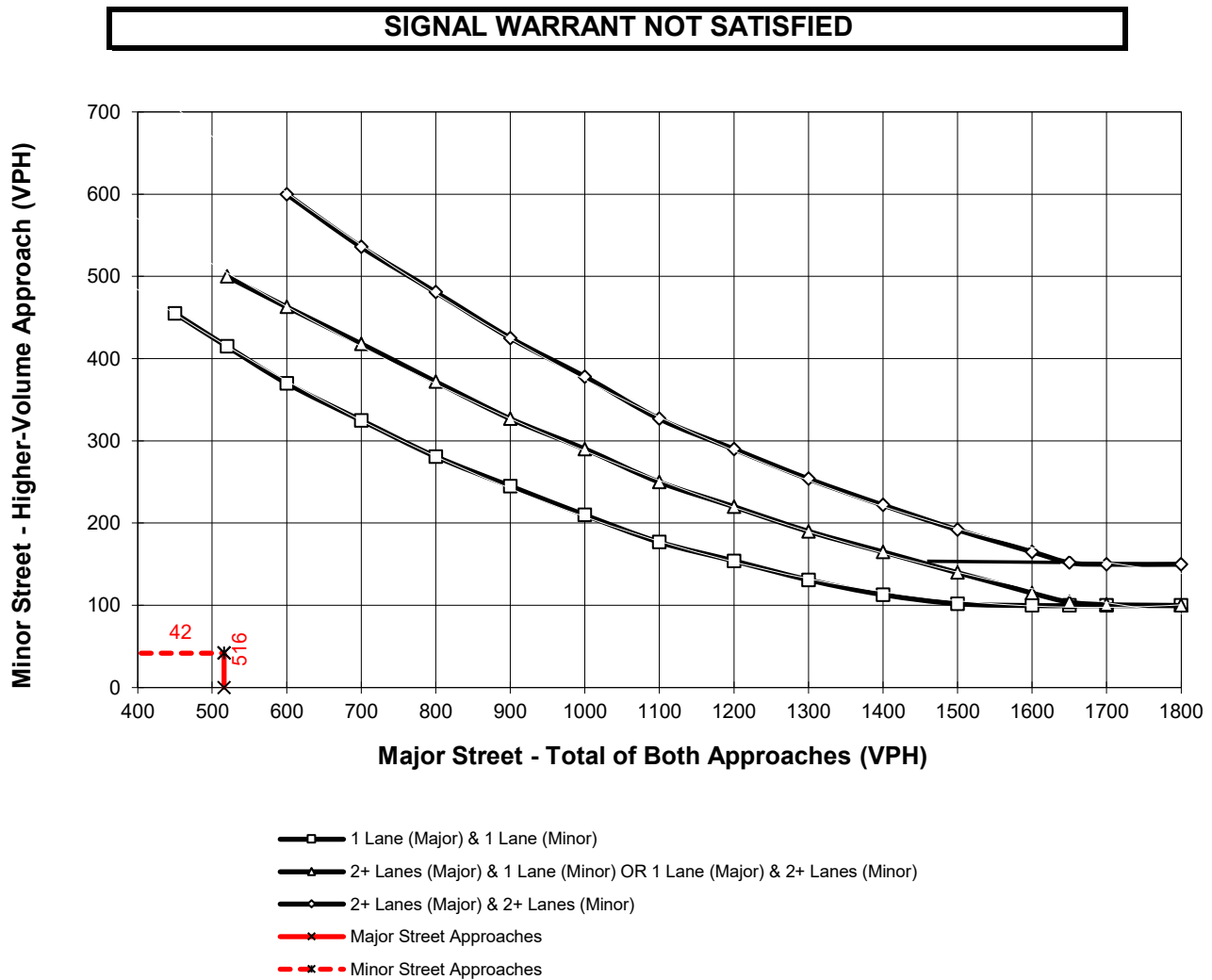
Traffic Conditions = **E+P Conditions - Weekday PM Peak Hour**

Major Street Name = **5th St.**

Total of Both Approaches (VPH) = **516**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **42**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	DATE	E+P
Jurisdiction: <u>City of San Bernardino</u>				CHK <u>CP</u>		DATE <u>12/14/11</u>	
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major)		<u>45</u> mph	
Minor Street: <u>Driveway 1</u>				Critical Approach Speed (Minor)		<u>25</u> mph	
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane			
Major Street Future ADT = <u>10,825</u> vpd				Minor Street Future ADT = <u>98</u> vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒	RURAL (R)
						or	
In built up area of isolated community of < 10,000 population						☐	

(Based on Estimated Average Daily Traffic - See Note)

URBAN		RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		8,000	5,600	2,400	1,680
<u>2 + 10,825</u>		<u>1 98</u>		9,600	6,720 *	2,400	1,680
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		12,000	8,400	1,200	850
<u>2 + 10,825</u>		<u>1 98</u>		14,400	10,080 *	1,200	850
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>	<u>B</u>				
		6%	12%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	DATE	E+P
Jurisdiction: <u>City of San Bernardino</u>				CHK <u>CP</u>		DATE <u>12/14/11</u>	
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major)		<u>45</u> mph	
Minor Street: <u>Driveway 2</u>				Critical Approach Speed (Minor)		<u>25</u> mph	
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane			
Major Street Future ADT = <u>11,023</u> vpd				Minor Street Future ADT = <u>132</u> vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒	RURAL (R)
In built up area of isolated community of < 10,000 population						☐	

(Based on Estimated Average Daily Traffic - See Note)

URBAN		RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		8,000	5,600	2,400	1,680
<u>2 + 11,023</u>		<u>1 132</u>		9,600	6,720 *	2,400	1,680
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		12,000	8,400	1,200	850
<u>2 + 11,023</u>		<u>1 132</u>		14,400	10,080 *	1,200	850
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>	<u>B</u>				
		8%	16%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	DATE	E+P
Jurisdiction: <u>City of San Bernardino</u>				CHK <u>CP</u>		DATE <u>12/14/11</u>	
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major)		<u>45</u> mph	
Minor Street: <u>Driveway 3</u>				Critical Approach Speed (Minor)		<u>25</u> mph	
Major Street Approach Lanes = <u>1</u> lane				Minor Street Approach Lanes: <u>1</u> lane			
Major Street Future ADT = <u>3,142</u> vpd				Minor Street Future ADT = <u>26</u> vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒	RURAL (R)
In built up area of isolated community of < 10,000 population						☐	

(Based on Estimated Average Daily Traffic - See Note)

URBAN		RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban		Rural	
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>		<u>Urban</u>	
1 3,142		1 26		8,000		2,400	
2 +		1		9,600		2,400	
2 +		2 +		9,600		3,200	
1		2 +		8,000		3,200	
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>					
		XX					
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban		Rural	
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>		<u>Urban</u>	
1 3,142		1 26		12,000		1,200	
2 +		1		14,400		1,200	
2 +		2 +		14,400		1,600	
1		2 +		12,000		1,600	
Combination of CONDITIONS A + B		XX		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>		<u>Not Satisfied</u>		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more							
		A				B	
		2%				3%	

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	DATE	E+P
Jurisdiction: <u>City of San Bernardino</u>				CHK <u>CP</u>		DATE <u>12/14/11</u>	
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major)		<u>45</u> mph	
Minor Street: <u>Driveway 3</u>				Critical Approach Speed (Minor)		<u>25</u> mph	
Major Street Approach Lanes = <u>1</u> lane				Minor Street Approach Lanes: <u>1</u> lane			
Major Street Future ADT = <u>7,438</u> vpd				Minor Street Future ADT = <u>121</u> vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒	RURAL (R)
In built up area of isolated community of < 10,000 population						☐	

(Based on Estimated Average Daily Traffic - See Note)

URBAN		RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1 7,438</u>		<u>1 121</u>		8,000	5,600 *	2,400	1,680
<u>2 +</u>		<u>1</u>		9,600	6,720	2,400	1,680
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>					
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1 7,438</u>		<u>1 121</u>		12,000	8,400	1,200	850
<u>2 +</u>		<u>1</u>		14,400	10,080	1,200	850
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>		<u>Not Satisfied</u>		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>	<u>B</u>				
		7%	14%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 5.3: E+P CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.

	→	↘	↙	←	↓	↗
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	351	374	574	802	326	258
v/c Ratio	0.49	0.61	0.72	0.43	0.66	0.46
Control Delay	30.6	8.5	31.5	11.3	31.7	11.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	30.6	8.5	31.5	11.3	31.7	11.7
Queue Length 50th (ft)	71	0	115	100	123	28
Queue Length 95th (ft)	154	80	233	198	272	110
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1395	836	1510	3035	1003	961
Starvation Cap Reductn	0	0	0	305	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.45	0.38	0.29	0.33	0.27
Intersection Summary						

Queues

5th & Sterling TA (JN:14057)

16: I-215 NB Ramps & 5th St.

09/13/2023



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	100	482	964	278	156	159	323
v/c Ratio	0.41	0.26	0.53	0.38	0.43	0.41	0.38
Control Delay	33.1	7.1	17.0	4.1	27.1	26.5	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.1	7.1	17.0	4.1	27.1	26.5	4.6
Queue Length 50th (ft)	33	38	97	0	51	52	0
Queue Length 95th (ft)	96	81	181	47	132	133	33
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	655	3325	3869	1247	950	1009	1698
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.14	0.25	0.22	0.16	0.16	0.19
Intersection Summary							

Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.

	→	↘	↙	←	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	661	236	221	540	407	201
v/c Ratio	0.65	0.40	0.53	0.31	0.71	0.32
Control Delay	28.0	8.3	38.8	12.5	31.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	8.3	38.8	12.5	31.1	5.6
Queue Length 50th (ft)	137	12	48	72	159	4
Queue Length 95th (ft)	265	78	113	147	335	53
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1724	857	714	2678	1198	1125
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.28	0.31	0.20	0.34	0.18
Intersection Summary						

Queues

5th & Sterling TA (JN:14057)

09/13/2023

16: I-215 NB Ramps & 5th St.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	186	866	533	352	113	111	367
v/c Ratio	0.55	0.45	0.42	0.54	0.33	0.31	0.45
Control Delay	27.0	7.9	18.2	6.0	22.9	22.3	6.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	7.9	18.2	6.0	22.9	22.3	6.1
Queue Length 50th (ft)	50	68	48	0	30	30	5
Queue Length 95th (ft)	125	130	95	57	86	84	42
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	969	3420	3869	1264	914	972	1649
Starvation Cap Reductn	0	89	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.26	0.14	0.28	0.12	0.11	0.22
Intersection Summary							

APPENDIX 6.1: EA (2026) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	9.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	52	84	20	21	97	19	11	197	17	34	489	49
Future Vol, veh/h	52	84	20	21	97	19	11	197	17	34	489	49
Conflicting Peds, #/hr	0	0	0	0	0	2	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	-	-	-	-	-	-	-	-	-	-	-	200
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	56	90	22	23	104	20	12	212	18	37	526	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	784	854	263	627	898	117	579	0	0	230	0	0
Stage 1	600	600	-	245	245	-	-	-	-	-	-	-
Stage 2	184	254	-	382	653	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	287	298	742	372	281	919	1005	-	-	1350	-	-
Stage 1	459	493	-	743	707	-	-	-	-	-	-	-
Stage 2	806	701	-	618	467	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	187	282	742	261	266	917	1005	-	-	1350	-	-
Mov Cap-2 Maneuver	187	282	-	261	266	-	-	-	-	-	-	-
Stage 1	453	473	-	733	697	-	-	-	-	-	-	-
Stage 2	659	691	-	466	448	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	41.3		28.9		0.5		0.5	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1005	-	-	259 294	1350	-	-
HCM Lane V/C Ratio	0.012	-	-	0.648 0.501	0.027	-	-
HCM Control Delay (s)	8.6	0.1	-	41.3 28.9	7.7	0.1	-
HCM Lane LOS	A	A	-	E D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	4.1 2.6	0.1	-	-

Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	100	37	280	2	175	24	426
Future Volume (vph)	25	100	37	280	2	175	24	426
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	54.0	54.0	54.0	54.0	66.0	66.0	66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%	45.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		11.1		11.1	12.6	12.6	12.6	12.6
Actuated g/C Ratio		0.32		0.32	0.36	0.36	0.36	0.36
v/c Ratio		0.18		0.40	0.01	0.17	0.07	0.47
Control Delay		9.0		10.9	7.5	7.8	8.0	9.6
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		9.0		10.9	7.5	7.8	8.0	9.6
LOS		A		B	A	A	A	A
Approach Delay		9.0		10.9		7.8		9.5
Approach LOS		A		B		A		A
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 34.7								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.47								
Intersection Signal Delay: 9.6				Intersection LOS: A				
Intersection Capacity Utilization 53.7%				ICU Level of Service A				
Analysis Period (min) 15								

Splits and Phases: 4: Sterling Av. & 5th St.

	
Ø2	Ø4
66 s	54 s
	
Ø6	Ø8
66 s	54 s

HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

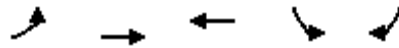
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	100	15	37	280	25	2	175	8	24	426	80
Future Volume (veh/h)	25	100	15	37	280	25	2	175	8	24	426	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	29	115	14	43	322	20	2	201	7	28	490	76
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	263	814	98	204	953	57	390	1098	38	553	967	149
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	326	2523	304	192	2956	178	811	3372	117	1126	2969	458
Grp Volume(v), veh/h	85	0	73	205	0	180	2	102	106	28	281	285
Grp Sat Flow(s),veh/h/ln	1569	0	1583	1722	0	1603	811	1710	1779	1126	1710	1717
Q Serve(g_s), s	0.0	0.0	1.0	0.0	0.0	2.6	0.1	1.3	1.3	0.6	4.1	4.1
Cycle Q Clear(g_c), s	1.0	0.0	1.0	2.7	0.0	2.6	4.2	1.3	1.3	1.9	4.1	4.1
Prop In Lane	0.34		0.19	0.21		0.11	1.00		0.07	1.00		0.27
Lane Grp Cap(c), veh/h	663	0	511	697	0	517	390	557	579	553	557	559
V/C Ratio(X)	0.13	0.00	0.14	0.29	0.00	0.35	0.01	0.18	0.18	0.05	0.50	0.51
Avail Cap(c_a), veh/h	2492	0	2506	2789	0	2538	1726	3375	3511	2409	3375	3390
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	7.4	8.0	0.0	7.9	10.1	7.4	7.4	8.1	8.4	8.4
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.2	0.0	0.4	0.0	0.2	0.2	0.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.6	0.0	0.5	0.0	0.3	0.3	0.1	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	7.5	8.2	0.0	8.3	10.1	7.6	7.6	8.1	9.1	9.1
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		158			385			210			594	
Approach Delay, s/veh		7.5			8.3			7.6			9.0	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.3		15.4		15.3				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		60.6		48.6		60.6		48.6				
Max Q Clear Time (g_c+I1), s		6.2		3.0		6.1		4.7				
Green Ext Time (p_c), s		1.2		0.9		3.7		2.3				
Intersection Summary												
HCM 6th Ctrl Delay				8.4								
HCM 6th LOS				A								

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023

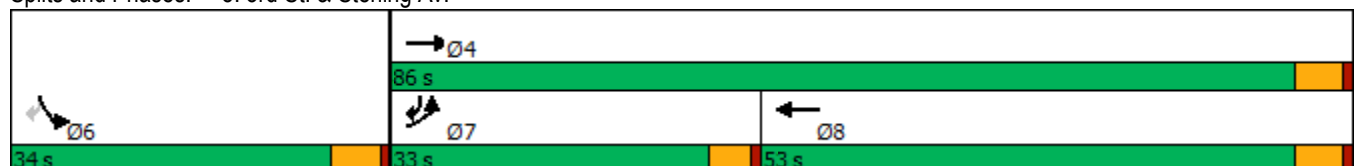


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	153	332	691	100	378
Future Volume (vph)	153	332	691	100	378
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	33.0	86.0	53.0	34.0	33.0
Total Split (%)	27.5%	71.7%	44.2%	28.3%	27.5%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	13.1	42.8	24.8	12.3	31.2
Actuated g/C Ratio	0.20	0.64	0.37	0.18	0.47
v/c Ratio	0.58	0.18	0.69	0.40	0.36
Control Delay	34.0	4.8	21.1	32.1	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.0	4.8	21.1	32.1	9.8
LOS	C	A	C	C	A
Approach Delay		14.0	21.1	14.4	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 66.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 17.2
Intersection Capacity Utilization 51.9%
Analysis Period (min) 15
Intersection LOS: B
ICU Level of Service A

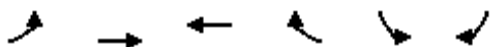
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	153	332	691	33	100	378
Future Volume (veh/h)	153	332	691	33	100	378
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700
Adj Flow Rate, veh/h	184	400	833	40	120	168
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	230	2040	1212	58	314	852
Arrive On Green	0.14	0.60	0.37	0.37	0.19	0.19
Sat Flow, veh/h	1619	3510	3407	159	1619	2536
Grp Volume(v), veh/h	184	400	429	444	120	168
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1767	1619	1268
Q Serve(g_s), s	5.7	2.8	11.0	11.0	3.3	2.4
Cycle Q Clear(g_c), s	5.7	2.8	11.0	11.0	3.3	2.4
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	230	2040	625	645	314	852
V/C Ratio(X)	0.80	0.20	0.69	0.69	0.38	0.20
Avail Cap(c_a), veh/h	892	5346	1579	1631	898	1767
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.4	4.8	13.9	13.9	18.1	12.2
Incr Delay (d2), s/veh	2.4	0.0	1.4	1.3	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.6	3.5	3.6	1.1	2.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.9	4.8	15.2	15.2	18.9	12.3
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		584	873		288	
Approach Delay, s/veh		10.8	15.2		15.0	
Approach LOS		B	B		B	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			36.2		15.4	11.9
Change Period (Y+Rc), s			5.4		5.4	4.6
Max Green Setting (Gmax), s			80.6		28.6	28.4
Max Q Clear Time (g_c+I1), s			4.8		5.3	7.7
Green Ext Time (p_c), s			2.7		0.9	0.2
Intersection Summary						
HCM 6th Ctrl Delay			13.7			
HCM 6th LOS			B			

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	17	91	4	9	95	1	5	15	2	7	34	23
Future Vol, veh/h	17	91	4	9	95	1	5	15	2	7	34	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	19	101	4	10	106	1	6	17	2	8	38	26
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	107	0	0	105	0	0	298	266	101	278	270	107
Stage 1	-	-	-	-	-	-	139	139	-	127	127	-
Stage 2	-	-	-	-	-	-	159	127	-	151	143	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1497	-	-	1499	-	-	658	643	960	678	640	953
Stage 1	-	-	-	-	-	-	869	785	-	882	795	-
Stage 2	-	-	-	-	-	-	848	795	-	856	782	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1497	-	-	1499	-	-	601	630	960	653	627	953
Mov Cap-2 Maneuver	-	-	-	-	-	-	601	630	-	653	627	-
Stage 1	-	-	-	-	-	-	858	775	-	871	789	-
Stage 2	-	-	-	-	-	-	780	789	-	825	772	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.6			10.8			10.6		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	643	1497	-	-	1499	-	-	718				
HCM Lane V/C Ratio	0.038	0.013	-	-	0.007	-	-	0.099				
HCM Control Delay (s)	10.8	7.4	0	-	7.4	0	-	10.6				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	5	123	0	3	327	5	0	12	7	10	19	19
Future Vol, veh/h	5	123	0	3	327	5	0	12	7	10	19	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	150	0	4	399	6	0	15	9	12	23	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	405	0	0	150	0	0	595	575	150	584	572	402
Stage 1	-	-	-	-	-	-	162	162	-	410	410	-
Stage 2	-	-	-	-	-	-	433	413	-	174	162	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1165	-	-	1444	-	-	419	431	902	426	433	653
Stage 1	-	-	-	-	-	-	845	768	-	623	599	-
Stage 2	-	-	-	-	-	-	605	597	-	833	768	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1165	-	-	1444	-	-	385	427	902	408	429	653
Mov Cap-2 Maneuver	-	-	-	-	-	-	385	427	-	408	429	-
Stage 1	-	-	-	-	-	-	840	763	-	619	597	-
Stage 2	-	-	-	-	-	-	559	595	-	804	763	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			12			13.3		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	427	902	1165	-	-	1444	-	-	490			
HCM Lane V/C Ratio	0.034	0.009	0.005	-	-	0.003	-	-	0.119			
HCM Control Delay (s)	13.7	9	8.1	0	-	7.5	0	-	13.3			
HCM Lane LOS	B	A	A	A	-	A	A	-	B			
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0.4			

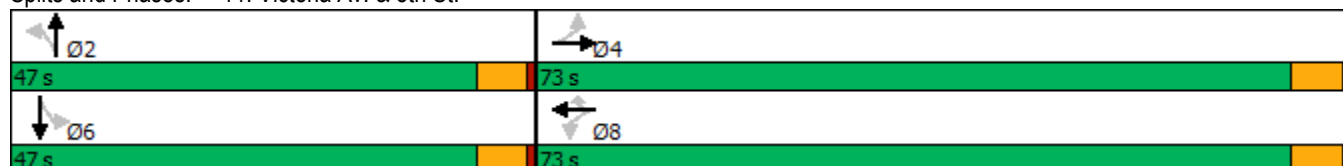
Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	110	270	303	81	1	94	78	320
Future Volume (vph)	21	110	270	303	81	1	94	78	320
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	73.0	73.0	73.0	73.0	73.0	47.0	47.0	47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%	60.8%	60.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	22.3	22.3	22.3	22.3	22.3		15.6		15.6
Actuated g/C Ratio	0.45	0.45	0.45	0.45	0.45		0.31		0.31
v/c Ratio	0.06	0.09	0.63	0.44	0.13		0.16		0.56
Control Delay	8.8	7.7	17.5	11.6	2.8		11.2		18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	8.8	7.7	17.5	11.6	2.8		11.2		18.0
LOS	A	A	B	B	A		B		B
Approach Delay		7.9		12.9			11.2		18.0
Approach LOS		A		B			B		B
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 50									
Natural Cycle: 60									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.63									
Intersection Signal Delay: 13.9					Intersection LOS: B				
Intersection Capacity Utilization 58.4%					ICU Level of Service B				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	110	9	270	303	81	1	94	39	78	320	32
Future Volume (veh/h)	21	110	9	270	303	81	1	94	39	78	320	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	25	129	10	318	356	87	1	111	42	92	376	36
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	438	1310	101	659	733	612	103	674	241	250	717	68
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	908	3218	247	1199	1800	1505	5	2410	863	410	2563	243
Grp Volume(v), veh/h	25	68	71	318	356	87	82	0	72	268	0	236
Grp Sat Flow(s),veh/h/ln	908	1710	1756	1199	1800	1505	1796	0	1483	1621	0	1594
Q Serve(g_s), s	0.7	0.9	0.9	8.0	5.2	1.3	0.0	0.0	1.3	2.5	0.0	4.5
Cycle Q Clear(g_c), s	6.0	0.9	0.9	8.9	5.2	1.3	1.2	0.0	1.3	4.9	0.0	4.5
Prop In Lane	1.00		0.14	1.00		1.00	0.01		0.58	0.34		0.15
Lane Grp Cap(c), veh/h	438	696	715	659	733	612	604	0	415	589	0	446
V/C Ratio(X)	0.06	0.10	0.10	0.48	0.49	0.14	0.14	0.00	0.17	0.46	0.00	0.53
Avail Cap(c_a), veh/h	1776	3214	3300	2425	3383	2828	2180	0	1725	1973	0	1855
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.0	6.5	6.6	9.3	7.8	6.7	9.7	0.0	9.7	11.0	0.0	10.9
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.5	0.5	0.1	0.1	0.0	0.2	0.6	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.2	1.2	1.1	0.2	0.3	0.0	0.3	1.3	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.1	6.6	6.6	9.8	8.3	6.8	9.8	0.0	9.9	11.5	0.0	11.9
LnGrp LOS	B	A	A	A	A	A	A	A	A	B	A	B
Approach Vol, veh/h		164			761			154			504	
Approach Delay, s/veh		7.1			8.8			9.9			11.7	
Approach LOS		A			A			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		20.4		15.4		20.4				
Change Period (Y+Rc), s		5.4		5.8		5.4		5.8				
Max Green Setting (Gmax), s		41.6		67.2		41.6		67.2				
Max Q Clear Time (g_c+I1), s		3.3		8.0		6.9		10.9				
Green Ext Time (p_c), s		0.8		0.9		3.1		3.7				
Intersection Summary												
HCM 6th Ctrl Delay				9.6								
HCM 6th LOS				A								

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	9	216	1	620	39	2	1	46	0
Future Volume (vph)	9	216	1	620	39	2	1	46	0
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	9.6	22.8	22.8	9.6	31.4	9.6	29.4
Total Split (s)	12.0	54.0	12.0	54.0	54.0	12.0	34.0	20.0	42.0
Total Split (%)	10.0%	45.0%	10.0%	45.0%	45.0%	10.0%	28.3%	16.7%	35.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effect Green (s)	5.7	17.8	5.5	17.7	17.7	5.5	11.0	6.9	16.0
Actuated g/C Ratio	0.12	0.37	0.11	0.36	0.36	0.11	0.23	0.14	0.33
v/c Ratio	0.06	0.21	0.01	0.59	0.07	0.01	0.00	0.23	0.07
Control Delay	27.3	12.2	28.0	15.8	0.2	28.0	24.0	26.3	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	12.2	28.0	15.8	0.2	28.0	24.0	26.3	0.2
LOS	C	B	C	B	A	C	C	C	A
Approach Delay		12.8		14.9			26.7		13.5
Approach LOS		B		B			C		B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 48.6

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 14.3

Intersection LOS: B

Intersection Capacity Utilization 36.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.

			
20 s	34 s	12 s	54 s
			
12 s	42 s	12 s	54 s

HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	216	7	1	620	39	2	1	0	46	0	44
Future Volume (veh/h)	9	216	7	1	620	39	2	1	0	46	0	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	11	254	8	1	729	46	2	1	0	54	0	20
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	23	1151	36	3	1120	488	4	359	0	85	0	375
Arrive On Green	0.01	0.34	0.34	0.00	0.33	0.33	0.00	0.20	0.00	0.05	0.00	0.25
Sat Flow, veh/h	1619	3385	106	1619	3420	1490	1619	1800	0	1619	0	1506
Grp Volume(v), veh/h	11	128	134	1	729	46	2	1	0	54	0	20
Grp Sat Flow(s),veh/h/ln	1619	1710	1781	1619	1710	1490	1619	1800	0	1619	0	1506
Q Serve(g_s), s	0.3	2.7	2.7	0.0	9.1	1.1	0.1	0.0	0.0	1.6	0.0	0.5
Cycle Q Clear(g_c), s	0.3	2.7	2.7	0.0	9.1	1.1	0.1	0.0	0.0	1.6	0.0	0.5
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	23	582	606	3	1120	488	4	359	0	85	0	375
V/C Ratio(X)	0.48	0.22	0.22	0.31	0.65	0.09	0.45	0.00	0.00	0.63	0.00	0.05
Avail Cap(c_a), veh/h	239	1642	1710	239	3285	1431	239	1026	0	497	0	1098
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.6	11.8	11.8	25.0	14.4	11.7	25.0	16.1	0.0	23.3	0.0	14.3
Incr Delay (d2), s/veh	5.7	0.2	0.2	19.0	0.6	0.1	24.3	0.0	0.0	2.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.8	0.8	0.0	2.8	0.3	0.1	0.0	0.0	0.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.2	12.0	12.0	44.0	15.1	11.8	49.3	16.1	0.0	26.2	0.0	14.4
LnGrp LOS	C	B	B	D	B	B	D	B	A	C	A	B
Approach Vol, veh/h	273			776			3			74		
Approach Delay, s/veh	12.7			14.9			38.3			23.0		
Approach LOS	B			B			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	15.4	4.7	22.9	4.7	17.9	5.3	22.2				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	15.4	28.6	7.4	48.2	7.4	36.6	7.4	48.2				
Max Q Clear Time (g_c+I1), s	3.6	2.0	2.0	4.7	2.1	2.5	2.3	11.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.1	0.0	5.3				
Intersection Summary												
HCM 6th Ctrl Delay	15.0											
HCM 6th LOS	B											

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)
09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	13	204	279	503	54	191	144	420
Future Volume (vph)	13	204	279	503	54	191	144	420
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	9.6	32.8	32.0	55.2	14.4	34.2	21.0	40.8
Total Split (%)	8.0%	27.3%	26.7%	46.0%	12.0%	28.5%	17.5%	34.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	5.2	12.7	20.0	35.9	7.4	13.4	12.4	20.9
Actuated g/C Ratio	0.06	0.16	0.25	0.45	0.09	0.17	0.16	0.26
v/c Ratio	0.13	0.53	0.74	0.42	0.38	0.53	0.61	0.58
Control Delay	45.8	32.9	40.9	16.6	46.3	22.2	45.5	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	32.9	40.9	16.6	46.3	22.2	45.5	30.4
LOS	D	C	D	B	D	C	D	C
Approach Delay		33.5		24.4		25.6		33.9
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 80

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 28.6

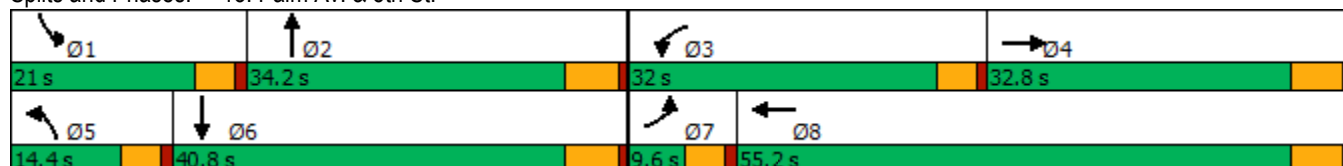
Intersection LOS: C

Intersection Capacity Utilization 62.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

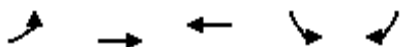
5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	204	69	279	503	89	54	191	134	144	420	60
Future Volume (veh/h)	13	204	69	279	503	89	54	191	134	144	420	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	14	217	58	297	535	84	57	203	87	153	447	38
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	28	438	114	346	1064	166	82	391	162	190	742	63
Arrive On Green	0.02	0.16	0.16	0.21	0.36	0.36	0.05	0.17	0.17	0.12	0.23	0.23
Sat Flow, veh/h	1619	2683	701	1619	2957	462	1619	2359	976	1619	3191	270
Grp Volume(v), veh/h	14	136	139	297	309	310	57	145	145	153	239	246
Grp Sat Flow(s),veh/h/ln	1619	1710	1674	1619	1710	1709	1619	1710	1624	1619	1710	1751
Q Serve(g_s), s	0.5	4.4	4.6	10.8	8.6	8.7	2.1	4.7	5.0	5.6	7.6	7.7
Cycle Q Clear(g_c), s	0.5	4.4	4.6	10.8	8.6	8.7	2.1	4.7	5.0	5.6	7.6	7.7
Prop In Lane	1.00		0.42	1.00		0.27	1.00		0.60	1.00		0.15
Lane Grp Cap(c), veh/h	28	279	274	346	615	615	82	284	269	190	397	407
V/C Ratio(X)	0.50	0.49	0.51	0.86	0.50	0.50	0.69	0.51	0.54	0.81	0.60	0.61
Avail Cap(c_a), veh/h	132	754	739	725	1380	1380	259	794	754	434	978	1001
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	23.3	23.3	23.2	15.3	15.3	28.6	23.3	23.4	26.3	21.0	21.0
Incr Delay (d2), s/veh	5.0	1.3	1.5	2.4	0.6	0.6	3.9	1.4	1.7	3.0	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.7	1.7	3.8	2.9	2.9	0.8	1.8	1.8	2.1	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.8	24.6	24.8	25.6	15.9	16.0	32.5	24.7	25.0	29.4	22.4	22.4
LnGrp LOS	C	C	C	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h		289			916			347			638	
Approach Delay, s/veh		25.2			19.1			26.1			24.1	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	15.9	17.7	15.8	7.7	20.0	5.7	27.8				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	28.4	27.4	27.0	9.8	35.0	5.0	49.4				
Max Q Clear Time (g_c+I1), s	7.6	7.0	12.8	6.6	4.1	9.7	2.5	10.7				
Green Ext Time (p_c), s	0.1	1.4	0.3	1.3	0.0	2.6	0.0	3.7				
Intersection Summary												
HCM 6th Ctrl Delay			22.5									
HCM 6th LOS			C									

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023

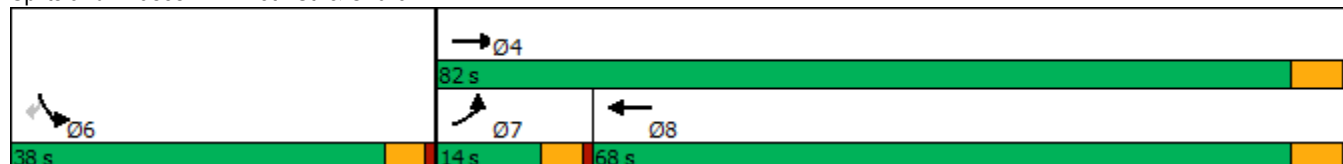


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	25	573	919	127	59
Future Volume (vph)	25	573	919	127	59
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	14.0	82.0	68.0	38.0	38.0
Total Split (%)	11.7%	68.3%	56.7%	31.7%	31.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	6.1	33.9	30.2	12.5	12.5
Actuated g/C Ratio	0.11	0.59	0.53	0.22	0.22
v/c Ratio	0.16	0.31	0.61	0.39	0.17
Control Delay	31.4	6.1	12.5	25.8	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	31.4	6.1	12.5	25.8	8.8
LOS	C	A	B	C	A
Approach Delay		7.2	12.5	20.5	
Approach LOS		A	B	C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 57.5
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 11.5
 Intersection LOS: B
 Intersection Capacity Utilization 47.4%
 ICU Level of Service A
 Analysis Period (min) 15

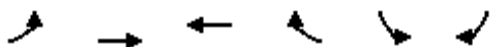
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	25	573	919	96	127	59	
Future Volume (veh/h)	25	573	919	96	127	59	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	27	616	988	90	137	59	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	51	1999	1444	131	316	298	
Arrive On Green	0.03	0.58	0.46	0.46	0.20	0.20	
Sat Flow, veh/h	1619	3510	3259	289	1619	1525	
Grp Volume(v), veh/h	27	616	533	545	137	59	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1748	1619	1525	
Q Serve(g_s), s	0.8	4.3	11.7	11.7	3.5	1.5	
Cycle Q Clear(g_c), s	0.8	4.3	11.7	11.7	3.5	1.5	
Prop In Lane	1.00			0.17	1.00	1.00	
Lane Grp Cap(c), veh/h	51	1999	779	796	316	298	
V/C Ratio(X)	0.53	0.31	0.68	0.68	0.43	0.20	
Avail Cap(c_a), veh/h	322	5514	2251	2300	1144	1078	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	22.5	5.0	10.2	10.2	16.7	15.9	
Incr Delay (d2), s/veh	3.1	0.1	1.1	1.1	0.9	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.7	3.0	3.1	1.2	1.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	25.7	5.1	11.2	11.2	17.6	16.2	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		643	1078		196		
Approach Delay, s/veh		5.9	11.2		17.2		
Approach LOS		A	B		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				33.4	13.8	6.1	27.3
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				76.2	33.4	9.4	62.2
Max Q Clear Time (g_c+I1), s				6.3	5.5	2.8	13.7
Green Ext Time (p_c), s				4.3	0.5	0.0	7.9
Intersection Summary							
HCM 6th Ctrl Delay			10.1				
HCM 6th LOS			B				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↗
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↗
Traffic Volume (vph)	340	360	565	771	48	244
Future Volume (vph)	340	360	565	771	48	244
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	34.0	34.0	40.0	74.0	46.0	46.0
Total Split (%)	28.3%	28.3%	33.3%	61.7%	38.3%	38.3%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	16.7	16.7	22.7	44.4	23.8	23.8
Actuated g/C Ratio	0.21	0.21	0.28	0.55	0.30	0.30
v/c Ratio	0.53	0.64	0.76	0.46	0.70	0.49
Control Delay	33.9	8.9	34.4	12.3	34.9	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	8.9	34.4	12.3	34.9	14.9
LOS	C	A	C	B	C	B
Approach Delay	21.0			21.7	26.2	
Approach LOS	C			C	C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 80.6

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 22.5

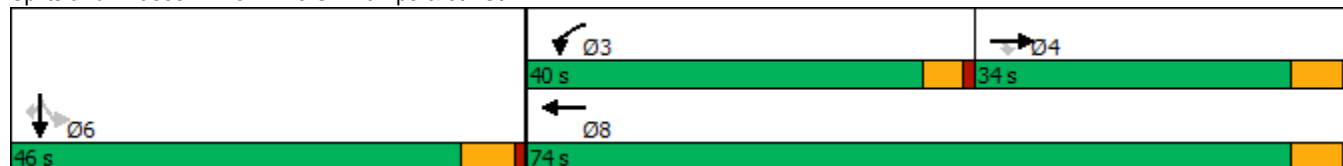
Intersection LOS: C

Intersection Capacity Utilization 74.8%

ICU Level of Service D

Analysis Period (min) 15

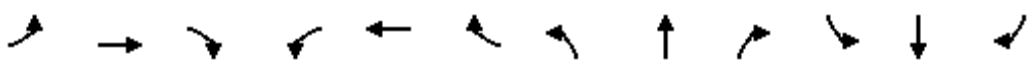
Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	340	360	565	771	0	0	0	0	272	48	244
Future Volume (veh/h)	0	340	360	565	771	0	0	0	0	272	48	244
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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	378	237	628	857	0				302	53	144
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	758	338	746	1876	0				387	68	402
Arrive On Green	0.00	0.22	0.22	0.25	0.55	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	3510	1523	2956	3510	0				1469	258	1525
Grp Volume(v), veh/h	0	378	237	628	857	0				355	0	144
Grp Sat Flow(s),veh/h/ln	0	1710	1523	1478	1710	0				1727	0	1525
Q Serve(g_s), s	0.0	6.0	8.8	12.4	9.3	0.0				11.8	0.0	4.7
Cycle Q Clear(g_c), s	0.0	6.0	8.8	12.4	9.3	0.0				11.8	0.0	4.7
Prop In Lane	0.00		1.00	1.00		0.00				0.85		1.00
Lane Grp Cap(c), veh/h	0	758	338	746	1876	0				455	0	402
V/C Ratio(X)	0.00	0.50	0.70	0.84	0.46	0.00				0.78	0.00	0.36
Avail Cap(c_a), veh/h	0	1563	696	1696	3781	0				1125	0	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.0	22.1	21.9	8.4	0.0				21.1	0.0	18.5
Incr Delay (d2), s/veh	0.0	0.5	2.7	1.0	0.2	0.0				3.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.1	3.0	3.8	2.4	0.0				4.4	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.5	24.8	22.9	8.6	0.0				24.0	0.0	19.0
LnGrp LOS	A	C	C	C	A	A				C	A	B
Approach Vol, veh/h		615			1485						499	
Approach Delay, s/veh		22.8			14.6						22.6	
Approach LOS		C			B						C	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			20.2	19.5		22.0			39.6			
Change Period (Y+Rc), s			4.6	5.8		5.8			5.8			
Max Green Setting (Gmax), s			35.4	28.2		40.2			68.2			
Max Q Clear Time (g_c+I1), s			14.4	10.8		13.8			11.3			
Green Ext Time (p_c), s			1.1	2.8		2.5			6.5			
Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations		 	  			 	 
Traffic Volume (vph)	102	510	1020	294	317	2	341
Future Volume (vph)	102	510	1020	294	317	2	341
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	27.0	80.0	53.0	53.0	40.0	40.0	40.0
Total Split (%)	22.5%	66.7%	44.2%	44.2%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	9.6	36.8	25.7	25.7	15.4	15.4	15.4
Actuated g/C Ratio	0.15	0.57	0.40	0.40	0.24	0.24	0.24
v/c Ratio	0.44	0.27	0.54	0.39	0.45	0.43	0.40
Control Delay	36.2	7.3	17.5	3.9	29.5	28.7	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	7.3	17.5	3.9	29.5	28.7	4.8
LOS	D	A	B	A	C	C	A
Approach Delay		12.1	14.4			16.5	
Approach LOS		B	B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 65

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.54

Intersection Signal Delay: 14.4

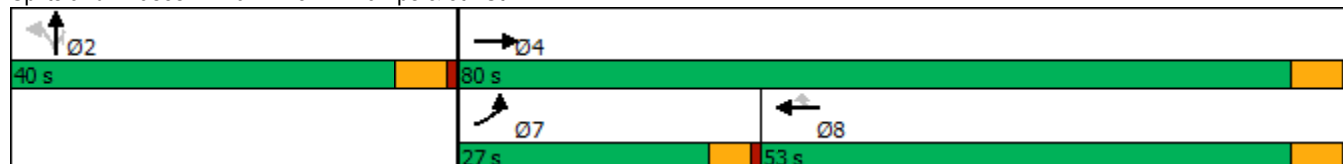
Intersection LOS: B

Intersection Capacity Utilization 74.8%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	102	510	0	0	1020	294	317	2	341	0	0	0
Future Volume (veh/h)	102	510	0	0	1020	294	317	2	341	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	105	526	0	0	1052	198	328	0	152			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	131	1930	0	0	1918	587	653	0	581			
Arrive On Green	0.08	0.56	0.00	0.00	0.39	0.39	0.20	0.00	0.20			
Sat Flow, veh/h	1619	3510	0	0	5076	1505	3238	0	2881			
Grp Volume(v), veh/h	105	526	0	0	1052	198	328	0	152			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1505	1619	0	1441			
Q Serve(g_s), s	3.2	3.9	0.0	0.0	8.2	4.6	4.5	0.0	2.2			
Cycle Q Clear(g_c), s	3.2	3.9	0.0	0.0	8.2	4.6	4.5	0.0	2.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	131	1930	0	0	1918	587	653	0	581			
V/C Ratio(X)	0.80	0.27	0.00	0.00	0.55	0.34	0.50	0.00	0.26			
Avail Cap(c_a), veh/h	732	5119	0	0	4679	1432	2234	0	1988			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.4	5.6	0.0	0.0	11.7	10.6	17.6	0.0	16.7			
Incr Delay (d2), s/veh	4.2	0.1	0.0	0.0	0.2	0.3	0.6	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	0.8	0.0	0.0	2.2	1.2	1.4	0.0	0.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	5.6	0.0	0.0	12.0	10.9	18.2	0.0	16.9			
LnGrp LOS	C	A	A	A	B	B	B	A	B			
Approach Vol, veh/h	631			1250			480					
Approach Delay, s/veh	9.1			11.8			17.8					
Approach LOS	A			B			B					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	15.8			33.8			8.6			25.2		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	34.2			74.2			22.4			47.2		
Max Q Clear Time (g_c+I1), s	6.5			5.9			5.2			10.2		
Green Ext Time (p_c), s	1.7			3.5			0.1			9.1		
Intersection Summary												
HCM 6th Ctrl Delay	12.3											
HCM 6th LOS	B											
Notes												

Intersection												
Int Delay, s/veh	6.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	34	85	20	16	71	24	16	486	25	25	292	20
Future Vol, veh/h	34	85	20	16	71	24	16	486	25	25	292	20
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	-	-	-	-	-	-	-	-	-	-	-	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	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	36	89	21	17	75	25	17	512	26	26	307	21

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	687	931	154	809	939	269	328	0	0	538	0	0
Stage 1	359	359	-	559	559	-	-	-	-	-	-	-
Stage 2	328	572	-	250	380	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	337	269	871	275	266	735	1243	-	-	1040	-	-
Stage 1	637	631	-	486	514	-	-	-	-	-	-	-
Stage 2	664	508	-	738	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	242	256	871	188	253	735	1243	-	-	1040	-	-
Mov Cap-2 Maneuver	242	256	-	188	253	-	-	-	-	-	-	-
Stage 1	624	611	-	476	504	-	-	-	-	-	-	-
Stage 2	535	498	-	596	598	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30.9	26.9	0.3	0.7
HCM LOS	D	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1243	-	-	281	279	1040	-
HCM Lane V/C Ratio	0.014	-	-	0.521	0.419	0.025	-
HCM Control Delay (s)	7.9	0.1	-	30.9	26.9	8.6	0.1
HCM Lane LOS	A	A	-	D	D	A	A
HCM 95th %tile Q(veh)	0	-	-	2.8	2	0.1	-

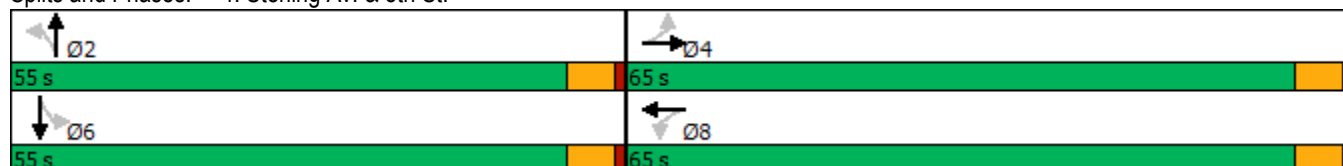
Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	102	307	21	161	5	402	19	266
Future Volume (vph)	102	307	21	161	5	402	19	266
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	65.0	65.0	65.0	65.0	55.0	55.0	55.0	55.0
Total Split (%)	54.2%	54.2%	54.2%	54.2%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		12.6		12.6	11.3	11.3	11.3	11.3
Actuated g/C Ratio		0.36		0.36	0.32	0.32	0.32	0.32
v/c Ratio		0.49		0.20	0.02	0.41	0.07	0.29
Control Delay		10.2		7.6	9.2	10.7	9.9	9.5
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		10.2		7.6	9.2	10.7	9.9	9.5
LOS		B		A	A	B	A	A
Approach Delay		10.2		7.6		10.7		9.5
Approach LOS		B		A		B		A
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 34.8								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.49								
Intersection Signal Delay: 9.8				Intersection LOS: A				
Intersection Capacity Utilization 53.8%				ICU Level of Service A				
Analysis Period (min) 15								

Splits and Phases: 4: Sterling Av. & 5th St.



HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

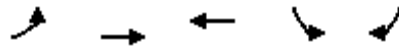
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	307	66	21	161	25	5	402	30	19	266	44
Future Volume (veh/h)	102	307	66	21	161	25	5	402	30	19	266	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	106	320	46	22	168	17	5	419	28	20	277	29
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	321	759	107	187	927	90	500	1056	70	437	1014	105
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	478	2336	331	144	2854	278	1030	3254	217	905	3123	324
Grp Volume(v), veh/h	253	0	219	110	0	97	5	220	227	20	151	155
Grp Sat Flow(s),veh/h/ln	1572	0	1573	1692	0	1584	1030	1710	1761	905	1710	1737
Q Serve(g_s), s	1.2	0.0	3.4	0.0	0.0	1.4	0.1	3.1	3.1	0.5	2.0	2.0
Cycle Q Clear(g_c), s	3.6	0.0	3.4	1.4	0.0	1.4	2.2	3.1	3.1	3.6	2.0	2.0
Prop In Lane	0.42		0.21	0.20		0.18	1.00		0.12	1.00		0.19
Lane Grp Cap(c), veh/h	676	0	511	690	0	514	500	555	572	437	555	564
V/C Ratio(X)	0.37	0.00	0.43	0.16	0.00	0.19	0.01	0.40	0.40	0.05	0.27	0.28
Avail Cap(c_a), veh/h	3091	0	3044	3213	0	3064	1823	2753	2835	1600	2753	2796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.2	0.0	8.2	7.5	0.0	7.5	8.5	8.1	8.1	9.5	7.7	7.7
Incr Delay (d2), s/veh	0.3	0.0	0.6	0.1	0.0	0.2	0.0	0.5	0.4	0.0	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.7	0.3	0.0	0.3	0.0	0.7	0.7	0.1	0.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.5	0.0	8.7	7.6	0.0	7.7	8.5	8.5	8.5	9.5	8.0	8.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		472			207			452			326	
Approach Delay, s/veh		8.6			7.6			8.5			8.1	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.4		15.4		15.4				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		49.6		59.6		49.6		59.6				
Max Q Clear Time (g_c+I1), s		5.1		5.6		5.6		3.4				
Green Ext Time (p_c), s		2.7		3.0		1.9		1.2				
Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	378	1044	296	169	182
Future Volume (vph)	378	1044	296	169	182
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	55.0	85.0	30.0	35.0	55.0
Total Split (%)	45.8%	70.8%	25.0%	29.2%	45.8%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	22.5	41.4	14.0	14.4	42.7
Actuated g/C Ratio	0.33	0.62	0.21	0.21	0.63
v/c Ratio	0.74	0.53	0.53	0.52	0.12
Control Delay	29.8	8.4	27.8	32.2	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	8.4	27.8	32.2	1.0
LOS	C	A	C	C	A
Approach Delay		14.1	27.8	16.0	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 67.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 16.7
Intersection Capacity Utilization 57.3%
Analysis Period (min) 15
Intersection LOS: B
ICU Level of Service B

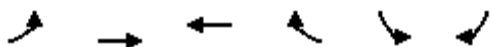
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	378	1044	296	59	169	182	
Future Volume (veh/h)	378	1044	296	59	169	182	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700	
Adj Flow Rate, veh/h	402	1111	315	45	180	78	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	463	1986	606	86	326	1237	
Arrive On Green	0.29	0.58	0.20	0.20	0.20	0.20	
Sat Flow, veh/h	1619	3510	3098	426	1619	2536	
Grp Volume(v), veh/h	402	1111	178	182	180	78	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1723	1619	1268	
Q Serve(g_s), s	11.7	10.0	4.6	4.7	5.0	0.8	
Cycle Q Clear(g_c), s	11.7	10.0	4.6	4.7	5.0	0.8	
Prop In Lane	1.00			0.25	1.00	1.00	
Lane Grp Cap(c), veh/h	463	1986	345	347	326	1237	
V/C Ratio(X)	0.87	0.56	0.52	0.52	0.55	0.06	
Avail Cap(c_a), veh/h	1645	5489	848	855	966	2239	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.8	6.5	17.6	17.7	17.8	6.7	
Incr Delay (d2), s/veh	2.0	0.2	1.2	1.2	1.5	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.7	2.1	1.6	1.7	1.7	0.8	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.8	6.7	18.8	18.9	19.2	6.7	
LnGrp LOS	B	A	B	B	B	A	
Approach Vol, veh/h		1513	360	258			
Approach Delay, s/veh		9.9	18.9	15.5			
Approach LOS		A	B	B			
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				34.2	15.4	18.8	15.4
Change Period (Y+Rc), s				5.4	5.4	4.6	5.4
Max Green Setting (Gmax), s				79.6	29.6	50.4	24.6
Max Q Clear Time (g_c+I1), s				12.0	7.0	13.7	6.7
Green Ext Time (p_c), s				10.1	0.8	0.6	1.8
Intersection Summary							
HCM 6th Ctrl Delay			12.1				
HCM 6th LOS			B				

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	36	95	5	2	93	16	3	35	13	5	30	13
Future Vol, veh/h	36	95	5	2	93	16	3	35	13	5	30	13
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	39	102	5	2	100	17	3	38	14	5	32	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	118	0	0	107	0	0	317	302	102	323	299	111
Stage 1	-	-	-	-	-	-	180	180	-	114	114	-
Stage 2	-	-	-	-	-	-	137	122	-	209	185	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1483	-	-	1497	-	-	640	614	959	634	616	948
Stage 1	-	-	-	-	-	-	826	754	-	896	805	-
Stage 2	-	-	-	-	-	-	871	799	-	798	751	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1482	-	-	1497	-	-	591	596	959	581	598	946
Mov Cap-2 Maneuver	-	-	-	-	-	-	591	596	-	581	598	-
Stage 1	-	-	-	-	-	-	803	733	-	870	803	-
Stage 2	-	-	-	-	-	-	822	797	-	725	730	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2			0.1			11			10.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	659	1482	-	-	1497	-	-	662				
HCM Lane V/C Ratio	0.083	0.026	-	-	0.001	-	-	0.078				
HCM Control Delay (s)	11	7.5	0	-	7.4	0	-	10.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	12	333	9	2	185	4	10	35	7	7	21	10
Future Vol, veh/h	12	333	9	2	185	4	10	35	7	7	21	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	354	10	2	197	4	11	37	7	7	22	11
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	201	0	0	364	0	0	606	590	359	610	593	200
Stage 1	-	-	-	-	-	-	385	385	-	203	203	-
Stage 2	-	-	-	-	-	-	221	205	-	407	390	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1383	-	-	1206	-	-	412	423	690	409	421	846
Stage 1	-	-	-	-	-	-	642	614	-	804	737	-
Stage 2	-	-	-	-	-	-	786	736	-	625	611	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1383	-	-	1206	-	-	386	417	690	373	415	845
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	417	-	373	415	-
Stage 1	-	-	-	-	-	-	634	607	-	794	736	-
Stage 2	-	-	-	-	-	-	750	735	-	573	604	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			14.3			13.4		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	410	690	1383	-	-	1206	-	-	468			
HCM Lane V/C Ratio	0.117	0.011	0.009	-	-	0.002	-	-	0.086			
HCM Control Delay (s)	14.9	10.3	7.6	0	-	8	0	-	13.4			
HCM Lane LOS	B	B	A	A	-	A	A	-	B			
HCM 95th %tile Q(veh)	0.4	0	0	-	-	0	-	-	0.3			

Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	74	261	72	165	145	7	471	56	232
Future Volume (vph)	74	261	72	165	145	7	471	56	232
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	46.0	46.0	46.0	46.0	46.0	74.0	74.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	61.7%	61.7%	61.7%	61.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	10.9	10.9	10.9	10.9	10.9		14.5		14.5
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30		0.39		0.39
v/c Ratio	0.24	0.29	0.27	0.33	0.28		0.55		0.32
Control Delay	13.5	11.6	14.2	13.3	4.4		9.3		8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	13.5	11.6	14.2	13.3	4.4		9.3		8.3
LOS	B	B	B	B	A		A		A
Approach Delay		12.0		10.1			9.3		8.3
Approach LOS		B		B			A		A
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 36.8									
Natural Cycle: 55									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.55									
Intersection Signal Delay: 9.9					Intersection LOS: A				
Intersection Capacity Utilization 65.6%					ICU Level of Service C				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	261	11	72	165	145	7	471	188	56	232	20
Future Volume (veh/h)	74	261	11	72	165	145	7	471	188	56	232	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	79	278	12	77	176	147	7	501	187	60	247	18
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	439	993	43	458	535	447	112	881	325	238	840	64
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1014	3340	144	1045	1800	1504	9	2387	879	244	2273	172
Grp Volume(v), veh/h	79	142	148	77	176	147	380	0	315	157	0	168
Grp Sat Flow(s),veh/h/ln	1014	1710	1774	1045	1800	1504	1795	0	1480	1087	0	1602
Q Serve(g_s), s	2.2	2.1	2.2	2.0	2.6	2.6	0.0	0.0	5.7	0.4	0.0	2.5
Cycle Q Clear(g_c), s	4.8	2.1	2.2	4.2	2.6	2.6	5.7	0.0	5.7	6.1	0.0	2.5
Prop In Lane	1.00		0.08	1.00		1.00	0.02		0.59	0.38		0.11
Lane Grp Cap(c), veh/h	439	508	528	458	535	447	772	0	547	549	0	592
V/C Ratio(X)	0.18	0.28	0.28	0.17	0.33	0.33	0.49	0.00	0.58	0.29	0.00	0.28
Avail Cap(c_a), veh/h	1350	2046	2122	1397	2153	1799	3749	0	3021	2537	0	3271
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.1	9.0	9.1	10.7	9.2	9.2	8.5	0.0	8.5	7.4	0.0	7.5
Incr Delay (d2), s/veh	0.2	0.3	0.3	0.2	0.4	0.4	0.5	0.0	1.0	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.5	0.5	0.3	0.6	0.5	1.3	0.0	1.2	0.5	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	9.3	9.3	10.8	9.5	9.6	9.0	0.0	9.5	7.7	0.0	7.7
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h		369			400			695			325	
Approach Delay, s/veh		9.7			9.8			9.2			7.7	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.8		15.8		17.8		15.8				
Change Period (Y+Rc), s		5.4		5.8		5.4		5.8				
Max Green Setting (Gmax), s		68.6		40.2		68.6		40.2				
Max Q Clear Time (g_c+I1), s		7.7		6.8		8.1		6.2				
Green Ext Time (p_c), s		4.7		1.9		2.2		1.8				
Intersection Summary												
HCM 6th Ctrl Delay				9.2								
HCM 6th LOS				A								

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	Ø3
Lane Configurations									
Traffic Volume (vph)	56	448	363	87	1	2	58	2	
Future Volume (vph)	56	448	363	87	1	2	58	2	
Turn Type	Prot	NA	NA	Perm	Prot	NA	Prot	NA	
Protected Phases	7	4	8		5	2	1	6	3
Permitted Phases				8					
Detector Phase	7	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	22.8	22.8	22.8	9.6	31.4	9.6	29.4	9.6
Total Split (s)	23.0	53.4	40.0	40.0	13.0	33.0	24.0	44.0	9.6
Total Split (%)	19.2%	44.5%	33.3%	33.3%	10.8%	27.5%	20.0%	36.7%	8%
Yellow Time (s)	3.6	4.8	4.8	4.8	3.6	4.4	3.6	4.4	3.6
All-Red Time (s)	1.0	1.0	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	0.0	
Total Lost Time (s)	4.6	5.8	5.8	5.8	4.6	5.4	4.6	5.4	
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min	None
Act Effect Green (s)	7.1	18.9	12.8	12.8	5.5	11.1	7.1	15.7	
Actuated g/C Ratio	0.15	0.39	0.26	0.26	0.11	0.23	0.15	0.32	
v/c Ratio	0.24	0.34	0.41	0.17	0.01	0.02	0.25	0.06	
Control Delay	26.0	11.2	19.1	0.7	27.0	16.7	25.9	8.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	26.0	11.2	19.1	0.7	27.0	16.7	25.9	8.7	
LOS	C	B	B	A	C	B	C	A	
Approach Delay		12.9	15.5			18.0		20.1	
Approach LOS		B	B			B		C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 48.4

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.41

Intersection Signal Delay: 14.7

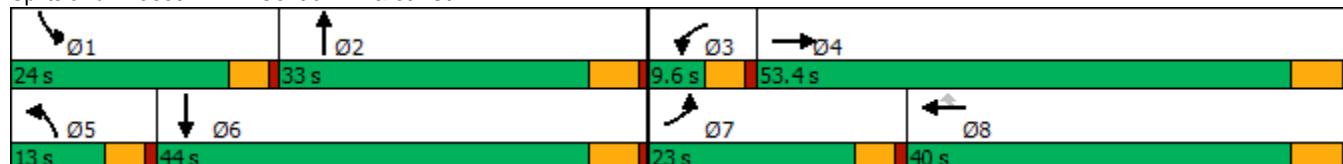
Intersection LOS: B

Intersection Capacity Utilization 40.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.



HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	448	0	0	363	87	1	2	5	58	2	27
Future Volume (veh/h)	56	448	0	0	363	87	1	2	5	58	2	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	57	457	0	0	370	78	1	2	2	59	2	15
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	91	1298	0	4	763	338	4	180	180	93	50	376
Arrive On Green	0.06	0.38	0.00	0.00	0.22	0.22	0.00	0.22	0.22	0.06	0.27	0.27
Sat Flow, veh/h	1619	3510	0	1619	3420	1515	1619	826	826	1619	183	1371
Grp Volume(v), veh/h	57	457	0	0	370	78	1	0	4	59	0	17
Grp Sat Flow(s),veh/h/ln	1619	1710	0	1619	1710	1515	1619	0	1651	1619	0	1553
Q Serve(g_s), s	1.6	4.4	0.0	0.0	4.3	1.9	0.0	0.0	0.1	1.6	0.0	0.4
Cycle Q Clear(g_c), s	1.6	4.4	0.0	0.0	4.3	1.9	0.0	0.0	0.1	1.6	0.0	0.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.50	1.00		0.88
Lane Grp Cap(c), veh/h	91	1298	0	4	763	338	4	0	360	93	0	426
V/C Ratio(X)	0.63	0.35	0.00	0.00	0.49	0.23	0.28	0.00	0.01	0.63	0.00	0.04
Avail Cap(c_a), veh/h	650	3551	0	177	2551	1130	297	0	994	685	0	1308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	10.2	0.0	0.0	15.5	14.6	22.9	0.0	14.0	21.1	0.0	12.2
Incr Delay (d2), s/veh	2.6	0.2	0.0	0.0	0.5	0.3	15.4	0.0	0.0	2.6	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.2	0.0	0.0	1.4	0.6	0.0	0.0	0.0	0.6	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	10.3	0.0	0.0	16.0	14.9	38.3	0.0	14.1	23.8	0.0	12.2
LnGrp LOS	C	B	A	A	B	B	D	A	B	C	A	B
Approach Vol, veh/h		514			448			5			76	
Approach Delay, s/veh		11.8			15.8			18.9			21.2	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	15.4	0.0	23.2	4.7	18.0	7.2	16.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	19.4	27.6	5.0	47.6	8.4	38.6	18.4	34.2				
Max Q Clear Time (g_c+I1), s	3.6	2.1	0.0	6.4	2.0	2.4	3.6	6.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	3.0	0.0	0.1	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay			14.3									
HCM 6th LOS			B									

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	49	411	203	313	103	522	152	334
Future Volume (vph)	49	411	203	313	103	522	152	334
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	14.2	32.8	26.0	44.6	19.3	40.2	21.0	41.9
Total Split (%)	11.8%	27.3%	21.7%	37.2%	16.1%	33.5%	17.5%	34.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	7.7	22.0	18.1	35.0	11.4	30.9	14.2	33.7
Actuated g/C Ratio	0.07	0.21	0.17	0.33	0.11	0.29	0.13	0.32
v/c Ratio	0.46	0.77	0.81	0.45	0.65	0.87	0.77	0.38
Control Delay	64.7	47.6	67.2	27.2	66.7	44.0	71.0	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.7	47.6	67.2	27.2	66.7	44.0	71.0	30.2
LOS	E	D	E	C	E	D	E	C
Approach Delay		49.1		39.4		46.6		42.0
Approach LOS		D		D		D		D

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 106.5

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 44.4

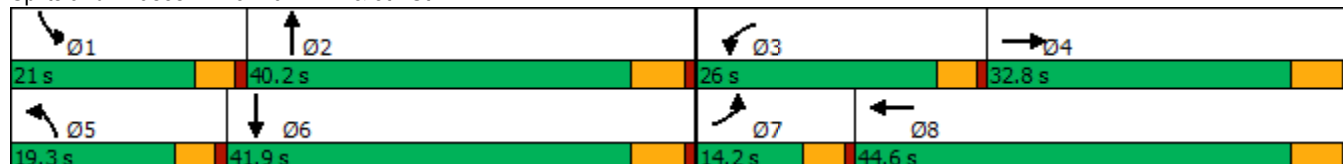
Intersection LOS: D

Intersection Capacity Utilization 78.4%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

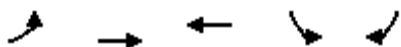
5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	411	82	203	313	148	103	522	269	152	334	39
Future Volume (veh/h)	49	411	82	203	313	148	103	522	269	152	334	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	53	447	57	221	340	138	112	567	253	165	363	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	67	583	74	254	730	291	138	681	303	196	1071	79
Arrive On Green	0.04	0.19	0.19	0.16	0.31	0.31	0.09	0.30	0.30	0.12	0.33	0.33
Sat Flow, veh/h	1619	3048	387	1619	2376	946	1619	2300	1024	1619	3228	239
Grp Volume(v), veh/h	53	250	254	221	243	235	112	421	399	165	192	198
Grp Sat Flow(s),veh/h/ln	1619	1710	1724	1619	1710	1612	1619	1710	1614	1619	1710	1757
Q Serve(g_s), s	2.9	12.3	12.4	11.8	10.2	10.5	6.0	20.4	20.5	8.9	7.5	7.6
Cycle Q Clear(g_c), s	2.9	12.3	12.4	11.8	10.2	10.5	6.0	20.4	20.5	8.9	7.5	7.6
Prop In Lane	1.00		0.22	1.00		0.59	1.00		0.63	1.00		0.14
Lane Grp Cap(c), veh/h	67	327	330	254	525	495	138	506	478	196	568	583
V/C Ratio(X)	0.80	0.76	0.77	0.87	0.46	0.47	0.81	0.83	0.83	0.84	0.34	0.34
Avail Cap(c_a), veh/h	175	520	524	390	747	705	268	663	626	299	695	714
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	34.0	34.1	36.5	24.8	24.9	39.9	29.2	29.2	38.2	22.3	22.3
Incr Delay (d2), s/veh	7.8	3.7	3.8	8.3	0.6	0.7	4.2	6.9	7.4	7.7	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	5.1	5.2	5.0	3.9	3.8	2.4	8.7	8.3	3.7	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	37.7	37.9	44.8	25.5	25.7	44.1	36.1	36.6	45.8	22.7	22.7
LnGrp LOS	D	D	D	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		557			699			932			555	
Approach Delay, s/veh		39.0			31.7			37.3			29.6	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	32.1	18.5	22.8	12.2	35.3	8.2	33.1				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	34.4	21.4	27.0	14.7	36.1	9.6	38.8				
Max Q Clear Time (g_c+I1), s	10.9	22.5	13.8	14.4	8.0	9.6	4.9	12.5				
Green Ext Time (p_c), s	0.1	3.8	0.2	2.2	0.1	2.0	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			34.6									
HCM 6th LOS			C									

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	←
Traffic Volume (vph)	59	806	641	88	40
Future Volume (vph)	59	806	641	88	40
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	22.0	83.0	61.0	37.0	37.0
Total Split (%)	18.3%	69.2%	50.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	7.2	33.1	26.5	11.2	11.2
Actuated g/C Ratio	0.15	0.68	0.54	0.23	0.23
v/c Ratio	0.27	0.38	0.45	0.26	0.11
Control Delay	25.6	5.7	11.9	22.1	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.6	5.7	11.9	22.1	8.9
LOS	C	A	B	C	A
Approach Delay		7.0	11.9	18.0	
Approach LOS		A	B	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 49

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 9.9

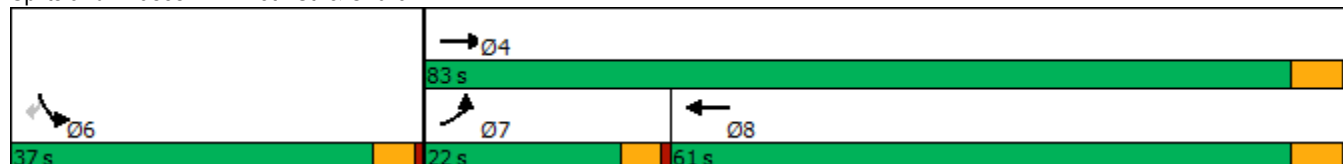
Intersection LOS: A

Intersection Capacity Utilization 47.3%

ICU Level of Service A

Analysis Period (min) 15

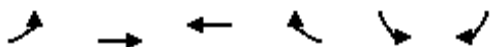
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	59	806	641	108	88	40	
Future Volume (veh/h)	59	806	641	108	88	40	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	64	876	697	103	96	14	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	104	1902	1116	165	289	272	
Arrive On Green	0.06	0.56	0.37	0.37	0.18	0.18	
Sat Flow, veh/h	1619	3510	3070	440	1619	1525	
Grp Volume(v), veh/h	64	876	400	400	96	14	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1710	1619	1525	
Q Serve(g_s), s	1.5	6.0	7.5	7.5	2.0	0.3	
Cycle Q Clear(g_c), s	1.5	6.0	7.5	7.5	2.0	0.3	
Prop In Lane	1.00			0.26	1.00	1.00	
Lane Grp Cap(c), veh/h	104	1902	640	640	289	272	
V/C Ratio(X)	0.62	0.46	0.62	0.63	0.33	0.05	
Avail Cap(c_a), veh/h	720	6745	2411	2411	1340	1263	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	17.9	5.2	10.0	10.0	14.1	13.3	
Incr Delay (d2), s/veh	2.2	0.2	1.0	1.0	0.7	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.5	0.8	1.9	1.9	0.6	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	20.1	5.4	11.0	11.0	14.7	13.4	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		940	800		110		
Approach Delay, s/veh		6.4	11.0		14.6		
Approach LOS		A	B		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				27.6	11.6	7.1	20.5
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				77.2	32.4	17.4	55.2
Max Q Clear Time (g_c+I1), s				8.0	4.0	3.5	9.5
Green Ext Time (p_c), s				6.7	0.3	0.0	5.2
Intersection Summary							
HCM 6th Ctrl Delay			8.9				
HCM 6th LOS			A				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↘
Traffic Volume (vph)	666	228	227	547	4	202
Future Volume (vph)	666	228	227	547	4	202
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	42.0	42.0	22.0	64.0	56.0	56.0
Total Split (%)	35.0%	35.0%	18.3%	53.3%	46.7%	46.7%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	25.4	25.4	11.9	42.2	29.2	29.2
Actuated g/C Ratio	0.30	0.30	0.14	0.50	0.35	0.35
v/c Ratio	0.69	0.41	0.58	0.34	0.74	0.33
Control Delay	31.0	9.7	42.9	13.9	33.6	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	9.7	42.9	13.9	33.6	6.5
LOS	C	A	D	B	C	A
Approach Delay	25.6			22.4	24.7	
Approach LOS	C			C	C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 83.8

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 24.3

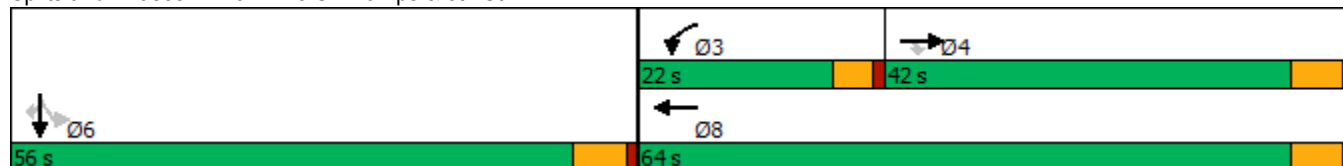
Intersection LOS: C

Intersection Capacity Utilization 65.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	666	228	227	547	0	0	0	0	414	4	202
Future Volume (veh/h)	0	666	228	227	547	0	0	0	0	414	4	202
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	709	170	241	582	0				440	4	110
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1025	451	338	1674	0				545	5	490
Arrive On Green	0.00	0.30	0.30	0.11	0.49	0.00				0.32	0.32	0.32
Sat Flow, veh/h	0	3510	1504	2956	3510	0				1700	15	1525
Grp Volume(v), veh/h	0	709	170	241	582	0				444	0	110
Grp Sat Flow(s),veh/h/ln	0	1710	1504	1478	1710	0				1715	0	1525
Q Serve(g_s), s	0.0	11.2	5.5	4.8	6.4	0.0				14.5	0.0	3.2
Cycle Q Clear(g_c), s	0.0	11.2	5.5	4.8	6.4	0.0				14.5	0.0	3.2
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	1025	451	338	1674	0				550	0	490
V/C Ratio(X)	0.00	0.69	0.38	0.71	0.35	0.00				0.81	0.00	0.22
Avail Cap(c_a), veh/h	0	2024	891	841	3255	0				1408	0	1252
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	18.9	16.9	26.1	9.6	0.0				19.0	0.0	15.2
Incr Delay (d2), s/veh	0.0	0.8	0.5	1.1	0.1	0.0				2.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.8	1.7	1.6	1.8	0.0				5.2	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.8	17.4	27.2	9.7	0.0				21.9	0.0	15.4
LnGrp LOS	A	B	B	C	A	A				C	A	B
Approach Vol, veh/h		879			823						554	
Approach Delay, s/veh		19.3			14.8						20.6	
Approach LOS		B			B						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			11.6	24.1		25.4		35.7				
Change Period (Y+Rc), s			4.6	5.8		5.8		5.8				
Max Green Setting (Gmax), s			17.4	36.2		50.2		58.2				
Max Q Clear Time (g_c+I1), s			6.8	13.2		16.5		8.4				
Green Ext Time (p_c), s			0.3	5.1		3.1		4.0				
Intersection Summary												
HCM 6th Ctrl Delay			18.0									
HCM 6th LOS			B									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	183	897	551	364	223	3	381
Future Volume (vph)	183	897	551	364	223	3	381
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	36.0	83.0	47.0	47.0	37.0	37.0	37.0
Total Split (%)	30.0%	69.2%	39.2%	39.2%	30.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	11.9	32.0	15.3	15.3	12.6	12.6	12.6
Actuated g/C Ratio	0.21	0.56	0.27	0.27	0.22	0.22	0.22
v/c Ratio	0.57	0.49	0.44	0.56	0.35	0.33	0.51
Control Delay	28.8	8.4	18.9	6.0	24.2	23.6	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	8.4	18.9	6.0	24.2	23.6	9.8
LOS	C	A	B	A	C	C	A
Approach Delay		11.8	13.8			15.0	
Approach LOS		B	B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 56.7

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 13.3

Intersection LOS: B

Intersection Capacity Utilization 65.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	183	897	0	0	551	364	223	3	381	0	0	0
Future Volume (veh/h)	183	897	0	0	551	364	223	3	381	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	193	944	0	0	580	251	237	0	153			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	242	1837	0	0	1420	435	694	0	617			
Arrive On Green	0.15	0.54	0.00	0.00	0.29	0.29	0.21	0.00	0.21			
Sat Flow, veh/h	1619	3510	0	0	5076	1506	3238	0	2881			
Grp Volume(v), veh/h	193	944	0	0	580	251	237	0	153			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1506	1619	0	1441			
Q Serve(g_s), s	5.4	8.2	0.0	0.0	4.4	6.6	2.9	0.0	2.1			
Cycle Q Clear(g_c), s	5.4	8.2	0.0	0.0	4.4	6.6	2.9	0.0	2.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	242	1837	0	0	1420	435	694	0	617			
V/C Ratio(X)	0.80	0.51	0.00	0.00	0.41	0.58	0.34	0.00	0.25			
Avail Cap(c_a), veh/h	1089	5658	0	0	4338	1330	2165	0	1926			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.2	6.9	0.0	0.0	13.4	14.2	15.5	0.0	15.2			
Incr Delay (d2), s/veh	2.3	0.2	0.0	0.0	0.2	1.2	0.3	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.8	1.6	0.0	0.0	1.3	1.8	0.9	0.0	0.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	7.1	0.0	0.0	13.6	15.4	15.8	0.0	15.4			
LnGrp LOS	C	A	A	A	B	B	B	A	B			
Approach Vol, veh/h	1137			831			390					
Approach Delay, s/veh	9.6			14.1			15.7					
Approach LOS	A			B			B					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	15.8			30.9			11.6			19.3		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	31.2			77.2			31.4			41.2		
Max Q Clear Time (g_c+I1), s	4.9			10.2			7.4			8.6		
Green Ext Time (p_c), s	1.4			7.5			0.2			4.8		
Intersection Summary												
HCM 6th Ctrl Delay	12.2											
HCM 6th LOS	B											
Notes												

APPENDIX 6.2: EAP (2026) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	9.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	52	84	20	21	97	19	11	197	17	34	490	49
Future Vol, veh/h	52	84	20	21	97	19	11	197	17	34	490	49
Conflicting Peds, #/hr	0	0	0	0	0	2	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	-	-	-	-	-	-	100	-	-	-	-	200
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	56	90	22	23	104	20	12	212	18	37	527	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	785	855	264	628	899	117	580	0	0	230	0	0
Stage 1	601	601	-	245	245	-	-	-	-	-	-	-
Stage 2	184	254	-	383	654	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	287	298	741	371	281	919	1004	-	-	1350	-	-
Stage 1	459	493	-	743	707	-	-	-	-	-	-	-
Stage 2	806	701	-	617	466	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	187	282	741	260	266	917	1004	-	-	1350	-	-
Mov Cap-2 Maneuver	187	282	-	260	266	-	-	-	-	-	-	-
Stage 1	453	473	-	734	699	-	-	-	-	-	-	-
Stage 2	661	693	-	465	447	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	41.3		28.9		0.4		0.5	
HCM LOS	E		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1004	-	-	259 294	1350	-	-
HCM Lane V/C Ratio	0.012	-	-	0.648 0.501	0.027	-	-
HCM Control Delay (s)	8.6	-	-	41.3 28.9	7.7	0.1	-
HCM Lane LOS	A	-	-	E D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	4.1 2.6	0.1	-	-

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	226	7	1	529
Future Vol, veh/h	1	0	226	7	1	529
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	246	8	1	575

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	540	127	0	0	254
Stage 1	250	-	-	-	-
Stage 2	290	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	477	906	-	-	1323
Stage 1	774	-	-	-	-
Stage 2	740	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	477	906	-	-	1323
Mov Cap-2 Maneuver	629	-	-	-	-
Stage 1	774	-	-	-	-
Stage 2	739	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.7	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	629	1323
HCM Lane V/C Ratio	-	-	0.002	0.001
HCM Control Delay (s)	-	-	10.7	7.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	233	12	0	530
Future Vol, veh/h	2	0	233	12	0	530
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	0	253	13	0	576

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	548	133	0	0	266
Stage 1	260	-	-	-	-
Stage 2	288	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	471	898	-	-	1310
Stage 1	766	-	-	-	-
Stage 2	741	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	471	898	-	-	1310
Mov Cap-2 Maneuver	625	-	-	-	-
Stage 1	766	-	-	-	-
Stage 2	741	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	625	1310
HCM Lane V/C Ratio	-	-	0.003	-
HCM Control Delay (s)	-	-	10.8	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	26	104	37	283	2	176	27	426
Future Volume (vph)	26	104	37	283	2	176	27	426
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	54.0	54.0	54.0	54.0	66.0	66.0	66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%	45.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		11.3		11.3	12.7	12.7	12.7	12.7
Actuated g/C Ratio		0.32		0.32	0.36	0.36	0.36	0.36
v/c Ratio		0.18		0.42	0.01	0.17	0.08	0.47
Control Delay		9.1		10.9	7.5	7.9	8.2	9.7
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		9.1		10.9	7.5	7.9	8.2	9.7
LOS		A		B	A	A	A	A
Approach Delay		9.1		10.9		7.9		9.6
Approach LOS		A		B		A		A
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 35								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.47								
Intersection Signal Delay: 9.7					Intersection LOS: A			
Intersection Capacity Utilization 57.4%					ICU Level of Service B			
Analysis Period (min) 15								

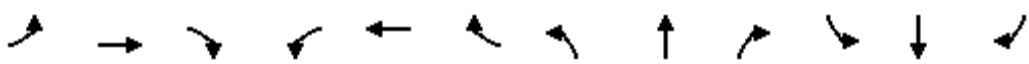
Splits and Phases: 4: Sterling Av. & 5th St.

	
Ø2	Ø4
66 s	54 s
	
Ø6	Ø8
66 s	54 s

HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↔	↔↔		↔	↔↔	
Traffic Volume (veh/h)	26	104	15	37	283	41	2	176	8	27	426	80
Future Volume (veh/h)	26	104	15	37	283	41	2	176	8	27	426	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	30	120	14	43	325	38	2	202	7	31	490	76
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	261	818	94	199	905	102	390	1098	38	552	966	149
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	323	2531	292	182	2803	317	811	3373	116	1125	2969	458
Grp Volume(v), veh/h	88	0	76	217	0	189	2	102	107	31	281	285
Grp Sat Flow(s),veh/h/ln	1561	0	1585	1725	0	1576	811	1710	1779	1125	1710	1717
Q Serve(g_s), s	0.0	0.0	1.0	0.0	0.0	2.8	0.1	1.3	1.3	0.6	4.1	4.1
Cycle Q Clear(g_c), s	1.1	0.0	1.0	2.9	0.0	2.8	4.2	1.3	1.3	2.0	4.1	4.1
Prop In Lane	0.34		0.18	0.20		0.20	1.00		0.07	1.00		0.27
Lane Grp Cap(c), veh/h	661	0	512	698	0	509	390	557	579	552	557	559
V/C Ratio(X)	0.13	0.00	0.15	0.31	0.00	0.37	0.01	0.18	0.18	0.06	0.51	0.51
Avail Cap(c_a), veh/h	2471	0	2508	2793	0	2493	1725	3373	3509	2405	3373	3388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.4	0.0	7.4	8.0	0.0	8.0	10.1	7.4	7.4	8.1	8.4	8.4
Incr Delay (d2), s/veh	0.1	0.0	0.1	0.3	0.0	0.4	0.0	0.2	0.2	0.0	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.2	0.6	0.0	0.6	0.0	0.3	0.3	0.1	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.5	0.0	7.5	8.3	0.0	8.4	10.1	7.6	7.6	8.2	9.1	9.1
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		164			406			211			597	
Approach Delay, s/veh		7.5			8.3			7.6			9.0	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.3		15.4		15.3				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		60.6		48.6		60.6		48.6				
Max Q Clear Time (g_c+I1), s		6.2		3.1		6.1		4.9				
Green Ext Time (p_c), s		1.2		1.0		3.7		2.4				
Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	154	332	691	100	378
Future Volume (vph)	154	332	691	100	378
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	33.0	86.0	53.0	34.0	33.0
Total Split (%)	27.5%	71.7%	44.2%	28.3%	27.5%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	13.2	42.9	24.9	12.4	31.2
Actuated g/C Ratio	0.20	0.64	0.37	0.19	0.47
v/c Ratio	0.58	0.18	0.69	0.40	0.36
Control Delay	34.1	4.8	21.1	32.2	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.1	4.8	21.1	32.2	9.8
LOS	C	A	C	C	A
Approach Delay		14.1	21.1	14.5	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 66.6

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 17.2

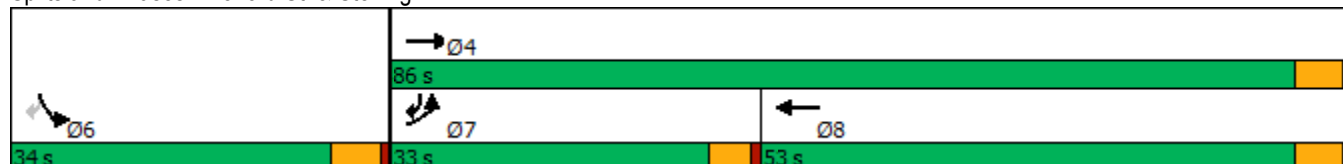
Intersection LOS: B

Intersection Capacity Utilization 52.0%

ICU Level of Service A

Analysis Period (min) 15

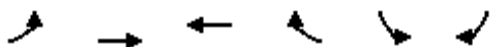
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	154	332	691	33	100	378	
Future Volume (veh/h)	154	332	691	33	100	378	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700	
Adj Flow Rate, veh/h	186	400	833	40	120	168	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	232	2043	1211	58	313	854	
Arrive On Green	0.14	0.60	0.37	0.37	0.19	0.19	
Sat Flow, veh/h	1619	3510	3407	159	1619	2536	
Grp Volume(v), veh/h	186	400	429	444	120	168	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1767	1619	1268	
Q Serve(g_s), s	5.7	2.8	11.0	11.0	3.3	2.4	
Cycle Q Clear(g_c), s	5.7	2.8	11.0	11.0	3.3	2.4	
Prop In Lane	1.00			0.09	1.00	1.00	
Lane Grp Cap(c), veh/h	232	2043	624	645	313	854	
V/C Ratio(X)	0.80	0.20	0.69	0.69	0.38	0.20	
Avail Cap(c_a), veh/h	890	5334	1575	1627	896	1767	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	21.4	4.7	13.9	13.9	18.2	12.2	
Incr Delay (d2), s/veh	2.4	0.0	1.4	1.3	0.8	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.0	0.6	3.6	3.7	1.1	2.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	23.8	4.8	15.3	15.2	18.9	12.3	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		586	873	288			
Approach Delay, s/veh		10.8	15.3	15.0			
Approach LOS		B	B	B			
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				36.3	15.4	12.0	24.3
Change Period (Y+Rc), s				5.4	5.4	4.6	5.4
Max Green Setting (Gmax), s				80.6	28.6	28.4	47.6
Max Q Clear Time (g_c+I1), s				4.8	5.3	7.7	13.0
Green Ext Time (p_c), s				2.7	0.9	0.2	5.9
Intersection Summary							
HCM 6th Ctrl Delay			13.7				
HCM 6th LOS			B				

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑			↗
Traffic Vol, veh/h	0	138	358	5	0	2
Future Vol, veh/h	0	138	358	5	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	150	389	5	0	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	197
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	817
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	817
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		9.4		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	817		
HCM Lane V/C Ratio	-	-	-	0.003		
HCM Control Delay (s)	-	-	-	9.4		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0		

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑	↑	
Traffic Vol, veh/h	113	0	3	123	0	1
Future Vol, veh/h	113	0	3	123	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	123	0	3	134	0	1

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	123	0	263	62
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1477	-	720	996
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	892	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1477	-	719	996
Mov Cap-2 Maneuver	-	-	-	-	735	-
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	890	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	996	-	-	1477	-
HCM Lane V/C Ratio	0.001	-	-	0.002	-
HCM Control Delay (s)	8.6	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	132	365	13	13	0
Future Vol, veh/h	4	132	365	13	13	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	143	397	14	14	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	411	0	-	0	555	206
Stage 1	-	-	-	-	404	-
Stage 2	-	-	-	-	151	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1159	-	-	-	481	807
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	882	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1159	-	-	-	480	807
Mov Cap-2 Maneuver	-	-	-	-	546	-
Stage 1	-	-	-	-	647	-
Stage 2	-	-	-	-	882	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		11.8		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1159	-	-	-	546	
HCM Lane V/C Ratio	0.004	-	-	-	0.026	
HCM Control Delay (s)	8.1	-	-	-	11.8	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection												
Int Delay, s/veh	3.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	91	4	9	95	1	5	15	2	7	34	26
Future Vol, veh/h	18	91	4	9	95	1	5	15	2	7	34	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	20	101	4	10	106	1	6	17	2	8	38	29
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	107	0	0	105	0	0	301	268	101	280	272	107
Stage 1	-	-	-	-	-	-	141	141	-	127	127	-
Stage 2	-	-	-	-	-	-	160	127	-	153	145	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1497	-	-	1499	-	-	655	641	960	676	638	953
Stage 1	-	-	-	-	-	-	867	784	-	882	795	-
Stage 2	-	-	-	-	-	-	847	795	-	854	781	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1497	-	-	1499	-	-	596	628	960	650	625	953
Mov Cap-2 Maneuver	-	-	-	-	-	-	596	628	-	650	625	-
Stage 1	-	-	-	-	-	-	855	773	-	870	789	-
Stage 2	-	-	-	-	-	-	777	789	-	822	770	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			0.6			10.8			10.5		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	640	1497	-	-	1499	-	-	725				
HCM Lane V/C Ratio	0.038	0.013	-	-	0.007	-	-	0.103				
HCM Control Delay (s)	10.8	7.4	0	-	7.4	0	-	10.5				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔	↔		↔	
Traffic Vol, veh/h	5	139	0	3	360	5	0	12	7	10	19	19
Future Vol, veh/h	5	139	0	3	360	5	0	12	7	10	19	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	170	0	4	439	6	0	15	9	12	23	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	445	0	0	170	0	0	655	635	170	644	632	442
Stage 1	-	-	-	-	-	-	182	182	-	450	450	-
Stage 2	-	-	-	-	-	-	473	453	-	194	182	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1126	-	-	1420	-	-	382	399	879	389	400	620
Stage 1	-	-	-	-	-	-	824	753	-	592	575	-
Stage 2	-	-	-	-	-	-	576	573	-	812	753	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1126	-	-	1420	-	-	349	395	879	371	396	620
Mov Cap-2 Maneuver	-	-	-	-	-	-	349	395	-	371	396	-
Stage 1	-	-	-	-	-	-	819	748	-	588	573	-
Stage 2	-	-	-	-	-	-	530	571	-	784	748	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.1			12.5			14.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	395	879	1126	-	-	1420	-	-	455			
HCM Lane V/C Ratio	0.037	0.01	0.005	-	-	0.003	-	-	0.129			
HCM Control Delay (s)	14.5	9.1	8.2	0	-	7.5	0	-	14.1			
HCM Lane LOS	B	A	A	A	-	A	A	-	B			
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0.4			

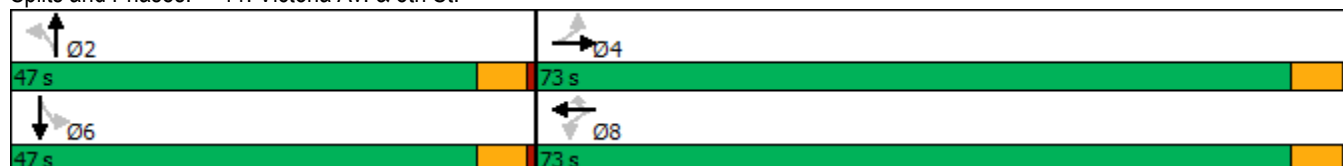
Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	125	270	335	81	1	94	78	320
Future Volume (vph)	21	125	270	335	81	1	94	78	320
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	73.0	73.0	73.0	73.0	73.0	47.0	47.0	47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%	60.8%	60.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	22.9	22.9	22.9	22.9	22.9		15.8		15.8
Actuated g/C Ratio	0.45	0.45	0.45	0.45	0.45		0.31		0.31
v/c Ratio	0.07	0.10	0.64	0.49	0.13		0.16		0.56
Control Delay	8.9	7.8	17.7	12.2	2.8		11.5		18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	8.9	7.8	17.7	12.2	2.8		11.5		18.4
LOS	A	A	B	B	A		B		B
Approach Delay		8.0		13.2			11.5		18.4
Approach LOS		A		B			B		B
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 50.9									
Natural Cycle: 60									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.64									
Intersection Signal Delay: 14.1					Intersection LOS: B				
Intersection Capacity Utilization 66.8%					ICU Level of Service C				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	125	9	270	335	81	1	94	39	78	320	33
Future Volume (veh/h)	21	125	9	270	335	81	1	94	39	78	320	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	25	147	10	318	394	87	1	111	42	92	376	37
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	420	1357	92	656	751	628	101	667	239	246	707	69
Arrive On Green	0.42	0.42	0.42	0.42	0.42	0.42	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	877	3251	219	1180	1800	1505	5	2410	863	411	2554	249
Grp Volume(v), veh/h	25	77	80	318	394	87	82	0	72	269	0	236
Grp Sat Flow(s),veh/h/ln	877	1710	1761	1180	1800	1505	1796	0	1483	1621	0	1593
Q Serve(g_s), s	0.8	1.0	1.0	8.2	6.0	1.3	0.0	0.0	1.4	2.7	0.0	4.6
Cycle Q Clear(g_c), s	6.8	1.0	1.0	9.3	6.0	1.3	1.3	0.0	1.4	5.1	0.0	4.6
Prop In Lane	1.00		0.12	1.00		1.00	0.01		0.58	0.34		0.16
Lane Grp Cap(c), veh/h	420	714	735	656	751	628	596	0	410	580	0	441
V/C Ratio(X)	0.06	0.11	0.11	0.48	0.52	0.14	0.14	0.00	0.18	0.46	0.00	0.54
Avail Cap(c_a), veh/h	1663	3138	3231	2329	3303	2761	2128	0	1684	1926	0	1810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.5	6.5	6.5	9.3	8.0	6.6	10.0	0.0	10.1	11.3	0.0	11.2
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.6	0.6	0.1	0.1	0.0	0.2	0.6	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.2	1.2	1.3	0.2	0.4	0.0	0.3	1.4	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	6.6	6.6	9.9	8.5	6.7	10.1	0.0	10.3	11.9	0.0	12.3
LnGrp LOS	B	A	A	A	A	A	B	A	B	B	A	B
Approach Vol, veh/h		182			799			154			505	
Approach Delay, s/veh		7.1			8.9			10.2			12.1	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.5		21.1		15.5		21.1				
Change Period (Y+Rc), s		5.4		5.8		5.4		5.8				
Max Green Setting (Gmax), s		41.6		67.2		41.6		67.2				
Max Q Clear Time (g_c+I1), s		3.4		8.8		7.1		11.3				
Green Ext Time (p_c), s		0.8		1.0		3.1		4.0				
Intersection Summary												
HCM 6th Ctrl Delay				9.8								
HCM 6th LOS				A								

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	9	231	1	650	39	2	1	46	0
Future Volume (vph)	9	231	1	650	39	2	1	46	0
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	9.6	22.8	22.8	9.6	31.4	9.6	29.4
Total Split (s)	12.0	54.0	12.0	54.0	54.0	12.0	34.0	20.0	42.0
Total Split (%)	10.0%	45.0%	10.0%	45.0%	45.0%	10.0%	28.3%	16.7%	35.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effect Green (s)	5.7	18.7	5.5	18.5	18.5	5.5	10.9	7.0	15.9
Actuated g/C Ratio	0.12	0.38	0.11	0.37	0.37	0.11	0.22	0.14	0.32
v/c Ratio	0.06	0.22	0.01	0.60	0.07	0.01	0.00	0.24	0.08
Control Delay	27.8	12.0	29.0	15.8	0.2	28.5	24.0	26.7	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	12.0	29.0	15.8	0.2	28.5	24.0	26.7	0.2
LOS	C	B	C	B	A	C	C	C	A
Approach Delay		12.6		15.0			27.0		13.6
Approach LOS		B		B			C		B

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 49.4

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 14.3

Intersection LOS: B

Intersection Capacity Utilization 37.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.

			
Ø1	Ø2	Ø3	Ø4
20 s	34 s	12 s	54 s
			
Ø5	Ø6	Ø7	Ø8
12 s	42 s	12 s	54 s

HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	231	7	1	650	39	2	1	0	46	0	45
Future Volume (veh/h)	9	231	7	1	650	39	2	1	0	46	0	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	11	272	4	1	765	15	2	1	0	54	0	21
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	23	1208	18	3	1154	503	4	353	0	85	0	370
Arrive On Green	0.01	0.35	0.35	0.00	0.34	0.34	0.00	0.20	0.00	0.05	0.00	0.25
Sat Flow, veh/h	1619	3450	51	1619	3420	1490	1619	1800	0	1619	0	1506
Grp Volume(v), veh/h	11	135	141	1	765	15	2	1	0	54	0	21
Grp Sat Flow(s),veh/h/ln	1619	1710	1791	1619	1710	1490	1619	1800	0	1619	0	1506
Q Serve(g_s), s	0.3	2.8	2.8	0.0	9.7	0.3	0.1	0.0	0.0	1.7	0.0	0.5
Cycle Q Clear(g_c), s	0.3	2.8	2.8	0.0	9.7	0.3	0.1	0.0	0.0	1.7	0.0	0.5
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	23	599	627	3	1154	503	4	353	0	85	0	370
V/C Ratio(X)	0.48	0.22	0.23	0.32	0.66	0.03	0.45	0.00	0.00	0.64	0.00	0.06
Avail Cap(c_a), veh/h	235	1616	1692	235	3232	1408	235	1009	0	489	0	1080
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.0	11.7	11.7	25.4	14.4	11.3	25.4	16.5	0.0	23.7	0.0	14.7
Incr Delay (d2), s/veh	5.7	0.2	0.2	19.7	0.7	0.0	24.4	0.0	0.0	2.9	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.9	0.9	0.0	3.0	0.1	0.1	0.0	0.0	0.6	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.6	11.9	11.9	45.1	15.1	11.3	49.8	16.5	0.0	26.6	0.0	14.8
LnGrp LOS	C	B	B	D	B	B	D	B	A	C	A	B
Approach Vol, veh/h		287			781			3			75	
Approach Delay, s/veh		12.6			15.0			38.7			23.3	
Approach LOS		B			B			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	15.4	4.7	23.7	4.7	17.9	5.3	23.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	15.4	28.6	7.4	48.2	7.4	36.6	7.4	48.2				
Max Q Clear Time (g_c+I1), s	3.7	2.0	2.0	4.8	2.1	2.5	2.3	11.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.5	0.0	0.1	0.0	5.5				
Intersection Summary												
HCM 6th Ctrl Delay			15.0									
HCM 6th LOS			B									

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)
09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	14	217	279	528	57	191	144	420
Future Volume (vph)	14	217	279	528	57	191	144	420
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	9.6	32.8	32.0	55.2	14.4	34.2	21.0	40.8
Total Split (%)	8.0%	27.3%	26.7%	46.0%	12.0%	28.5%	17.5%	34.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	5.2	13.2	20.1	36.5	7.6	13.7	12.4	21.1
Actuated g/C Ratio	0.06	0.16	0.25	0.45	0.09	0.17	0.15	0.26
v/c Ratio	0.15	0.55	0.74	0.43	0.40	0.52	0.62	0.58
Control Delay	46.6	33.6	41.6	16.9	47.3	22.3	46.3	30.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.6	33.6	41.6	16.9	47.3	22.3	46.3	30.8
LOS	D	C	D	B	D	C	D	C
Approach Delay		34.2		24.6		26.1		34.4
Approach LOS		C		C		C		C

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 81

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 28.9

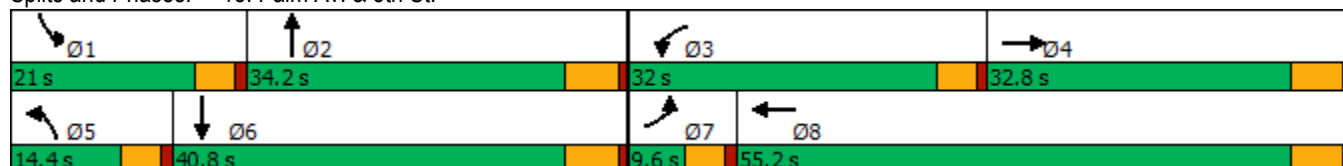
Intersection LOS: C

Intersection Capacity Utilization 62.4%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

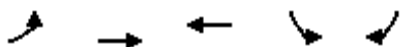
5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	217	71	279	528	89	57	191	134	144	420	62
Future Volume (veh/h)	14	217	71	279	528	89	57	191	134	144	420	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	15	231	61	297	562	84	61	203	87	153	447	40
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	30	440	114	346	1068	159	85	391	162	190	732	65
Arrive On Green	0.02	0.16	0.16	0.21	0.36	0.36	0.05	0.17	0.17	0.12	0.23	0.23
Sat Flow, veh/h	1619	2690	695	1619	2979	444	1619	2359	976	1619	3176	283
Grp Volume(v), veh/h	15	145	147	297	322	324	61	145	145	153	240	247
Grp Sat Flow(s),veh/h/ln	1619	1710	1675	1619	1710	1713	1619	1710	1624	1619	1710	1749
Q Serve(g_s), s	0.6	4.7	4.9	10.8	9.1	9.2	2.3	4.7	5.0	5.6	7.7	7.8
Cycle Q Clear(g_c), s	0.6	4.7	4.9	10.8	9.1	9.2	2.3	4.7	5.0	5.6	7.7	7.8
Prop In Lane	1.00		0.41	1.00		0.26	1.00		0.60	1.00		0.16
Lane Grp Cap(c), veh/h	30	279	274	346	613	614	85	284	269	190	394	403
V/C Ratio(X)	0.50	0.52	0.54	0.86	0.52	0.53	0.71	0.51	0.54	0.81	0.61	0.61
Avail Cap(c_a), veh/h	132	754	739	725	1380	1383	259	794	754	434	978	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.8	23.4	23.5	23.2	15.5	15.5	28.5	23.3	23.4	26.3	21.1	21.1
Incr Delay (d2), s/veh	4.8	1.5	1.6	2.4	0.7	0.7	4.1	1.4	1.7	3.0	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.8	1.8	3.8	3.0	3.1	0.9	1.8	1.8	2.1	2.8	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	24.9	25.1	25.6	16.2	16.2	32.6	24.7	25.0	29.4	22.6	22.6
LnGrp LOS	C	C	C	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h	307			943			351			640		
Approach Delay, s/veh	25.5			19.2			26.2			24.2		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	15.9	17.7	15.8	7.8	19.9	5.7	27.7				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	28.4	27.4	27.0	9.8	35.0	5.0	49.4				
Max Q Clear Time (g_c+I1), s	7.6	7.0	12.8	6.9	4.3	9.8	2.6	11.2				
Green Ext Time (p_c), s	0.1	1.4	0.3	1.4	0.0	2.6	0.0	3.9				
Intersection Summary												
HCM 6th Ctrl Delay	22.6											
HCM 6th LOS	C											

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023

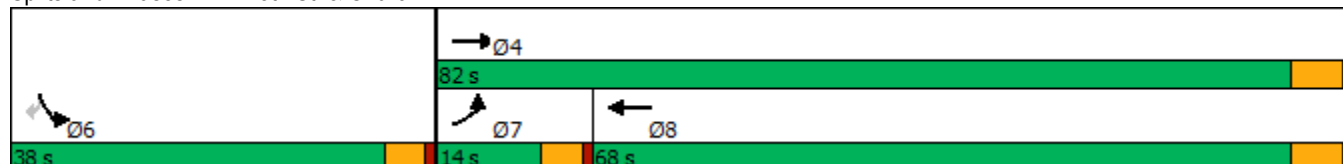


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	←
Traffic Volume (vph)	25	586	944	127	59
Future Volume (vph)	25	586	944	127	59
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	14.0	82.0	68.0	38.0	38.0
Total Split (%)	11.7%	68.3%	56.7%	31.7%	31.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	6.1	34.8	31.1	12.7	12.7
Actuated g/C Ratio	0.10	0.59	0.53	0.22	0.22
v/c Ratio	0.16	0.31	0.62	0.39	0.17
Control Delay	32.2	6.1	12.5	26.4	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.2	6.1	12.5	26.4	8.9
LOS	C	A	B	C	A
Approach Delay		7.2	12.5	20.9	
Approach LOS		A	B	C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 58.5
 Natural Cycle: 70
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.62
 Intersection Signal Delay: 11.6
 Intersection LOS: B
 Intersection Capacity Utilization 48.2%
 ICU Level of Service A
 Analysis Period (min) 15

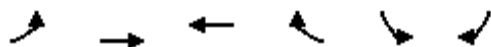
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	25	586	944	96	127	59	
Future Volume (veh/h)	25	586	944	96	127	59	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	27	630	1015	90	137	59	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	51	2020	1473	131	312	294	
Arrive On Green	0.03	0.59	0.46	0.46	0.19	0.19	
Sat Flow, veh/h	1619	3510	3267	282	1619	1525	
Grp Volume(v), veh/h	27	630	546	559	137	59	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1749	1619	1525	
Q Serve(g_s), s	0.8	4.4	12.1	12.1	3.6	1.6	
Cycle Q Clear(g_c), s	0.8	4.4	12.1	12.1	3.6	1.6	
Prop In Lane	1.00			0.16	1.00	1.00	
Lane Grp Cap(c), veh/h	51	2020	793	811	312	294	
V/C Ratio(X)	0.53	0.31	0.69	0.69	0.44	0.20	
Avail Cap(c_a), veh/h	317	5422	2213	2263	1125	1060	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	22.9	4.9	10.2	10.2	17.1	16.3	
Incr Delay (d2), s/veh	3.1	0.1	1.1	1.1	1.0	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.8	3.1	3.2	1.2	1.4	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	26.1	5.0	11.2	11.2	18.1	16.6	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		657	1105		196		
Approach Delay, s/veh		5.9	11.2		17.6		
Approach LOS		A	B		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				34.2	13.9	6.1	28.1
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				76.2	33.4	9.4	62.2
Max Q Clear Time (g_c+I1), s				6.4	5.6	2.8	14.1
Green Ext Time (p_c), s				4.4	0.5	0.0	8.2
Intersection Summary							
HCM 6th Ctrl Delay			10.1				
HCM 6th LOS			B				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↘
Traffic Volume (vph)	345	367	565	787	48	253
Future Volume (vph)	345	367	565	787	48	253
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	34.0	34.0	40.0	74.0	46.0	46.0
Total Split (%)	28.3%	28.3%	33.3%	61.7%	38.3%	38.3%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	17.0	17.0	22.8	44.7	23.9	23.9
Actuated g/C Ratio	0.21	0.21	0.28	0.55	0.29	0.29
v/c Ratio	0.54	0.64	0.76	0.46	0.70	0.51
Control Delay	33.8	8.9	34.8	12.4	35.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	8.9	34.8	12.4	35.2	16.2
LOS	C	A	C	B	D	B
Approach Delay	21.0			21.8	26.8	
Approach LOS	C			C	C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 81.1

Natural Cycle: 70

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 22.6

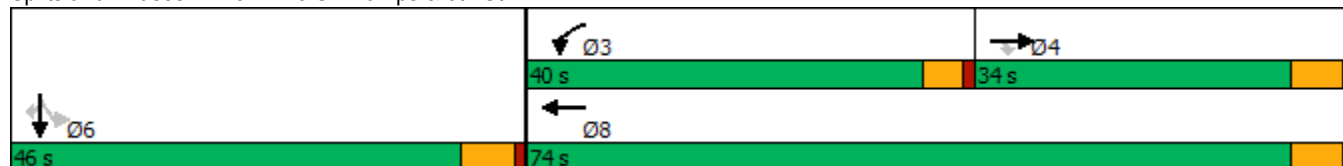
Intersection LOS: C

Intersection Capacity Utilization 75.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	345	367	565	787	0	0	0	0	272	48	253
Future Volume (veh/h)	0	345	367	565	787	0	0	0	0	272	48	253
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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	383	245	628	874	0				302	53	154
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	773	344	745	1886	0				386	68	401
Arrive On Green	0.00	0.23	0.23	0.25	0.55	0.00				0.26	0.26	0.26
Sat Flow, veh/h	0	3510	1523	2956	3510	0				1469	258	1525
Grp Volume(v), veh/h	0	383	245	628	874	0				355	0	154
Grp Sat Flow(s),veh/h/ln	0	1710	1523	1478	1710	0				1727	0	1525
Q Serve(g_s), s	0.0	6.1	9.3	12.6	9.6	0.0				11.9	0.0	5.2
Cycle Q Clear(g_c), s	0.0	6.1	9.3	12.6	9.6	0.0				11.9	0.0	5.2
Prop In Lane	0.00		1.00	1.00		0.00				0.85		1.00
Lane Grp Cap(c), veh/h	0	773	344	745	1886	0				454	0	401
V/C Ratio(X)	0.00	0.50	0.71	0.84	0.46	0.00				0.78	0.00	0.38
Avail Cap(c_a), veh/h	0	1542	687	1674	3730	0				1110	0	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	21.1	22.3	22.2	8.4	0.0				21.4	0.0	18.9
Incr Delay (d2), s/veh	0.0	0.5	2.7	1.0	0.2	0.0				3.0	0.0	0.6
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	0.0	2.2	3.1	3.9	2.5	0.0				4.5	0.0	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	21.6	25.0	23.2	8.6	0.0				24.3	0.0	19.5
LnGrp LOS	A	C	C	C	A	A				C	A	B
Approach Vol, veh/h		628			1502						509	
Approach Delay, s/veh		22.9			14.7						22.9	
Approach LOS		C			B						C	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			20.3	19.9		22.2			40.3			
Change Period (Y+Rc), s			4.6	5.8		5.8			5.8			
Max Green Setting (Gmax), s			35.4	28.2		40.2			68.2			
Max Q Clear Time (g_c+I1), s			14.6	11.3		13.9			11.6			
Green Ext Time (p_c), s			1.1	2.8		2.5			6.7			
Intersection Summary												
HCM 6th Ctrl Delay			18.3									
HCM 6th LOS			B									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	106	511	1022	294	331	2	341
Future Volume (vph)	106	511	1022	294	331	2	341
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	27.0	80.0	53.0	53.0	40.0	40.0	40.0
Total Split (%)	22.5%	66.7%	44.2%	44.2%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	9.9	37.2	25.9	25.9	15.8	15.8	15.8
Actuated g/C Ratio	0.15	0.57	0.39	0.39	0.24	0.24	0.24
v/c Ratio	0.45	0.27	0.55	0.39	0.46	0.44	0.40
Control Delay	36.7	7.4	17.8	3.9	29.9	29.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.7	7.4	17.8	3.9	29.9	29.1	4.8
LOS	D	A	B	A	C	C	A
Approach Delay		12.4	14.7			17.0	
Approach LOS		B	B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 65.8

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 14.8

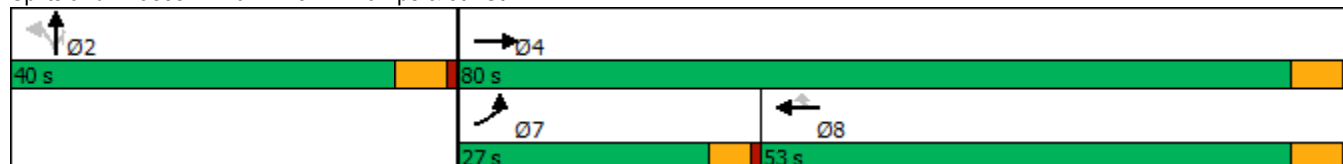
Intersection LOS: B

Intersection Capacity Utilization 75.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	106	511	0	0	1022	294	331	2	341	0	0	0
Future Volume (veh/h)	106	511	0	0	1022	294	331	2	341	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	109	527	0	0	1054	198	342	0	152			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	137	1938	0	0	1917	587	650	0	578			
Arrive On Green	0.08	0.57	0.00	0.00	0.39	0.39	0.20	0.00	0.20			
Sat Flow, veh/h	1619	3510	0	0	5076	1505	3238	0	2881			
Grp Volume(v), veh/h	109	527	0	0	1054	198	342	0	152			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1505	1619	0	1441			
Q Serve(g_s), s	3.3	3.9	0.0	0.0	8.3	4.6	4.7	0.0	2.2			
Cycle Q Clear(g_c), s	3.3	3.9	0.0	0.0	8.3	4.6	4.7	0.0	2.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	137	1938	0	0	1917	587	650	0	578			
V/C Ratio(X)	0.80	0.27	0.00	0.00	0.55	0.34	0.53	0.00	0.26			
Avail Cap(c_a), veh/h	728	5091	0	0	4653	1425	2222	0	1977			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	22.4	5.5	0.0	0.0	11.8	10.7	17.8	0.0	16.8			
Incr Delay (d2), s/veh	4.0	0.1	0.0	0.0	0.2	0.3	0.7	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.2	0.8	0.0	0.0	2.2	1.2	1.5	0.0	0.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	5.6	0.0	0.0	12.1	11.0	18.5	0.0	17.1			
LnGrp LOS	C	A	A	A	B	B	B	A	B			
Approach Vol, veh/h	636			1252			494					
Approach Delay, s/veh	9.2			11.9			18.0					
Approach LOS	A			B			B					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	15.8			34.0			8.8			25.2		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	34.2			74.2			22.4			47.2		
Max Q Clear Time (g_c+I1), s	6.7			5.9			5.3			10.3		
Green Ext Time (p_c), s	1.8			3.5			0.1			9.1		
Intersection Summary												
HCM 6th Ctrl Delay				12.4								
HCM 6th LOS				B								
Notes												

Intersection												
Int Delay, s/veh	6.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	34	85	20	16	71	24	16	488	25	25	293	20
Future Vol, veh/h	34	85	20	16	71	24	16	488	25	25	293	20
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	-	-	-	-	-	-	100	-	-	-	-	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	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	36	89	21	17	75	25	17	514	26	26	308	21

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	689	934	154	812	942	270	329	0	0	540	0	0
Stage 1	360	360	-	561	561	-	-	-	-	-	-	-
Stage 2	329	574	-	251	381	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	336	268	871	274	265	734	1242	-	-	1039	-	-
Stage 1	636	630	-	485	513	-	-	-	-	-	-	-
Stage 2	664	506	-	737	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	242	256	871	189	253	734	1242	-	-	1039	-	-
Mov Cap-2 Maneuver	242	256	-	189	253	-	-	-	-	-	-	-
Stage 1	627	610	-	478	506	-	-	-	-	-	-	-
Stage 2	539	499	-	595	598	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	30.9		26.9		0.2		0.7	
HCM LOS	D		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1242	-	-	281	279	1039	-
HCM Lane V/C Ratio	0.014	-	-	0.521	0.419	0.025	-
HCM Control Delay (s)	7.9	-	-	30.9	26.9	8.6	0.1
HCM Lane LOS	A	-	-	D	D	A	A
HCM 95th %tile Q(veh)	0	-	-	2.8	2	0.1	-

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	2	528	3	1	328
Future Vol, veh/h	9	2	528	3	1	328
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	10	2	574	3	1	357

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	757	289	0	0	577
Stage 1	576	-	-	-	-
Stage 2	181	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	348	714	-	-	1006
Stage 1	531	-	-	-	-
Stage 2	838	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	348	714	-	-	1006
Mov Cap-2 Maneuver	488	-	-	-	-
Stage 1	531	-	-	-	-
Stage 2	837	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	518	1006
HCM Lane V/C Ratio	-	-	0.023	0.001
HCM Control Delay (s)	-	-	12.1	8.6
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	0	531	5	0	337
Future Vol, veh/h	15	0	531	5	0	337
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	0	577	5	0	366
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	763	291	0	0	582	0
Stage 1	580	-	-	-	-	-
Stage 2	183	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	345	712	-	-	1002	-
Stage 1	529	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	345	712	-	-	1002	-
Mov Cap-2 Maneuver	486	-	-	-	-	-
Stage 1	529	-	-	-	-	-
Stage 2	836	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	12.7	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	486	1002	-	
HCM Lane V/C Ratio	-	-	0.034	-	-	
HCM Control Delay (s)	-	-	12.7	0	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

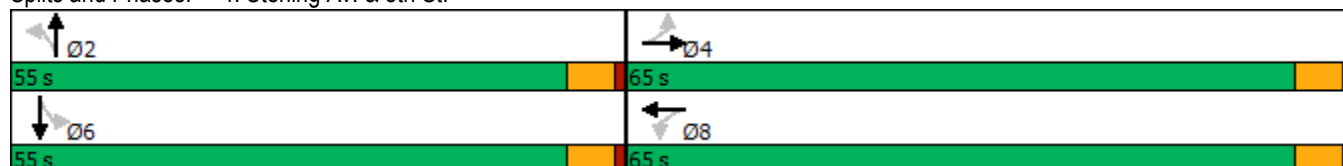
Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	103	309	21	164	5	403	39	268
Future Volume (vph)	103	309	21	164	5	403	39	268
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	65.0	65.0	65.0	65.0	55.0	55.0	55.0	55.0
Total Split (%)	54.2%	54.2%	54.2%	54.2%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		12.6		12.6	11.3	11.3	11.3	11.3
Actuated g/C Ratio		0.36		0.36	0.32	0.32	0.32	0.32
v/c Ratio		0.49		0.21	0.02	0.41	0.15	0.30
Control Delay		10.3		7.5	9.2	10.8	10.9	9.6
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		10.3		7.5	9.2	10.8	10.9	9.6
LOS		B		A	A	B	B	A
Approach Delay		10.3		7.5		10.7		9.7
Approach LOS		B		A		B		A
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 34.9								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.49								
Intersection Signal Delay: 9.9				Intersection LOS: A				
Intersection Capacity Utilization 61.9%				ICU Level of Service B				
Analysis Period (min) 15								

Splits and Phases: 4: Sterling Av. & 5th St.



HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

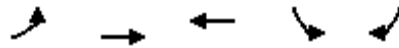
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	103	309	66	21	164	32	5	403	30	39	268	46
Future Volume (veh/h)	103	309	66	21	164	32	5	403	30	39	268	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	107	322	46	22	171	24	5	420	28	41	279	31
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	321	757	107	182	897	121	498	1056	70	436	1007	111
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	479	2331	328	133	2761	371	1026	3255	216	904	3102	341
Grp Volume(v), veh/h	254	0	221	116	0	101	5	220	228	41	153	157
Grp Sat Flow(s),veh/h/ln	1565	0	1574	1700	0	1566	1026	1710	1761	904	1710	1733
Q Serve(g_s), s	1.3	0.0	3.4	0.0	0.0	1.4	0.1	3.1	3.1	1.1	2.0	2.1
Cycle Q Clear(g_c), s	3.7	0.0	3.4	1.4	0.0	1.4	2.2	3.1	3.1	4.2	2.0	2.1
Prop In Lane	0.42		0.21	0.19		0.24	1.00		0.12	1.00		0.20
Lane Grp Cap(c), veh/h	674	0	511	691	0	509	498	555	572	436	555	563
V/C Ratio(X)	0.38	0.00	0.43	0.17	0.00	0.20	0.01	0.40	0.40	0.09	0.27	0.28
Avail Cap(c_a), veh/h	3075	0	3044	3228	0	3029	1816	2753	2835	1598	2753	2791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.2	0.0	8.2	7.5	0.0	7.5	8.5	8.1	8.1	9.7	7.7	7.7
Incr Delay (d2), s/veh	0.3	0.0	0.6	0.1	0.0	0.2	0.0	0.5	0.5	0.1	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.7	0.3	0.0	0.3	0.0	0.7	0.7	0.2	0.4	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.6	0.0	8.7	7.6	0.0	7.7	8.6	8.5	8.5	9.8	8.0	8.0
LnGrp LOS	A	A	A	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h		475			217			453			351	
Approach Delay, s/veh		8.6			7.7			8.5			8.2	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.4		15.4		15.4				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		49.6		59.6		49.6		59.6				
Max Q Clear Time (g_c+I1), s		5.1		5.7		6.2		3.4				
Green Ext Time (p_c), s		2.7		3.0		2.0		1.3				
Intersection Summary												
HCM 6th Ctrl Delay			8.4									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	379	1044	296	169	184
Future Volume (vph)	379	1044	296	169	184
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	55.0	85.0	30.0	35.0	55.0
Total Split (%)	45.8%	70.8%	25.0%	29.2%	45.8%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	22.6	41.5	14.0	14.4	42.7
Actuated g/C Ratio	0.34	0.62	0.21	0.21	0.63
v/c Ratio	0.74	0.53	0.54	0.52	0.12
Control Delay	29.8	8.4	27.8	32.3	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.8	8.4	27.8	32.3	1.0
LOS	C	A	C	C	A
Approach Delay		14.1	27.8	16.0	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 67.3

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 16.7

Intersection LOS: B

Intersection Capacity Utilization 57.4%

ICU Level of Service B

Analysis Period (min) 15

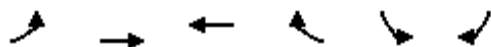
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	379	1044	296	59	169	184	
Future Volume (veh/h)	379	1044	296	59	169	184	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700	
Adj Flow Rate, veh/h	403	1111	315	45	180	80	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	464	1987	606	86	326	1238	
Arrive On Green	0.29	0.58	0.20	0.20	0.20	0.20	
Sat Flow, veh/h	1619	3510	3098	426	1619	2536	
Grp Volume(v), veh/h	403	1111	178	182	180	80	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1723	1619	1268	
Q Serve(g_s), s	11.7	10.0	4.6	4.7	5.0	0.8	
Cycle Q Clear(g_c), s	11.7	10.0	4.6	4.7	5.0	0.8	
Prop In Lane	1.00			0.25	1.00	1.00	
Lane Grp Cap(c), veh/h	464	1987	344	347	326	1238	
V/C Ratio(X)	0.87	0.56	0.52	0.52	0.55	0.06	
Avail Cap(c_a), veh/h	1644	5484	847	854	965	2239	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.8	6.5	17.7	17.7	17.8	6.7	
Incr Delay (d2), s/veh	2.0	0.2	1.2	1.2	1.5	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.7	2.1	1.6	1.7	1.7	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.8	6.7	18.9	18.9	19.3	6.7	
LnGrp LOS	B	A	B	B	B	A	
Approach Vol, veh/h		1514	360	260			
Approach Delay, s/veh		9.9	18.9	15.4			
Approach LOS		A	B	B			
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				34.2	15.4	18.8	15.4
Change Period (Y+Rc), s				5.4	5.4	4.6	5.4
Max Green Setting (Gmax), s				79.6	29.6	50.4	24.6
Max Q Clear Time (g_c+I1), s				12.0	7.0	13.7	6.7
Green Ext Time (p_c), s				10.1	0.8	0.6	1.8
Intersection Summary							
HCM 6th Ctrl Delay			12.1				
HCM 6th LOS			B				

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑			↗
Traffic Vol, veh/h	0	377	216	2	0	1
Future Vol, veh/h	0	377	216	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	410	235	2	0	1
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	119
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	917
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	917
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		8.9		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	917		
HCM Lane V/C Ratio	-	-	-	0.001		
HCM Control Delay (s)	-	-	-	8.9		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0		

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑	↑	↑	
Traffic Vol, veh/h	137	0	1	109	0	3
Future Vol, veh/h	137	0	1	109	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	149	0	1	118	0	3
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	149	0	269	75
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	120	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1445	-	714	978
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	910	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1445	-	713	978
Mov Cap-2 Maneuver	-	-	-	-	730	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	909	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.1		8.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	978	-	-	1445	-	
HCM Lane V/C Ratio	0.003	-	-	0.001	-	
HCM Control Delay (s)	8.7	-	-	7.5	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	374	213	6	12	2
Future Vol, veh/h	2	374	213	6	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	407	232	7	13	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	239	0	0 647 120
Stage 1	-	-	- - 236 -
Stage 2	-	-	- - 411 -
Critical Hdwy	4.1	-	- - 6.6 6.9
Critical Hdwy Stg 1	-	-	- - 5.8 -
Critical Hdwy Stg 2	-	-	- - 5.4 -
Follow-up Hdwy	2.2	-	- - 3.5 3.3
Pot Cap-1 Maneuver	1340	-	- - 423 915
Stage 1	-	-	- - 787 -
Stage 2	-	-	- - 674 -
Platoon blocked, %		-	- -
Mov Cap-1 Maneuver	1340	-	- - 423 915
Mov Cap-2 Maneuver	-	-	- - 522 -
Stage 1	-	-	- - 786 -
Stage 2	-	-	- - 674 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1340	-	-	-	556
HCM Lane V/C Ratio	0.002	-	-	-	0.027
HCM Control Delay (s)	7.7	-	-	-	11.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	95	5	2	93	16	3	35	13	5	30	14
Future Vol, veh/h	39	95	5	2	93	16	3	35	13	5	30	14
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	42	102	5	2	100	17	3	38	14	5	32	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	118	0	0	107	0	0	323	308	102	329	305	111
Stage 1	-	-	-	-	-	-	186	186	-	114	114	-
Stage 2	-	-	-	-	-	-	137	122	-	215	191	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1483	-	-	1497	-	-	634	609	959	628	612	948
Stage 1	-	-	-	-	-	-	820	750	-	896	805	-
Stage 2	-	-	-	-	-	-	871	799	-	792	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1482	-	-	1497	-	-	583	590	959	575	592	946
Mov Cap-2 Maneuver	-	-	-	-	-	-	583	590	-	575	592	-
Stage 1	-	-	-	-	-	-	795	728	-	868	803	-
Stage 2	-	-	-	-	-	-	821	797	-	718	724	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			0.1			11			10.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	654	1482	-	-	1497	-	-	661				
HCM Lane V/C Ratio	0.084	0.028	-	-	0.001	-	-	0.08				
HCM Control Delay (s)	11	7.5	0	-	7.4	0	-	10.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	12	366	9	2	200	4	10	35	7	7	21	10
Future Vol, veh/h	12	366	9	2	200	4	10	35	7	7	21	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	389	10	2	213	4	11	37	7	7	22	11
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	217	0	0	399	0	0	657	641	394	661	644	216
Stage 1	-	-	-	-	-	-	420	420	-	219	219	-
Stage 2	-	-	-	-	-	-	237	221	-	442	425	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1365	-	-	1171	-	-	381	395	659	379	394	829
Stage 1	-	-	-	-	-	-	615	593	-	788	726	-
Stage 2	-	-	-	-	-	-	771	724	-	598	590	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1365	-	-	1171	-	-	355	389	659	344	388	828
Mov Cap-2 Maneuver	-	-	-	-	-	-	355	389	-	344	388	-
Stage 1	-	-	-	-	-	-	608	586	-	779	725	-
Stage 2	-	-	-	-	-	-	735	723	-	547	583	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			15.1			14		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1		
Capacity (veh/h)	381		659	1365	-	-	1171	-	-	-	439	
HCM Lane V/C Ratio	0.126		0.011	0.009	-	-	0.002	-	-	-	0.092	
HCM Control Delay (s)	15.8		10.5	7.7	0	-	8.1	0	-	-	14	
HCM Lane LOS	C		B	A	A	-	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.4		0	0	-	-	0	-	-	-	0.3	

Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	76	292	72	179	145	7	471	56	232
Future Volume (vph)	76	292	72	179	145	7	471	56	232
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	46.0	46.0	46.0	46.0	46.0	74.0	74.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	61.7%	61.7%	61.7%	61.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	11.1	11.1	11.1	11.1	11.1		14.7		14.7
Actuated g/C Ratio	0.30	0.30	0.30	0.30	0.30		0.40		0.40
v/c Ratio	0.25	0.32	0.27	0.36	0.28		0.55		0.32
Control Delay	13.7	11.9	14.4	13.6	4.4		9.4		8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	13.7	11.9	14.4	13.6	4.4		9.4		8.4
LOS	B	B	B	B	A		A		A
Approach Delay		12.3		10.4			9.4		8.4
Approach LOS		B		B			A		A
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 37.2									
Natural Cycle: 55									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.55									
Intersection Signal Delay: 10.1					Intersection LOS: B				
Intersection Capacity Utilization 66.4%					ICU Level of Service C				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	292	11	72	179	145	7	471	188	56	232	21
Future Volume (veh/h)	76	292	11	72	179	145	7	471	188	56	232	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	81	311	12	77	190	147	7	501	187	60	247	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	429	999	38	443	535	447	112	881	325	238	837	67
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1001	3358	129	1014	1800	1504	9	2386	879	243	2266	181
Grp Volume(v), veh/h	81	158	165	77	190	147	380	0	315	158	0	168
Grp Sat Flow(s),veh/h/ln	1001	1710	1777	1014	1800	1504	1795	0	1480	1090	0	1600
Q Serve(g_s), s	2.3	2.4	2.4	2.1	2.8	2.6	0.0	0.0	5.7	0.4	0.0	2.5
Cycle Q Clear(g_c), s	5.1	2.4	2.4	4.6	2.8	2.6	5.7	0.0	5.7	6.1	0.0	2.5
Prop In Lane	1.00		0.07	1.00		1.00	0.02		0.59	0.38		0.11
Lane Grp Cap(c), veh/h	429	509	528	443	535	447	772	0	547	550	0	591
V/C Ratio(X)	0.19	0.31	0.31	0.17	0.35	0.33	0.49	0.00	0.58	0.29	0.00	0.28
Avail Cap(c_a), veh/h	1329	2045	2125	1354	2153	1799	3749	0	3021	2541	0	3267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	9.1	9.1	10.9	9.3	9.2	8.5	0.0	8.5	7.4	0.0	7.5
Incr Delay (d2), s/veh	0.2	0.3	0.3	0.2	0.4	0.4	0.5	0.0	1.0	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	0.6	0.3	0.7	0.5	1.3	0.0	1.2	0.5	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.5	9.5	9.5	11.1	9.7	9.6	9.0	0.0	9.5	7.7	0.0	7.7
LnGrp LOS	B	A	A	B	A	A	A	A	A	A	A	A
Approach Vol, veh/h	404			414			695			326		
Approach Delay, s/veh	9.9			9.9			9.2			7.7		
Approach LOS	A			A			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	17.8			15.8			17.8			15.8		
Change Period (Y+Rc), s	5.4			5.8			5.4			5.8		
Max Green Setting (Gmax), s	68.6			40.2			68.6			40.2		
Max Q Clear Time (g_c+I1), s	7.7			7.1			8.1			6.6		
Green Ext Time (p_c), s	4.7			2.1			2.2			1.8		
Intersection Summary												
HCM 6th Ctrl Delay	9.2											
HCM 6th LOS	A											

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	SBL	SBT	Ø3
Lane Configurations									
Traffic Volume (vph)	58	477	377	87	1	2	58	2	
Future Volume (vph)	58	477	377	87	1	2	58	2	
Turn Type	Prot	NA	NA	Perm	Prot	NA	Prot	NA	
Protected Phases	7	4	8		5	2	1	6	3
Permitted Phases				8					
Detector Phase	7	4	8	8	5	2	1	6	
Switch Phase									
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0	10.0	5.0	10.0	5.0
Minimum Split (s)	9.6	22.8	22.8	22.8	9.6	31.4	9.6	29.4	9.6
Total Split (s)	23.0	53.4	40.0	40.0	13.0	33.0	24.0	44.0	9.6
Total Split (%)	19.2%	44.5%	33.3%	33.3%	10.8%	27.5%	20.0%	36.7%	8%
Yellow Time (s)	3.6	4.8	4.8	4.8	3.6	4.4	3.6	4.4	3.6
All-Red Time (s)	1.0	1.0	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	0.0	
Total Lost Time (s)	4.6	5.8	5.8	5.8	4.6	5.4	4.6	5.4	
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	Min	None	Min	None
Act Effect Green (s)	7.2	19.3	13.2	13.2	5.5	11.1	7.2	15.7	
Actuated g/C Ratio	0.15	0.39	0.27	0.27	0.11	0.23	0.15	0.32	
v/c Ratio	0.25	0.36	0.42	0.17	0.01	0.02	0.25	0.06	
Control Delay	26.4	11.3	19.0	0.7	27.0	17.0	26.4	8.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	26.4	11.3	19.0	0.7	27.0	17.0	26.4	8.8	
LOS	C	B	B	A	C	B	C	A	
Approach Delay		12.9	15.6			18.3		20.3	
Approach LOS		B	B			B		C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 48.9

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 14.7

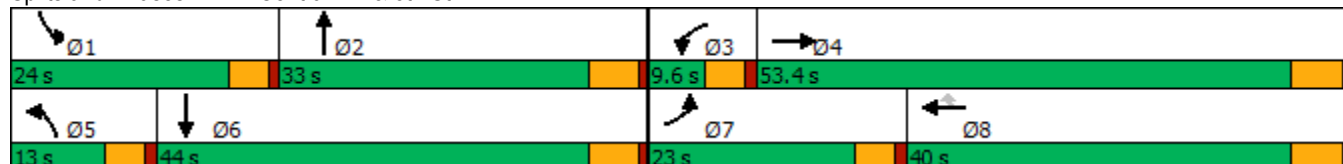
Intersection LOS: B

Intersection Capacity Utilization 41.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.



HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	477	0	0	377	87	1	2	5	58	2	28
Future Volume (veh/h)	58	477	0	0	377	87	1	2	5	58	2	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	59	487	0	0	385	78	1	2	2	59	2	16
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	93	1301	0	4	762	337	4	180	180	93	47	378
Arrive On Green	0.06	0.38	0.00	0.00	0.22	0.22	0.00	0.22	0.22	0.06	0.27	0.27
Sat Flow, veh/h	1619	3510	0	1619	3420	1515	1619	826	826	1619	172	1379
Grp Volume(v), veh/h	59	487	0	0	385	78	1	0	4	59	0	18
Grp Sat Flow(s),veh/h/ln	1619	1710	0	1619	1710	1515	1619	0	1651	1619	0	1552
Q Serve(g_s), s	1.6	4.7	0.0	0.0	4.5	1.9	0.0	0.0	0.1	1.6	0.0	0.4
Cycle Q Clear(g_c), s	1.6	4.7	0.0	0.0	4.5	1.9	0.0	0.0	0.1	1.6	0.0	0.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.50	1.00		0.89
Lane Grp Cap(c), veh/h	93	1301	0	4	762	337	4	0	360	93	0	425
V/C Ratio(X)	0.63	0.37	0.00	0.00	0.51	0.23	0.28	0.00	0.01	0.63	0.00	0.04
Avail Cap(c_a), veh/h	649	3546	0	176	2548	1129	296	0	993	684	0	1305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	10.3	0.0	0.0	15.6	14.6	22.9	0.0	14.1	21.2	0.0	12.2
Incr Delay (d2), s/veh	2.6	0.2	0.0	0.0	0.5	0.3	15.5	0.0	0.0	2.6	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.3	0.0	0.0	1.4	0.6	0.0	0.0	0.0	0.6	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.8	10.5	0.0	0.0	16.2	15.0	38.4	0.0	14.1	23.8	0.0	12.3
LnGrp LOS	C	B	A	A	B	B	D	A	B	C	A	B
Approach Vol, veh/h		546			463			5			77	
Approach Delay, s/veh		11.9			16.0			18.9			21.1	
Approach LOS		B			B			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	15.4	0.0	23.3	4.7	18.0	7.2	16.0				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	19.4	27.6	5.0	47.6	8.4	38.6	18.4	34.2				
Max Q Clear Time (g_c+I1), s	3.6	2.1	0.0	6.7	2.0	2.4	3.6	6.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	3.2	0.0	0.1	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay			14.3									
HCM 6th LOS			B									

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)
09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	51	435	203	325	104	522	152	334
Future Volume (vph)	51	435	203	325	104	522	152	334
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	14.2	32.8	26.0	44.6	19.3	40.2	21.0	41.9
Total Split (%)	11.8%	27.3%	21.7%	37.2%	16.1%	33.5%	17.5%	34.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	7.8	22.8	18.2	35.8	11.4	31.1	14.2	33.8
Actuated g/C Ratio	0.07	0.21	0.17	0.33	0.11	0.29	0.13	0.31
v/c Ratio	0.47	0.79	0.81	0.46	0.66	0.87	0.77	0.38
Control Delay	65.8	48.6	68.2	27.6	67.9	44.8	72.0	30.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.8	48.6	68.2	27.6	67.9	44.8	72.0	30.6
LOS	E	D	E	C	E	D	E	C
Approach Delay		50.1		39.8		47.5		42.6
Approach LOS		D		D		D		D

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 107.6

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 45.1

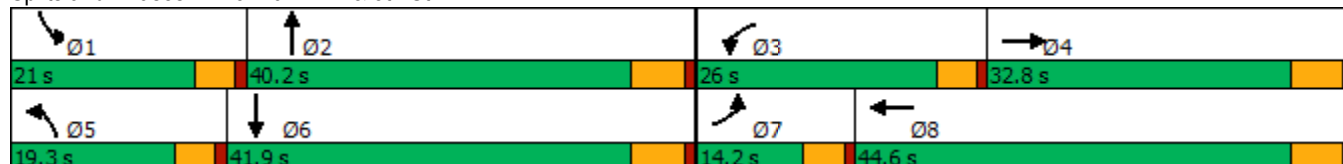
Intersection LOS: D

Intersection Capacity Utilization 79.2%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

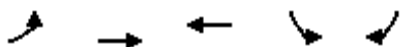
5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	435	85	203	325	148	104	522	269	152	334	40
Future Volume (veh/h)	51	435	85	203	325	148	104	522	269	152	334	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	55	473	60	221	353	138	113	567	253	165	363	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	68	605	76	254	753	289	139	677	302	196	1060	81
Arrive On Green	0.04	0.20	0.20	0.16	0.31	0.31	0.09	0.29	0.29	0.12	0.33	0.33
Sat Flow, veh/h	1619	3050	385	1619	2404	923	1619	2300	1024	1619	3218	247
Grp Volume(v), veh/h	55	264	269	221	249	242	113	421	399	165	192	199
Grp Sat Flow(s),veh/h/ln	1619	1710	1725	1619	1710	1617	1619	1710	1614	1619	1710	1755
Q Serve(g_s), s	3.1	13.3	13.4	12.1	10.6	10.9	6.2	20.9	21.0	9.0	7.7	7.8
Cycle Q Clear(g_c), s	3.1	13.3	13.4	12.1	10.6	10.9	6.2	20.9	21.0	9.0	7.7	7.8
Prop In Lane	1.00		0.22	1.00		0.57	1.00		0.63	1.00		0.14
Lane Grp Cap(c), veh/h	68	339	342	254	536	506	139	503	475	196	563	578
V/C Ratio(X)	0.81	0.78	0.79	0.87	0.47	0.48	0.81	0.84	0.84	0.84	0.34	0.34
Avail Cap(c_a), veh/h	172	509	514	382	732	692	263	649	613	293	681	699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.1	34.4	34.5	37.3	25.0	25.1	40.7	29.9	30.0	39.0	23.0	23.0
Incr Delay (d2), s/veh	8.3	4.4	4.6	9.3	0.6	0.7	4.3	7.5	8.0	8.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	5.6	5.7	5.2	4.1	4.0	2.5	9.0	8.6	3.9	2.9	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	38.8	39.1	46.6	25.6	25.8	44.9	37.4	38.0	47.6	23.3	23.3
LnGrp LOS	D	D	D	D	C	C	D	D	D	D	C	C
Approach Vol, veh/h		588			712			933			556	
Approach Delay, s/veh		40.1			32.2			38.6			30.5	
Approach LOS		D			C			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	32.5	18.8	23.8	12.4	35.6	8.4	34.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	34.4	21.4	27.0	14.7	36.1	9.6	38.8				
Max Q Clear Time (g_c+I1), s	11.0	23.0	14.1	15.4	8.2	9.8	5.1	12.9				
Green Ext Time (p_c), s	0.1	3.7	0.2	2.2	0.1	2.0	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay				35.7								
HCM 6th LOS				D								

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023

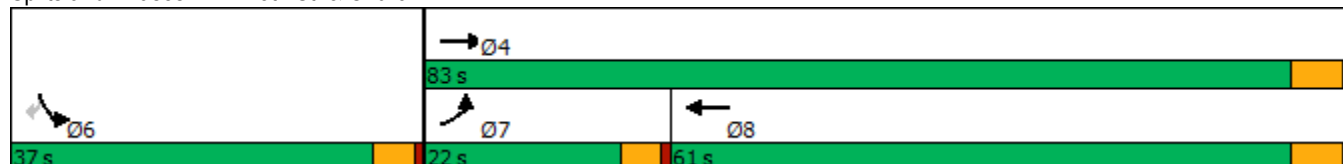


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	59	830	653	88	40
Future Volume (vph)	59	830	653	88	40
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	22.0	83.0	61.0	37.0	37.0
Total Split (%)	18.3%	69.2%	50.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	7.2	33.4	26.8	11.3	11.3
Actuated g/C Ratio	0.15	0.68	0.54	0.23	0.23
v/c Ratio	0.27	0.39	0.45	0.26	0.11
Control Delay	25.7	5.7	12.0	22.3	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.7	5.7	12.0	22.3	8.9
LOS	C	A	B	C	A
Approach Delay		7.0	12.0	18.1	
Approach LOS		A	B	B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 49.3
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.45
 Intersection Signal Delay: 10.0
 Intersection LOS: A
 Intersection Capacity Utilization 47.7%
 ICU Level of Service A
 Analysis Period (min) 15

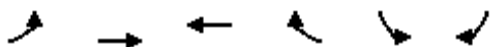
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	59	830	653	108	88	40	
Future Volume (veh/h)	59	830	653	108	88	40	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	64	902	710	103	96	14	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	103	1912	1131	164	287	271	
Arrive On Green	0.06	0.56	0.38	0.38	0.18	0.18	
Sat Flow, veh/h	1619	3510	3078	433	1619	1525	
Grp Volume(v), veh/h	64	902	406	407	96	14	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1711	1619	1525	
Q Serve(g_s), s	1.5	6.2	7.6	7.7	2.0	0.3	
Cycle Q Clear(g_c), s	1.5	6.2	7.6	7.7	2.0	0.3	
Prop In Lane	1.00			0.25	1.00	1.00	
Lane Grp Cap(c), veh/h	103	1912	647	648	287	271	
V/C Ratio(X)	0.62	0.47	0.63	0.63	0.33	0.05	
Avail Cap(c_a), veh/h	714	6690	2392	2393	1329	1252	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	18.0	5.2	10.0	10.0	14.2	13.5	
Incr Delay (d2), s/veh	2.2	0.2	1.0	1.0	0.7	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.5	0.8	1.9	1.9	0.6	0.3	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	20.2	5.4	11.0	11.0	14.9	13.5	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		966	813		110		
Approach Delay, s/veh		6.4	11.0		14.7		
Approach LOS		A	B		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				27.9	11.6	7.1	20.7
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				77.2	32.4	17.4	55.2
Max Q Clear Time (g_c+I1), s				8.2	4.0	3.5	9.7
Green Ext Time (p_c), s				7.0	0.3	0.0	5.3
Intersection Summary							
HCM 6th Ctrl Delay			8.9				
HCM 6th LOS			A				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↗
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↗
Traffic Volume (vph)	677	241	227	554	4	206
Future Volume (vph)	677	241	227	554	4	206
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	42.0	42.0	22.0	64.0	56.0	56.0
Total Split (%)	35.0%	35.0%	18.3%	53.3%	46.7%	46.7%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	25.6	25.6	12.0	42.5	29.3	29.3
Actuated g/C Ratio	0.30	0.30	0.14	0.50	0.35	0.35
v/c Ratio	0.69	0.43	0.58	0.34	0.74	0.33
Control Delay	31.2	10.0	43.1	14.0	33.7	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	10.0	43.1	14.0	33.7	6.6
LOS	C	A	D	B	C	A
Approach Delay	25.6			22.4	24.7	
Approach LOS	C			C	C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 84.2

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 24.3

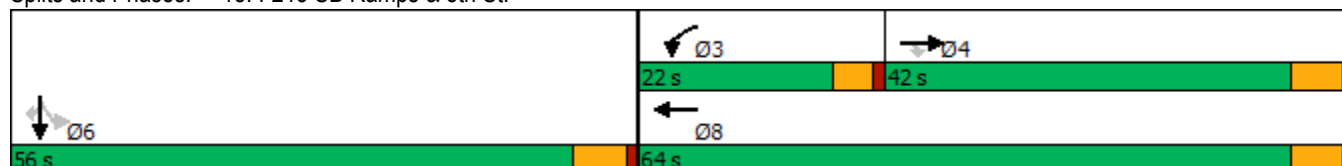
Intersection LOS: C

Intersection Capacity Utilization 65.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	677	241	227	554	0	0	0	0	414	4	206
Future Volume (veh/h)	0	677	241	227	554	0	0	0	0	414	4	206
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	720	183	241	589	0				440	4	114
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	1037	456	337	1682	0				545	5	489
Arrive On Green	0.00	0.30	0.30	0.11	0.49	0.00				0.32	0.32	0.32
Sat Flow, veh/h	0	3510	1505	2956	3510	0				1700	15	1525
Grp Volume(v), veh/h	0	720	183	241	589	0				444	0	114
Grp Sat Flow(s),veh/h/ln	0	1710	1505	1478	1710	0				1715	0	1525
Q Serve(g_s), s	0.0	11.5	6.0	4.9	6.5	0.0				14.7	0.0	3.4
Cycle Q Clear(g_c), s	0.0	11.5	6.0	4.9	6.5	0.0				14.7	0.0	3.4
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	1037	456	337	1682	0				550	0	489
V/C Ratio(X)	0.00	0.69	0.40	0.71	0.35	0.00				0.81	0.00	0.23
Avail Cap(c_a), veh/h	0	2004	882	833	3222	0				1394	0	1239
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	19.0	17.1	26.4	9.6	0.0				19.2	0.0	15.4
Incr Delay (d2), s/veh	0.0	0.8	0.6	1.1	0.1	0.0				2.9	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.0	1.8	1.6	1.9	0.0				5.3	0.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	19.8	17.6	27.5	9.8	0.0				22.1	0.0	15.7
LnGrp LOS	A	B	B	C	A	A				C	A	B
Approach Vol, veh/h		903			830						558	
Approach Delay, s/veh		19.4			14.9						20.8	
Approach LOS		B			B						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			11.6	24.5		25.6		36.2				
Change Period (Y+Rc), s			4.6	5.8		5.8		5.8				
Max Green Setting (Gmax), s			17.4	36.2		50.2		58.2				
Max Q Clear Time (g_c+I1), s			6.9	13.5		16.7		8.5				
Green Ext Time (p_c), s			0.3	5.3		3.1		4.0				
Intersection Summary												
HCM 6th Ctrl Delay			18.1									
HCM 6th LOS			B									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	192	899	552	364	229	3	381
Future Volume (vph)	192	899	552	364	229	3	381
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	36.0	83.0	47.0	47.0	37.0	37.0	37.0
Total Split (%)	30.0%	69.2%	39.2%	39.2%	30.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	12.3	32.5	15.4	15.4	12.8	12.8	12.8
Actuated g/C Ratio	0.21	0.57	0.27	0.27	0.22	0.22	0.22
v/c Ratio	0.58	0.49	0.44	0.56	0.36	0.33	0.51
Control Delay	29.1	8.4	19.3	6.1	24.7	24.0	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	8.4	19.3	6.1	24.7	24.0	9.9
LOS	C	A	B	A	C	C	A
Approach Delay		12.0	14.1			15.4	
Approach LOS		B	B			B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 57.4

Natural Cycle: 55

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 13.5

Intersection LOS: B

Intersection Capacity Utilization 65.4%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	192	899	0	0	552	364	229	3	381	0	0	0
Future Volume (veh/h)	192	899	0	0	552	364	229	3	381	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	202	946	0	0	581	251	243	0	153			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	253	1852	0	0	1415	434	687	0	612			
Arrive On Green	0.16	0.54	0.00	0.00	0.29	0.29	0.21	0.00	0.21			
Sat Flow, veh/h	1619	3510	0	0	5076	1506	3238	0	2881			
Grp Volume(v), veh/h	202	946	0	0	581	251	243	0	153			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1506	1619	0	1441			
Q Serve(g_s), s	5.7	8.3	0.0	0.0	4.5	6.7	3.0	0.0	2.1			
Cycle Q Clear(g_c), s	5.7	8.3	0.0	0.0	4.5	6.7	3.0	0.0	2.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	253	1852	0	0	1415	434	687	0	612			
V/C Ratio(X)	0.80	0.51	0.00	0.00	0.41	0.58	0.35	0.00	0.25			
Avail Cap(c_a), veh/h	1079	5604	0	0	4297	1317	2144	0	1908			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.2	6.8	0.0	0.0	13.5	14.3	15.8	0.0	15.4			
Incr Delay (d2), s/veh	2.2	0.2	0.0	0.0	0.2	1.2	0.3	0.0	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.9	1.6	0.0	0.0	1.3	1.9	0.9	0.0	0.6			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	7.1	0.0	0.0	13.7	15.6	16.1	0.0	15.7			
LnGrp LOS	C	A	A	A	B	B	B	A	B			
Approach Vol, veh/h	1148			832			396					
Approach Delay, s/veh	9.6			14.3			15.9					
Approach LOS	A			B			B					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	15.8			31.3			12.0			19.4		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	31.2			77.2			31.4			41.2		
Max Q Clear Time (g_c+l1), s	5.0			10.3			7.7			8.7		
Green Ext Time (p_c), s	1.4			7.5			0.2			4.9		
Intersection Summary												
HCM 6th Ctrl Delay	12.3											
HCM 6th LOS	B											
Notes												

APPENDIX 6.3: EA (2026) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-3. Warrant 3, Peak Hour

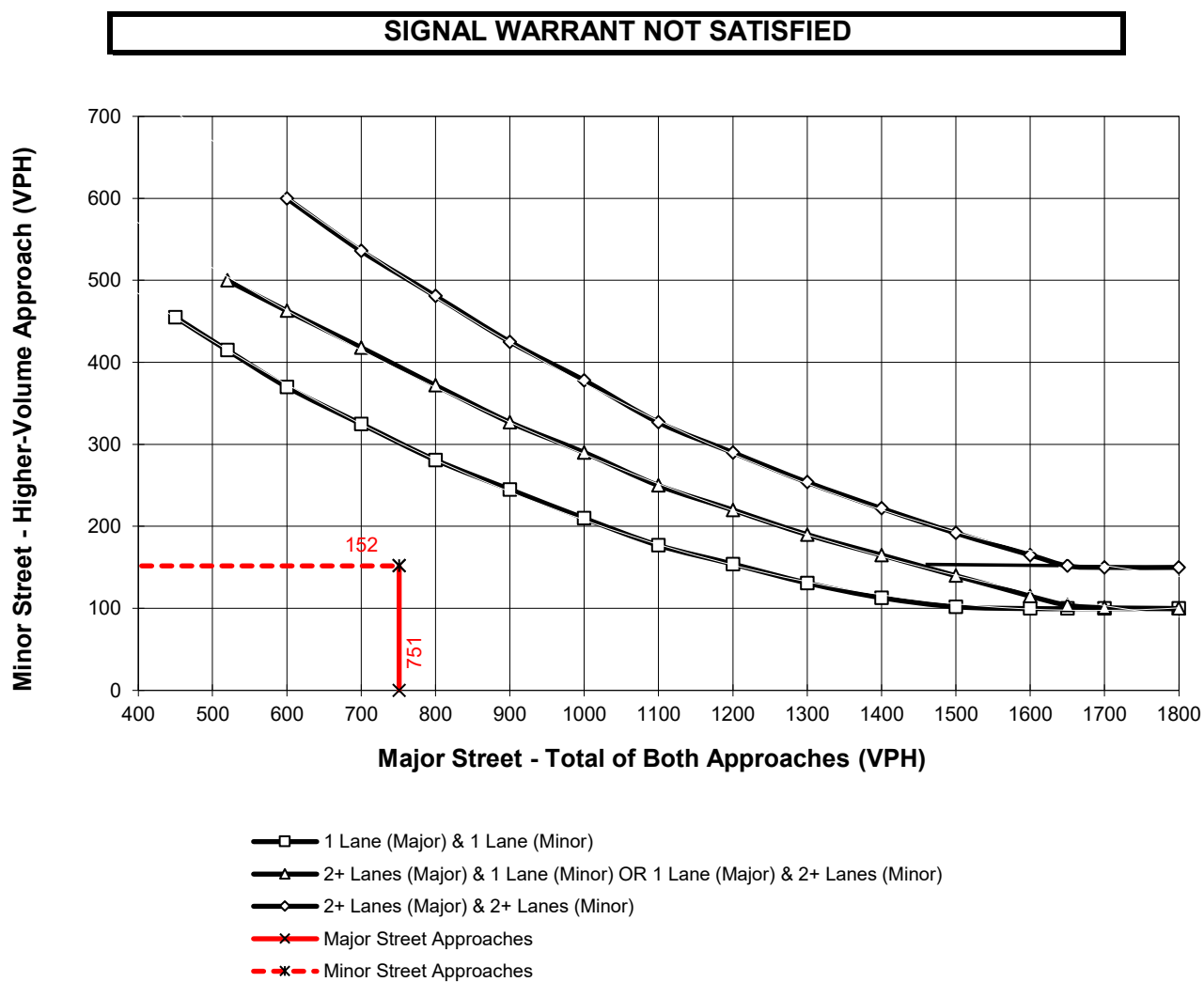
Traffic Conditions = **Existing (2023) Conditions - Weekday AM Peak Hour**

Major Street Name = **Sterling Av.**

Total of Both Approaches (VPH) = **751**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **5th St.**

High Volume Approach (VPH) = **152**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EA (2026) Conditions - Weekday AM Peak Hour**

Major Street Name = **6th St.**

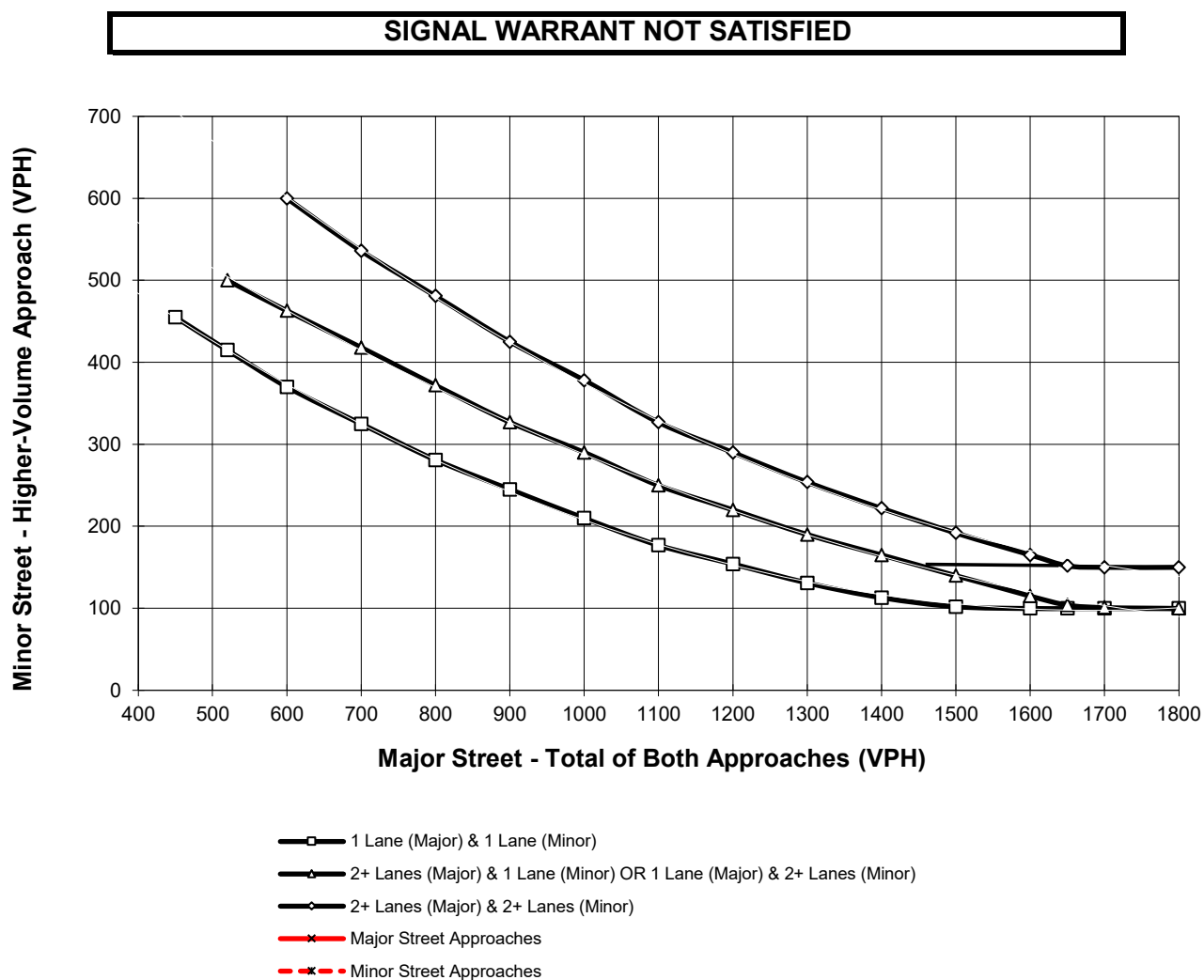
Total of Both Approaches (VPH) = **204**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **62**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EA (2026) Conditions - Weekday PM Peak Hour**

Major Street Name = **5th St.**

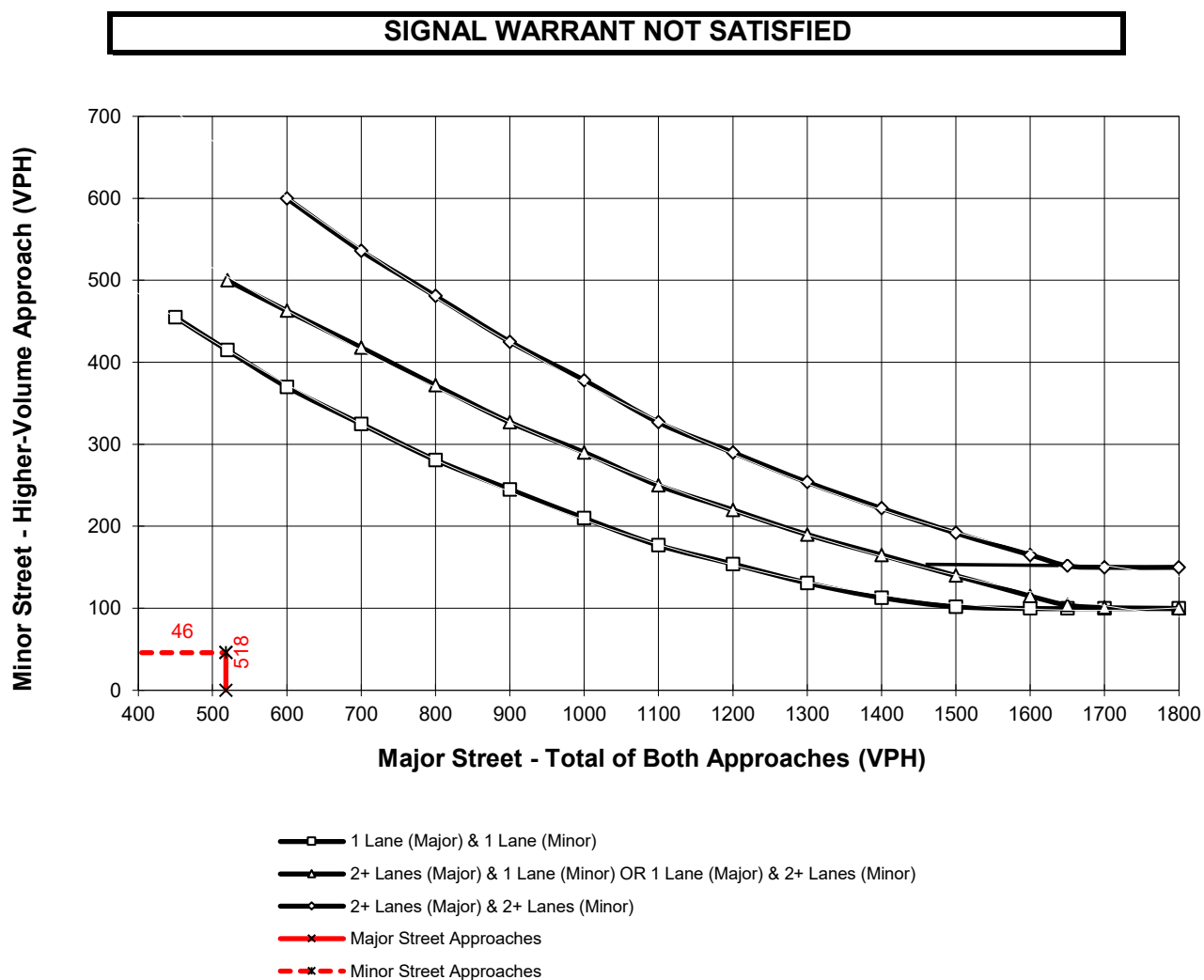
Total of Both Approaches (VPH) = **518**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **46**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

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APPENDIX 6.4: EAP (2026) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAP (2026) Conditions - Weekday AM Peak Hour**

Major Street Name = **Sterling Av.**

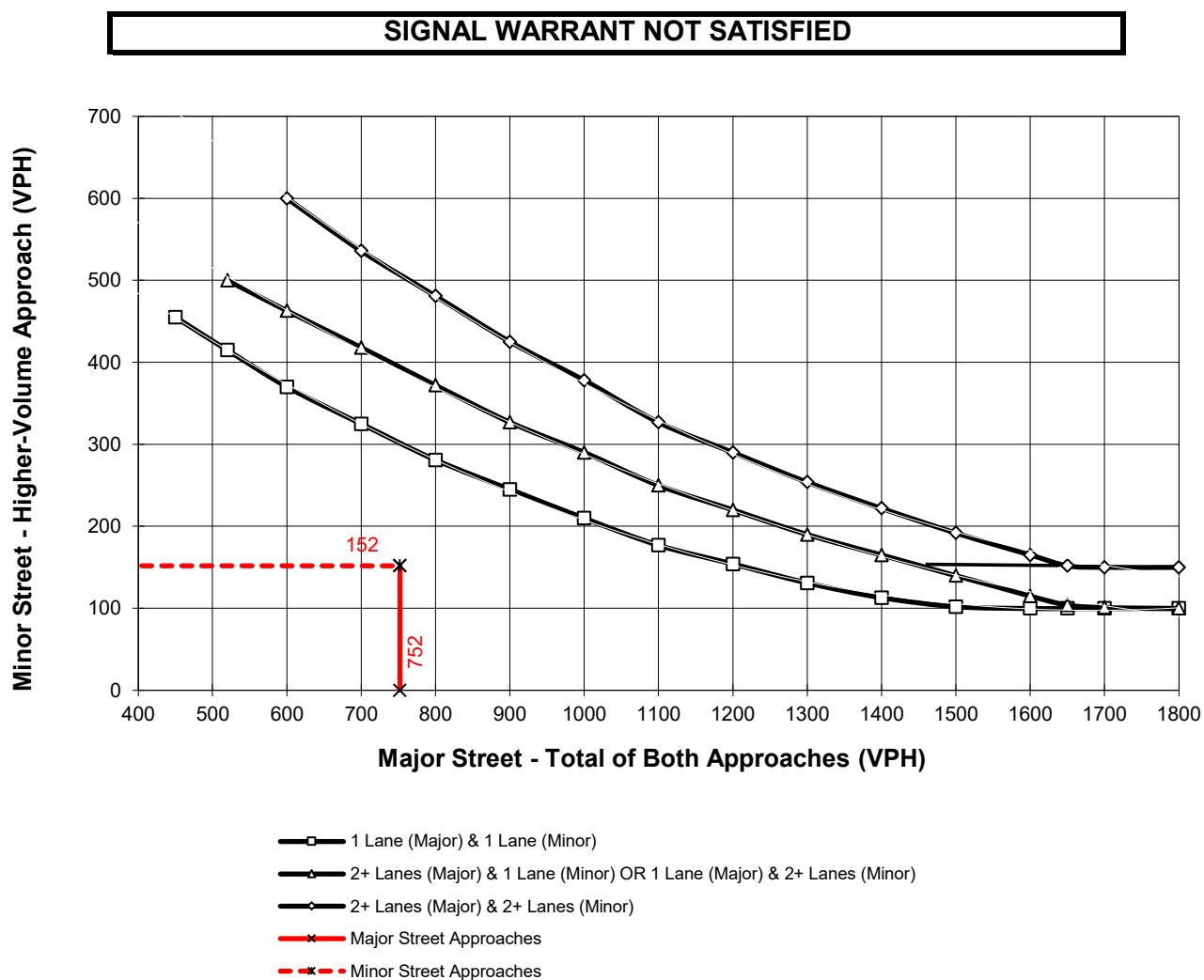
Total of Both Approaches (VPH) = **752**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **5th St.**

High Volume Approach (VPH) = **152**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAP (2026) Conditions - Weekday AM Peak Hour**

Major Street Name = **6th St.**

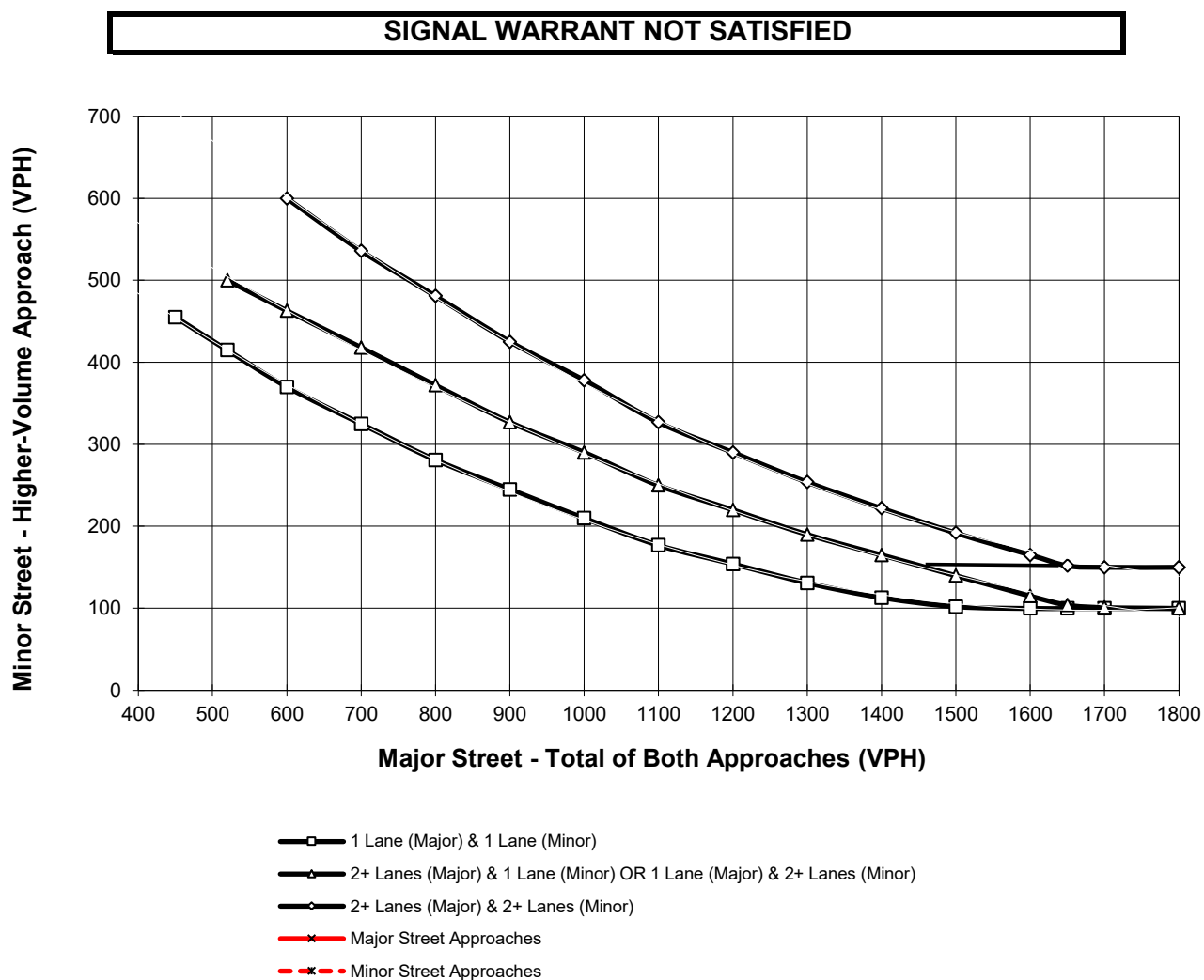
Total of Both Approaches (VPH) = **205**

Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **64**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAP (2026) Conditions - Weekday PM Peak Hour**

Major Street Name = **5th St.**

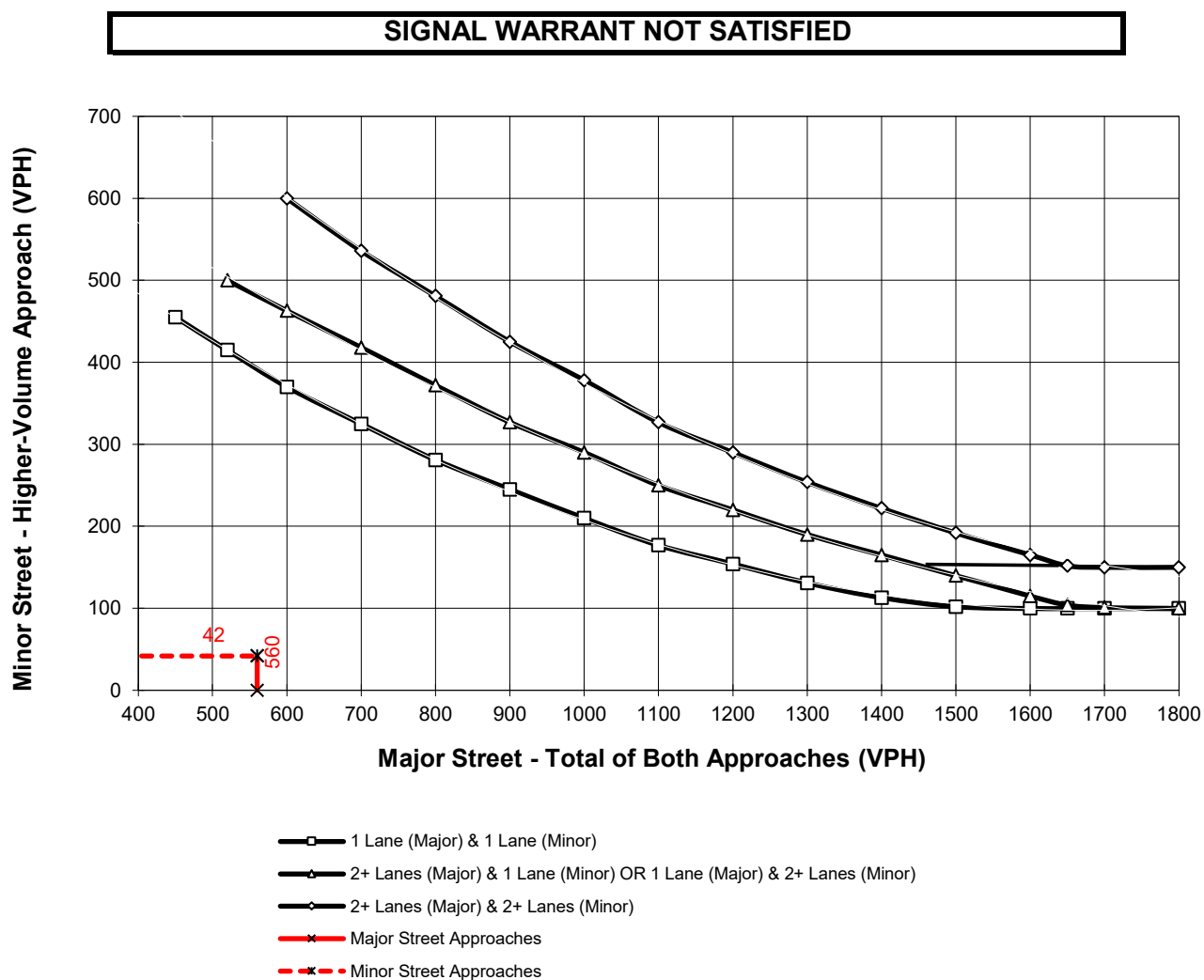
Total of Both Approaches (VPH) = **560**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **42**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	EAP (2026)
Jurisdiction: <u>City of San Bernardino</u>				CHK	CP	DATE <u>12/14/11</u>
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major)		<u>45</u> mph
Minor Street: <u>Driveway 1</u>				Critical Approach Speed (Minor)		<u>25</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>11,820</u> vpd				Minor Street Future ADT = <u>98</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒
						or
In built up area of isolated community of < 10,000 population						☐

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN		RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied		Not Satisfied					
		XX					
Number of lanes for moving traffic on each approach							
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			8,000	5,600	2,400	1,680
2 + 11,820	1 98			9,600	6,720 *	2,400	1,680
2 +	2 +			9,600	6,720	3,200	2,240
1	2 +			8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied		Not Satisfied					
		XX					
Number of lanes for moving traffic on each approach							
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			12,000	8,400	1,200	850
2 + 11,820	1 98			14,400	10,080 *	1,200	850
2 +	2 +			14,400	10,080	1,600	1,120
1	2 +			12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				2 CONDITIONS		2 CONDITIONS	
Satisfied		Not Satisfied		80%		80%	
		XX					
No one condition satisfied, but following conditions fulfilled 80% of more							

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	EAP (2026)
Jurisdiction: <u>City of San Bernardino</u>				CHK	CP	DATE <u>12/14/11</u>
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major)		<u>45</u> mph
Minor Street: <u>Driveway 2</u>				Critical Approach Speed (Minor)		<u>25</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>12,018</u> vpd				Minor Street Future ADT = <u>132</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒ or ☐
In built up area of isolated community of < 10,000 population						RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN		RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
1		1		8,000	5,600	2,400	1,680
2 + 12,018		1 132		9,600	6,720 *	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>					
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
1		1		12,000	8,400	1,200	850
2 + 12,018		1 132		14,400	10,080 *	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>		<u>Not Satisfied</u>		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more							
		A	B				
		8%	16%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	EAP (2026)
Jurisdiction: <u>City of San Bernardino</u>				CHK	CP	DATE <u>12/14/11</u>
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major)		<u>45</u> mph
Minor Street: <u>Driveway 3</u>				Critical Approach Speed (Minor)		<u>25</u> mph
Major Street Approach Lanes = <u>1</u> lane				Minor Street Approach Lanes		<u>1</u> lane
Major Street Future ADT = <u>3,431</u> vpd				Minor Street Future ADT =		<u>26</u> vpd
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒
						or
In built up area of isolated community of < 10,000 population						☐

RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements			
CONDITION A - Minimum Vehicular Volume		XX		EADT			
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
		XX		(Total of Both Approaches)		(One Direction Only)	
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1 3,431		1 26		8,000	5,600	2,400	1,680
2 +		1		9,600	6,720	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day on Major Street		Vehicles Per Day on Higher-Volume Minor Street Approach	
<u>Satisfied</u>		<u>Not Satisfied</u>		(Total of Both Approaches)		(One Direction Only)	
		XX					
Number of lanes for moving traffic on each approach							
<u>Major Street</u>		<u>Minor Street</u>		<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1 3,431		1 26		12,000	8,400	1,200	850
2 +		1		14,400	10,080	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>		<u>Not Satisfied</u>		80%		80%	
		XX					
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>					
		2%					
		<u>B</u>					
		3%					

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	EAP (2026)
Jurisdiction: <u>City of San Bernardino</u>				CHK	CP	DATE <u>12/14/11</u>
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major) <u>45</u> mph		
Minor Street: <u>Driveway 3</u>				Critical Approach Speed (Minor) <u>25</u> mph		
Major Street Approach Lanes = <u>1</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>8,081</u> vpd				Minor Street Future ADT = <u>121</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒ or ☐
In built up area of isolated community of < 10,000 population						RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN		RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street		Minor Street					
1 8,081		1 121		8,000	5,600 *	2,400	1,680
2 +		1		9,600	6,720	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
Major Street		Minor Street					
1 8,081		1 121		12,000	8,400	1,200	850
2 +		1		14,400	10,080	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
No one condition satisfied, but following conditions fulfilled 80% of more							
		A	B				
		7%	14%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 6.5: EA (2026) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.

	→	↘	↙	←	↓	↗
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	378	400	628	857	355	271
v/c Ratio	0.53	0.64	0.76	0.46	0.70	0.49
Control Delay	33.9	8.9	34.4	12.3	34.9	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.9	8.9	34.4	12.3	34.9	14.9
Queue Length 50th (ft)	86	0	143	121	153	45
Queue Length 95th (ft)	180	88	276	232	322	142
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1285	816	1391	2878	924	889
Starvation Cap Reductn	0	0	0	427	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.49	0.45	0.35	0.38	0.30
Intersection Summary						

Queues

5th & Sterling TA (JN:14057)

16: I-215 NB Ramps & 5th St.

09/13/2023



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	105	526	1052	303	163	166	352
v/c Ratio	0.44	0.27	0.54	0.39	0.45	0.43	0.40
Control Delay	36.2	7.3	17.5	3.9	29.5	28.7	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.2	7.3	17.5	3.9	29.5	28.7	4.8
Queue Length 50th (ft)	38	44	113	0	57	58	0
Queue Length 95th (ft)	107	92	209	49	148	148	36
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	612	3274	3658	1201	888	943	1620
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.17	0.16	0.29	0.25	0.18	0.18	0.22
Intersection Summary							

Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.

	→	↘	↙	←	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	709	243	241	582	444	215
v/c Ratio	0.69	0.41	0.58	0.34	0.74	0.33
Control Delay	31.0	9.7	42.9	13.9	33.6	6.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.0	9.7	42.9	13.9	33.6	6.5
Queue Length 50th (ft)	165	19	60	87	196	10
Queue Length 95th (ft)	306	94	129	172	383	63
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1580	798	655	2496	1099	1047
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.30	0.37	0.23	0.40	0.21
Intersection Summary						

Queues

5th & Sterling TA (JN:14057)

09/13/2023

16: I-215 NB Ramps & 5th St.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	193	944	580	383	120	118	401
v/c Ratio	0.57	0.49	0.44	0.56	0.35	0.33	0.51
Control Delay	28.8	8.4	18.9	6.0	24.2	23.6	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	8.4	18.9	6.0	24.2	23.6	9.8
Queue Length 50th (ft)	55	80	54	0	34	33	18
Queue Length 95th (ft)	138	155	110	60	96	93	65
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	930	3420	3712	1235	877	933	1574
Starvation Cap Reductn	0	116	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.29	0.16	0.31	0.14	0.13	0.25
Intersection Summary							

APPENDIX 6.6: EAP (2026) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.

	→	↘	↙	←	↓	↘
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	383	408	628	874	355	281
v/c Ratio	0.54	0.64	0.76	0.46	0.70	0.51
Control Delay	33.8	8.9	34.8	12.4	35.2	16.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.8	8.9	34.8	12.4	35.2	16.2
Queue Length 50th (ft)	88	0	144	125	153	52
Queue Length 95th (ft)	184	88	282	240	326	158
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1280	819	1386	2869	921	884
Starvation Cap Reductn	0	0	0	432	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.50	0.45	0.36	0.39	0.32
Intersection Summary						

Queues

5th & Sterling TA (JN:14057)

16: I-215 NB Ramps & 5th St.

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	109	527	1054	303	170	173	352
v/c Ratio	0.45	0.27	0.55	0.39	0.46	0.44	0.40
Control Delay	36.7	7.4	17.8	3.9	29.9	29.1	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.7	7.4	17.8	3.9	29.9	29.1	4.8
Queue Length 50th (ft)	40	44	115	0	62	62	0
Queue Length 95th (ft)	112	94	215	49	155	155	36
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	606	3255	3622	1191	879	934	1607
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.16	0.29	0.25	0.19	0.19	0.22
Intersection Summary							

Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	720	256	241	589	444	219
v/c Ratio	0.69	0.43	0.58	0.34	0.74	0.33
Control Delay	31.2	10.0	43.1	14.0	33.7	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.2	10.0	43.1	14.0	33.7	6.6
Queue Length 50th (ft)	168	22	60	89	198	10
Queue Length 95th (ft)	312	100	129	174	383	64
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1572	799	651	2487	1093	1043
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.32	0.37	0.24	0.41	0.21
Intersection Summary						

Queues

5th & Sterling TA (JN:14057)

09/13/2023

16: I-215 NB Ramps & 5th St.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	202	946	581	383	123	121	401
v/c Ratio	0.58	0.49	0.44	0.56	0.36	0.33	0.51
Control Delay	29.1	8.4	19.3	6.1	24.7	24.0	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.1	8.4	19.3	6.1	24.7	24.0	9.9
Queue Length 50th (ft)	59	80	56	0	36	35	19
Queue Length 95th (ft)	146	157	112	61	100	97	67
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	919	3420	3671	1225	867	922	1559
Starvation Cap Reductn	0	123	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.29	0.16	0.31	0.14	0.13	0.26
Intersection Summary							

APPENDIX 6.7: EA (2026) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	84	20	21	97	19	11	197	17	34	489	49
Future Vol, veh/h	52	84	20	21	97	19	11	197	17	34	489	49
Conflicting Peds, #/hr	0	0	0	0	0	2	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	0	-	-	0	-	-	100	-	-	0	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	56	90	22	23	104	20	12	212	18	37	526	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	811	881	290	627	898	117	579	0	0	230	0	0
Stage 1	627	627	-	245	245	-	-	-	-	-	-	-
Stage 2	184	254	-	382	653	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	274	288	713	372	281	919	1005	-	-	1350	-	-
Stage 1	443	479	-	743	707	-	-	-	-	-	-	-
Stage 2	806	701	-	618	467	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	201	277	713	284	270	917	1005	-	-	1350	-	-
Mov Cap-2 Maneuver	322	368	-	374	359	-	-	-	-	-	-	-
Stage 1	438	466	-	734	699	-	-	-	-	-	-	-
Stage 2	661	693	-	470	454	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	17.6		17.7		0.4		0.5	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1005	-	-	322	406	374	399	1350	-	-
HCM Lane V/C Ratio	0.012	-	-	0.174	0.275	0.06	0.313	0.027	-	-
HCM Control Delay (s)	8.6	-	-	18.5	17.2	15.2	18.1	7.7	-	-
HCM Lane LOS	A	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	1.1	0.2	1.3	0.1	-	-

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	85	20	16	71	24	16	486	25	25	292	20
Future Vol, veh/h	34	85	20	16	71	24	16	486	25	25	292	20
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	0	-	-	0	-	-	100	-	-	0	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	36	89	21	17	75	25	17	512	26	26	307	21
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	698	942	164	809	939	269	328	0	0	538	0	0
Stage 1	370	370	-	559	559	-	-	-	-	-	-	-
Stage 2	328	572	-	250	380	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	331	265	858	275	266	735	1243	-	-	1040	-	-
Stage 1	628	624	-	486	514	-	-	-	-	-	-	-
Stage 2	664	508	-	738	617	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	261	255	858	210	256	735	1243	-	-	1040	-	-
Mov Cap-2 Maneuver	373	356	-	334	364	-	-	-	-	-	-	-
Stage 1	619	608	-	479	507	-	-	-	-	-	-	-
Stage 2	539	501	-	599	602	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	17		16.3		0.2		0.6					
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1243	-	-	373	401	334	417	1040	-	-		
HCM Lane V/C Ratio	0.014	-	-	0.096	0.276	0.05	0.24	0.025	-	-		
HCM Control Delay (s)	7.9	-	-	15.7	17.4	16.4	16.3	8.6	-	-		
HCM Lane LOS	A	-	-	C	C	C	C	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.3	1.1	0.2	0.9	0.1	-	-		

APPENDIX 6.8: EAP (2026) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	5.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	52	84	20	21	97	19	11	197	17	34	490	49
Future Vol, veh/h	52	84	20	21	97	19	11	197	17	34	490	49
Conflicting Peds, #/hr	0	0	0	0	0	2	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	0	-	-	0	-	-	100	-	-	0	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	56	90	22	23	104	20	12	212	18	37	527	53

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	812	882	290	628	899	117	580	0	0	230	0	0
Stage 1	628	628	-	245	245	-	-	-	-	-	-	-
Stage 2	184	254	-	383	654	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	274	287	713	371	281	919	1004	-	-	1350	-	-
Stage 1	442	479	-	743	707	-	-	-	-	-	-	-
Stage 2	806	701	-	617	466	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	201	276	713	283	270	917	1004	-	-	1350	-	-
Mov Cap-2 Maneuver	322	368	-	373	358	-	-	-	-	-	-	-
Stage 1	437	466	-	734	699	-	-	-	-	-	-	-
Stage 2	661	693	-	469	453	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	17.6		17.7		0.4		0.5	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1004	-	-	322	406	373	398	1350	-	-
HCM Lane V/C Ratio	0.012	-	-	0.174	0.275	0.061	0.313	0.027	-	-
HCM Control Delay (s)	8.6	-	-	18.5	17.2	15.3	18.1	7.7	-	-
HCM Lane LOS	A	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	1.1	0.2	1.3	0.1	-	-

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	85	20	16	71	24	16	488	25	25	293	20
Future Vol, veh/h	34	85	20	16	71	24	16	488	25	25	293	20
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	0	-	-	0	-	-	100	-	-	0	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	36	89	21	17	75	25	17	514	26	26	308	21

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	700	945	165	812	942	270	329	0
Stage 1	371	371	-	561	561	-	-	-
Stage 2	329	574	-	251	381	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-
Pot Cap-1 Maneuver	330	264	857	274	265	734	1242	-
Stage 1	627	623	-	485	513	-	-	-
Stage 2	664	506	-	737	617	-	-	-
Platoon blocked, %								-
Mov Cap-1 Maneuver	261	254	857	209	255	734	1242	-
Mov Cap-2 Maneuver	373	355	-	333	363	-	-	-
Stage 1	618	607	-	478	506	-	-	-
Stage 2	539	499	-	598	602	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17	16.4	0.2	0.6
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1242	-	-	373	400	333	416	1039	-	-
HCM Lane V/C Ratio	0.014	-	-	0.096	0.276	0.051	0.24	0.025	-	-
HCM Control Delay (s)	7.9	-	-	15.7	17.4	16.4	16.4	8.6	-	-
HCM Lane LOS	A	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	1.1	0.2	0.9	0.1	-	-

APPENDIX 7.1: EAC (2026) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	14.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	84	22	21	97	19	17	253	17	34	515	53
Future Vol, veh/h	61	84	22	21	97	19	17	253	17	34	515	53
Conflicting Peds, #/hr	0	0	0	0	0	2	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	-	-	-	-	-	-	-	-	-	-	-	200
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	66	90	24	23	104	20	18	272	18	37	554	57
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	854	954	277	713	1002	147	611	0	0	290	0	0
Stage 1	628	628	-	317	317	-	-	-	-	-	-	-
Stage 2	226	326	-	396	685	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	256	261	726	323	244	880	978	-	-	1283	-	-
Stage 1	442	479	-	674	658	-	-	-	-	-	-	-
Stage 2	762	652	-	606	451	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	153	244	726	212	228	878	978	-	-	1283	-	-
Mov Cap-2 Maneuver	153	244	-	212	228	-	-	-	-	-	-	-
Stage 1	432	458	-	659	644	-	-	-	-	-	-	-
Stage 2	609	638	-	450	431	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	71.3		37.9		0.6		0.6					
HCM LOS	F		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	978	-	-	216	251	1283	-	-				
HCM Lane V/C Ratio	0.019	-	-	0.831	0.587	0.028	-	-				
HCM Control Delay (s)	8.8	0.1	-	71.3	37.9	7.9	0.2	-				
HCM Lane LOS	A	A	-	F	E	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	6.2	3.4	0.1	-	-				

Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	34	140	37	327	2	184	43	430
Future Volume (vph)	34	140	37	327	2	184	43	430
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	54.0	54.0	54.0	54.0	66.0	66.0	66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%	45.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		12.5		12.5	13.8	13.8	13.8	13.8
Actuated g/C Ratio		0.33		0.33	0.37	0.37	0.37	0.37
v/c Ratio		0.23		0.48	0.01	0.17	0.13	0.47
Control Delay		9.9		11.7	8.0	8.4	9.2	10.2
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		9.9		11.7	8.0	8.4	9.2	10.2
LOS		A		B	A	A	A	B
Approach Delay		9.9		11.7		8.4		10.1
Approach LOS		A		B		A		B
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 37.4								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.48								
Intersection Signal Delay: 10.3					Intersection LOS: B			
Intersection Capacity Utilization 63.0%					ICU Level of Service B			
Analysis Period (min) 15								

Splits and Phases: 4: Sterling Av. & 5th St.

 Ø2	 Ø4
66 s	54 s
 Ø6	 Ø8
66 s	54 s

HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

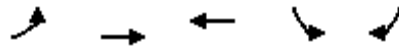
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	140	15	37	327	68	2	184	8	43	430	84
Future Volume (veh/h)	34	140	15	37	327	68	2	184	8	43	430	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	39	161	14	43	376	69	2	211	7	49	494	81
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	256	829	72	185	859	153	386	1100	36	547	959	156
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	306	2560	222	151	2653	472	804	3378	112	1116	2943	480
Grp Volume(v), veh/h	113	0	101	262	0	226	2	106	112	49	286	289
Grp Sat Flow(s),veh/h/ln	1490	0	1598	1730	0	1546	804	1710	1780	1116	1710	1714
Q Serve(g_s), s	0.0	0.0	1.4	0.0	0.0	3.6	0.1	1.4	1.4	1.0	4.2	4.2
Cycle Q Clear(g_c), s	3.6	0.0	1.4	3.5	0.0	3.6	4.3	1.4	1.4	2.4	4.2	4.2
Prop In Lane	0.34		0.14	0.16		0.31	1.00		0.06	1.00		0.28
Lane Grp Cap(c), veh/h	640	0	517	696	0	501	386	557	580	547	557	558
V/C Ratio(X)	0.18	0.00	0.20	0.38	0.00	0.45	0.01	0.19	0.19	0.09	0.51	0.52
Avail Cap(c_a), veh/h	2373	0	2521	2793	0	2439	1705	3363	3501	2378	3363	3370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.5	0.0	7.5	8.2	0.0	8.3	10.2	7.5	7.5	8.3	8.4	8.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.3	0.0	0.6	0.0	0.2	0.2	0.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3	0.8	0.0	0.7	0.0	0.3	0.3	0.2	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	0.0	7.7	8.6	0.0	8.9	10.2	7.6	7.6	8.4	9.1	9.2
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		214			488			220			624	
Approach Delay, s/veh		7.7			8.7			7.7			9.1	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.4		15.4		15.4				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		60.6		48.6		60.6		48.6				
Max Q Clear Time (g_c+I1), s		6.3		5.6		6.2		5.6				
Green Ext Time (p_c), s		1.2		1.3		3.8		3.0				
Intersection Summary												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	162	332	691	100	382
Future Volume (vph)	162	332	691	100	382
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	33.0	86.0	53.0	34.0	33.0
Total Split (%)	27.5%	71.7%	44.2%	28.3%	27.5%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	13.7	43.7	25.1	12.4	31.8
Actuated g/C Ratio	0.20	0.65	0.37	0.18	0.47
v/c Ratio	0.59	0.18	0.69	0.41	0.37
Control Delay	34.4	4.8	21.4	32.8	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.4	4.8	21.4	32.8	9.9
LOS	C	A	C	C	A
Approach Delay		14.5	21.4	14.6	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 67.4

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 17.5

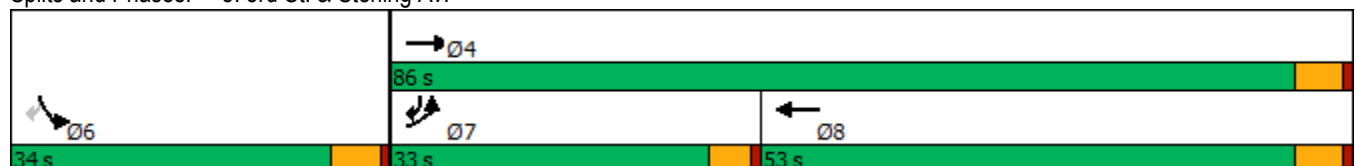
Intersection LOS: B

Intersection Capacity Utilization 52.5%

ICU Level of Service A

Analysis Period (min) 15

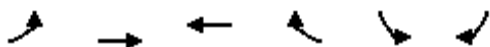
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	162	332	691	33	100	382
Future Volume (veh/h)	162	332	691	33	100	382
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700
Adj Flow Rate, veh/h	195	400	833	40	120	173
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	243	2058	1207	58	310	865
Arrive On Green	0.15	0.60	0.36	0.36	0.19	0.19
Sat Flow, veh/h	1619	3510	3407	159	1619	2536
Grp Volume(v), veh/h	195	400	429	444	120	173
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1767	1619	1268
Q Serve(g_s), s	6.1	2.8	11.1	11.1	3.4	2.5
Cycle Q Clear(g_c), s	6.1	2.8	11.1	11.1	3.4	2.5
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	243	2058	622	643	310	865
V/C Ratio(X)	0.80	0.19	0.69	0.69	0.39	0.20
Avail Cap(c_a), veh/h	881	5279	1559	1610	887	1769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	4.7	14.1	14.1	18.4	12.2
Incr Delay (d2), s/veh	2.4	0.0	1.4	1.3	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.6	3.6	3.7	1.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.8	4.7	15.5	15.4	19.2	12.3
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		595	873		293	
Approach Delay, s/veh		11.0	15.5		15.1	
Approach LOS		B	B		B	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			36.8		15.4	12.4
Change Period (Y+Rc), s			5.4		5.4	4.6
Max Green Setting (Gmax), s			80.6		28.6	28.4
Max Q Clear Time (g_c+I1), s			4.8		5.4	8.1
Green Ext Time (p_c), s			2.7		1.0	0.2
Green Ext Time (p_c), s						5.9
Intersection Summary						
HCM 6th Ctrl Delay			13.9			
HCM 6th LOS			B			

Intersection												
Int Delay, s/veh	4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	
Traffic Vol, veh/h	17	91	4	9	95	1	5	20	2	7	44	23
Future Vol, veh/h	17	91	4	9	95	1	5	20	2	7	44	23
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	19	101	4	10	106	1	6	22	2	8	49	26
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	107	0	0	105	0	0	303	266	101	280	270	107
Stage 1	-	-	-	-	-	-	139	139	-	127	127	-
Stage 2	-	-	-	-	-	-	164	127	-	153	143	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1497	-	-	1499	-	-	653	643	960	676	640	953
Stage 1	-	-	-	-	-	-	869	785	-	882	795	-
Stage 2	-	-	-	-	-	-	843	795	-	854	782	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1497	-	-	1499	-	-	588	630	960	646	627	953
Mov Cap-2 Maneuver	-	-	-	-	-	-	588	630	-	646	627	-
Stage 1	-	-	-	-	-	-	858	775	-	871	789	-
Stage 2	-	-	-	-	-	-	764	789	-	817	772	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.1			0.6			10.9			10.8		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	638	1497	-	-	1499	-	-	704				
HCM Lane V/C Ratio	0.047	0.013	-	-	0.007	-	-	0.117				
HCM Control Delay (s)	10.9	7.4	0	-	7.4	0	-	10.8				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4				

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	5	182	0	3	416	10	0	12	7	20	19	19
Future Vol, veh/h	5	182	0	3	416	10	0	12	7	20	19	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	222	0	4	507	12	0	15	9	24	23	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	519	0	0	222	0	0	778	761	222	767	755	513
Stage 1	-	-	-	-	-	-	234	234	-	521	521	-
Stage 2	-	-	-	-	-	-	544	527	-	246	234	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1057	-	-	1359	-	-	316	337	823	322	340	565
Stage 1	-	-	-	-	-	-	774	715	-	542	535	-
Stage 2	-	-	-	-	-	-	527	532	-	762	715	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1057	-	-	1359	-	-	285	334	823	306	337	565
Mov Cap-2 Maneuver	-	-	-	-	-	-	285	334	-	306	337	-
Stage 1	-	-	-	-	-	-	769	711	-	539	533	-
Stage 2	-	-	-	-	-	-	481	530	-	734	711	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			13.8			16.9		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	334	823	1057	-	-	1359	-	-	373			
HCM Lane V/C Ratio	0.044	0.01	0.006	-	-	0.003	-	-	0.19			
HCM Control Delay (s)	16.3	9.4	8.4	0	-	7.7	0	-	16.9			
HCM Lane LOS	C	A	A	A	-	A	A	-	C			
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0.7			

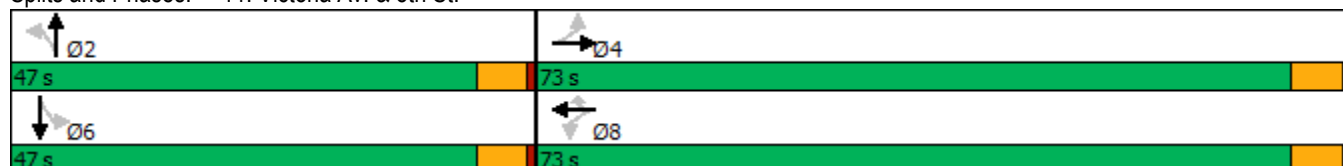
Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	165	360	393	86	5	95	83	324
Future Volume (vph)	21	165	360	393	86	5	95	83	324
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	73.0	73.0	73.0	73.0	73.0	47.0	47.0	47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%	60.8%	60.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	36.3	36.3	36.3	36.3	36.3		20.1		20.1
Actuated g/C Ratio	0.53	0.53	0.53	0.53	0.53		0.29		0.29
v/c Ratio	0.07	0.12	0.77	0.49	0.12		0.20		0.62
Control Delay	8.9	7.6	24.2	12.3	2.3		15.5		26.9
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	8.9	7.6	24.2	12.3	2.3		15.5		26.9
LOS	A	A	C	B	A		B		C
Approach Delay		7.7		16.4			15.5		26.9
Approach LOS		A		B			B		C
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 69									
Natural Cycle: 65									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.77									
Intersection Signal Delay: 18.0					Intersection LOS: B				
Intersection Capacity Utilization 70.7%					ICU Level of Service C				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	165	23	360	393	86	5	95	54	83	324	32
Future Volume (veh/h)	21	165	23	360	393	86	5	95	54	83	324	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	25	194	26	424	462	93	6	112	60	98	381	36
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	430	1550	205	681	919	768	88	548	269	219	638	60
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.51	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	819	3036	401	1114	1800	1505	32	2139	1052	458	2492	235
Grp Volume(v), veh/h	25	108	112	424	462	93	95	0	83	270	0	245
Grp Sat Flow(s),veh/h/ln	819	1710	1728	1114	1800	1505	1774	0	1449	1589	0	1596
Q Serve(g_s), s	1.0	1.6	1.6	15.4	8.1	1.5	0.0	0.0	2.2	4.9	0.0	6.5
Cycle Q Clear(g_c), s	9.1	1.6	1.6	17.1	8.1	1.5	2.0	0.0	2.2	7.1	0.0	6.5
Prop In Lane	1.00		0.23	1.00		1.00	0.06		0.73	0.36		0.15
Lane Grp Cap(c), veh/h	430	873	882	681	919	768	534	0	371	509	0	408
V/C Ratio(X)	0.06	0.12	0.13	0.62	0.50	0.12	0.18	0.00	0.22	0.53	0.00	0.60
Avail Cap(c_a), veh/h	1159	2395	2420	1673	2521	2108	1579	0	1256	1452	0	1384
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.7	6.1	6.1	10.6	7.7	6.1	14.0	0.0	14.1	15.8	0.0	15.7
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.9	0.4	0.1	0.2	0.0	0.3	0.9	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.4	0.4	2.5	1.9	0.3	0.7	0.0	0.6	2.2	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	6.2	6.2	11.5	8.2	6.2	14.2	0.0	14.4	16.7	0.0	17.1
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	B
Approach Vol, veh/h	245			979			178			515		
Approach Delay, s/veh	6.7			9.4			14.3			16.9		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	17.7			30.3			17.7			30.3		
Change Period (Y+Rc), s	5.4			5.8			5.4			5.8		
Max Green Setting (Gmax), s	41.6			67.2			41.6			67.2		
Max Q Clear Time (g_c+I1), s	4.2			11.1			9.1			19.1		
Green Ext Time (p_c), s	1.0			1.4			3.1			5.4		
Intersection Summary												
HCM 6th Ctrl Delay				11.5								
HCM 6th LOS				B								

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	9	292	9	803	49	2	2	56	3
Future Volume (vph)	9	292	9	803	49	2	2	56	3
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	9.6	22.8	22.8	9.6	31.4	9.6	29.4
Total Split (s)	12.0	54.0	12.0	54.0	54.0	12.0	34.0	20.0	42.0
Total Split (%)	10.0%	45.0%	10.0%	45.0%	45.0%	10.0%	28.3%	16.7%	35.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effect Green (s)	5.7	23.4	5.7	23.4	23.4	5.5	10.9	7.7	19.1
Actuated g/C Ratio	0.10	0.41	0.10	0.41	0.41	0.10	0.19	0.13	0.33
v/c Ratio	0.07	0.25	0.07	0.68	0.08	0.01	0.01	0.31	0.11
Control Delay	32.3	12.5	32.3	17.5	0.2	33.0	25.7	31.3	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.3	12.5	32.3	17.5	0.2	33.0	25.7	31.3	8.7
LOS	C	B	C	B	A	C	C	C	A
Approach Delay		13.1		16.7			28.6		20.8
Approach LOS		B		B			C		C

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 57.6

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 16.2

Intersection LOS: B

Intersection Capacity Utilization 42.9%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.

			
20 s	34 s	12 s	54 s
			
12 s	42 s	12 s	54 s

HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	292	7	9	803	49	2	2	1	56	3	46
Future Volume (veh/h)	9	292	7	9	803	49	2	2	1	56	3	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	11	344	8	11	945	58	2	2	1	66	4	22
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	23	1347	31	23	1349	588	4	198	99	92	55	301
Arrive On Green	0.01	0.39	0.39	0.01	0.39	0.39	0.00	0.18	0.18	0.06	0.23	0.23
Sat Flow, veh/h	1619	3416	79	1619	3420	1491	1619	1126	563	1619	238	1307
Grp Volume(v), veh/h	11	172	180	11	945	58	2	0	3	66	0	26
Grp Sat Flow(s),veh/h/ln	1619	1710	1786	1619	1710	1491	1619	0	1690	1619	0	1545
Q Serve(g_s), s	0.4	3.8	3.9	0.4	13.1	1.4	0.1	0.0	0.1	2.3	0.0	0.7
Cycle Q Clear(g_c), s	0.4	3.8	3.9	0.4	13.1	1.4	0.1	0.0	0.1	2.3	0.0	0.7
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.33	1.00		0.85
Lane Grp Cap(c), veh/h	23	674	704	23	1349	588	4	0	297	92	0	355
V/C Ratio(X)	0.48	0.25	0.26	0.48	0.70	0.10	0.45	0.00	0.01	0.72	0.00	0.07
Avail Cap(c_a), veh/h	211	1450	1514	211	2899	1264	211	0	850	439	0	994
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	11.6	11.6	27.8	14.4	10.8	28.3	0.0	19.3	26.4	0.0	17.1
Incr Delay (d2), s/veh	5.8	0.2	0.2	5.8	0.7	0.1	24.5	0.0	0.0	3.8	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.2	1.2	0.2	4.0	0.4	0.1	0.0	0.0	0.9	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.7	11.8	11.8	33.7	15.1	10.9	52.8	0.0	19.4	30.2	0.0	17.2
LnGrp LOS	C	B	B	C	B	B	D	A	B	C	A	B
Approach Vol, veh/h		363			1014			5			92	
Approach Delay, s/veh		12.5			15.0			32.7			26.5	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	15.4	5.4	28.2	4.8	18.5	5.4	28.2				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	15.4	28.6	7.4	48.2	7.4	36.6	7.4	48.2				
Max Q Clear Time (g_c+I1), s	4.3	2.1	2.4	5.9	2.1	2.7	2.4	15.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.9	0.0	0.1	0.0	7.3				
Intersection Summary												
HCM 6th Ctrl Delay			15.2									
HCM 6th LOS			B									

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	18	287	292	680	77	198	151	425
Future Volume (vph)	18	287	292	680	77	198	151	425
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	9.6	32.8	32.0	55.2	14.4	34.2	21.0	40.8
Total Split (%)	8.0%	27.3%	26.7%	46.0%	12.0%	28.5%	17.5%	34.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	5.2	15.7	21.9	39.1	8.4	15.0	13.2	22.5
Actuated g/C Ratio	0.06	0.18	0.25	0.45	0.10	0.17	0.15	0.26
v/c Ratio	0.20	0.65	0.77	0.55	0.53	0.54	0.66	0.61
Control Delay	51.4	37.3	46.0	20.4	55.1	24.6	52.0	33.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.4	37.3	46.0	20.4	55.1	24.6	52.0	33.5
LOS	D	D	D	C	E	C	D	C
Approach Delay		37.9		27.4		30.3		37.9
Approach LOS		D		C		C		D

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 87.3

Natural Cycle: 105

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 32.2

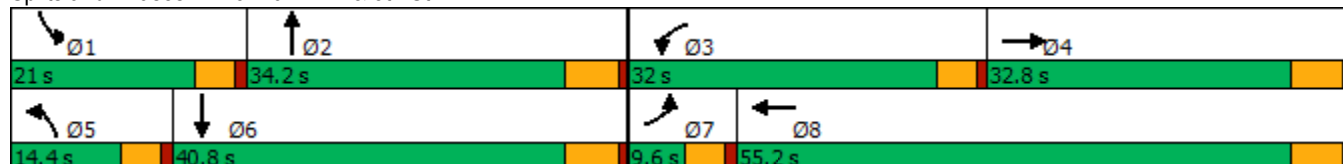
Intersection LOS: C

Intersection Capacity Utilization 66.6%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

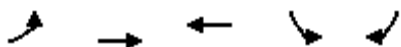
5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	287	89	292	680	96	77	198	137	151	425	71
Future Volume (veh/h)	18	287	89	292	680	96	77	198	137	151	425	71
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	19	305	80	311	723	91	82	211	90	161	452	50
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	36	455	117	358	1122	141	101	377	155	199	682	75
Arrive On Green	0.02	0.17	0.17	0.22	0.37	0.37	0.06	0.16	0.16	0.12	0.22	0.22
Sat Flow, veh/h	1619	2691	694	1619	3051	384	1619	2361	973	1619	3106	342
Grp Volume(v), veh/h	19	192	193	311	405	409	82	151	150	161	248	254
Grp Sat Flow(s),veh/h/ln	1619	1710	1675	1619	1710	1725	1619	1710	1625	1619	1710	1738
Q Serve(g_s), s	0.7	6.7	6.9	11.8	12.5	12.5	3.2	5.2	5.4	6.2	8.4	8.5
Cycle Q Clear(g_c), s	0.7	6.7	6.9	11.8	12.5	12.5	3.2	5.2	5.4	6.2	8.4	8.5
Prop In Lane	1.00		0.41	1.00		0.22	1.00		0.60	1.00		0.20
Lane Grp Cap(c), veh/h	36	289	283	358	629	634	101	273	260	199	376	382
V/C Ratio(X)	0.52	0.66	0.68	0.87	0.64	0.64	0.81	0.55	0.58	0.81	0.66	0.67
Avail Cap(c_a), veh/h	127	726	712	698	1329	1341	250	764	726	418	942	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	24.7	24.8	23.8	16.6	16.6	29.4	24.6	24.7	27.2	22.6	22.7
Incr Delay (d2), s/veh	4.3	2.6	2.9	2.5	1.1	1.1	5.6	1.7	2.0	3.0	2.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.6	2.6	4.2	4.2	4.3	1.3	2.0	2.0	2.3	3.2	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.0	27.3	27.7	26.4	17.7	17.7	35.0	26.3	26.8	30.2	24.6	24.7
LnGrp LOS	D	C	C	C	B	B	D	C	C	C	C	C
Approach Vol, veh/h	404			1125				383			663	
Approach Delay, s/veh	27.9			20.1				28.4			26.0	
Approach LOS	C			C				C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	16.0	18.7	16.5	8.6	19.8	6.0	29.2				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	28.4	27.4	27.0	9.8	35.0	5.0	49.4				
Max Q Clear Time (g_c+I1), s	8.2	7.4	13.8	8.9	5.2	10.5	2.7	14.5				
Green Ext Time (p_c), s	0.1	1.5	0.4	1.9	0.0	2.7	0.0	5.2				
Intersection Summary												
HCM 6th Ctrl Delay	24.1											
HCM 6th LOS	C											

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	←
Traffic Volume (vph)	25	666	1117	127	59
Future Volume (vph)	25	666	1117	127	59
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	14.0	82.0	68.0	38.0	38.0
Total Split (%)	11.7%	68.3%	56.7%	31.7%	31.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	6.3	41.7	37.9	13.4	13.4
Actuated g/C Ratio	0.10	0.63	0.57	0.20	0.20
v/c Ratio	0.18	0.33	0.67	0.42	0.18
Control Delay	37.5	6.0	13.1	31.0	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	37.5	6.0	13.1	31.0	9.9
LOS	D	A	B	C	A
Approach Delay		7.1	13.1	24.4	
Approach LOS		A	B	C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 66.2

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 12.1

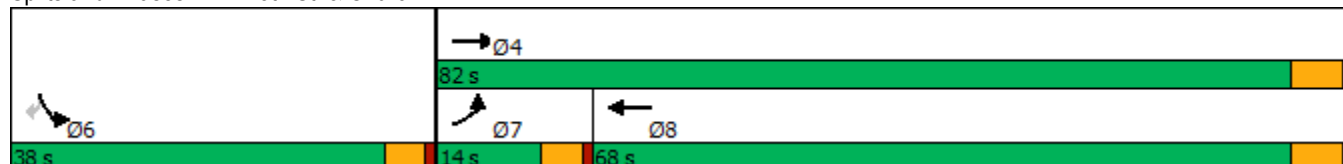
Intersection LOS: B

Intersection Capacity Utilization 53.2%

ICU Level of Service A

Analysis Period (min) 15

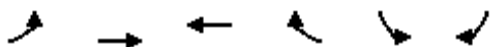
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	25	666	1117	96	127	59	
Future Volume (veh/h)	25	666	1117	96	127	59	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	27	716	1201	90	137	59	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	50	2165	1668	125	283	267	
Arrive On Green	0.03	0.63	0.52	0.52	0.18	0.18	
Sat Flow, veh/h	1619	3510	3315	241	1619	1525	
Grp Volume(v), veh/h	27	716	636	655	137	59	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1756	1619	1525	
Q Serve(g_s), s	0.9	5.3	15.5	15.5	4.1	1.8	
Cycle Q Clear(g_c), s	0.9	5.3	15.5	15.5	4.1	1.8	
Prop In Lane	1.00			0.14	1.00	1.00	
Lane Grp Cap(c), veh/h	50	2165	884	908	283	267	
V/C Ratio(X)	0.54	0.33	0.72	0.72	0.48	0.22	
Avail Cap(c_a), veh/h	281	4813	1964	2018	999	941	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	25.9	4.6	10.1	10.1	20.1	19.2	
Incr Delay (d2), s/veh	3.4	0.1	1.1	1.1	1.3	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.3	0.9	4.0	4.1	1.5	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	29.2	4.7	11.2	11.2	21.4	19.6	
LnGrp LOS	C	A	B	B	C	B	
Approach Vol, veh/h		743	1291		196		
Approach Delay, s/veh		5.6	11.2		20.9		
Approach LOS		A	B		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				40.1	14.1	6.3	33.8
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				76.2	33.4	9.4	62.2
Max Q Clear Time (g_c+I1), s				7.3	6.1	2.9	17.5
Green Ext Time (p_c), s				5.1	0.5	0.0	10.5
Intersection Summary							
HCM 6th Ctrl Delay			10.2				
HCM 6th LOS			B				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑	↑	↑
Traffic Volume (vph)	11	407	386	721	921	48	292
Future Volume (vph)	11	407	386	721	921	48	292
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		4		3	8	6	
Permitted Phases	4		4				6
Detector Phase	4	4	4	3	8	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	34.0	34.0	34.0	40.0	74.0	46.0	46.0
Total Split (%)	28.3%	28.3%	28.3%	33.3%	61.7%	38.3%	38.3%
Yellow Time (s)	4.8	4.8	4.8	3.6	4.8	4.8	4.8
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
Total Lost Time (s)		5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	Min	Min
Act Effect Green (s)		22.7	22.7	32.0	59.4	34.5	34.5
Actuated g/C Ratio		0.21	0.21	0.30	0.56	0.33	0.33
v/c Ratio		0.70	0.65	0.90	0.53	0.86	0.57
Control Delay		45.9	8.8	50.9	16.2	51.1	25.3
Queue Delay		0.0	0.0	0.0	0.3	0.0	0.0
Total Delay		45.9	8.8	50.9	16.5	51.1	25.3
LOS		D	A	D	B	D	C
Approach Delay		28.0			31.6	40.8	
Approach LOS		C			C	D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 105.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 32.8

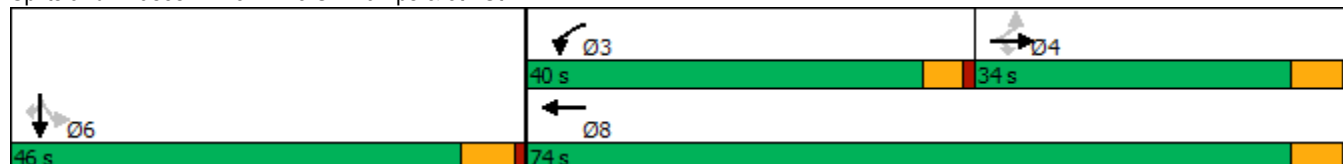
Intersection LOS: C

Intersection Capacity Utilization 92.1%

ICU Level of Service F

Analysis Period (min) 15

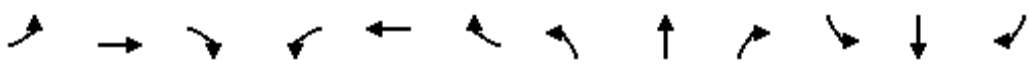
Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	11	407	386	721	921	0	0	0	0	388	48	292
Future Volume (veh/h)	11	407	386	721	921	0	0	0	0	388	48	292
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	1800	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	12	452	266	801	1023	0				431	53	197
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	47	698	327	874	1912	0				488	60	485
Arrive On Green	0.21	0.21	0.21	0.30	0.56	0.00				0.32	0.32	0.32
Sat Flow, veh/h	33	3249	1523	2956	3510	0				1535	189	1525
Grp Volume(v), veh/h	245	219	266	801	1023	0				484	0	197
Grp Sat Flow(s),veh/h/ln	1726	1556	1523	1478	1710	0				1723	0	1525
Q Serve(g_s), s	0.0	12.2	15.7	24.8	17.8	0.0				25.2	0.0	9.6
Cycle Q Clear(g_c), s	11.7	12.2	15.7	24.8	17.8	0.0				25.2	0.0	9.6
Prop In Lane	0.05		1.00	1.00		0.00				0.89		1.00
Lane Grp Cap(c), veh/h	411	334	327	874	1912	0				548	0	485
V/C Ratio(X)	0.60	0.66	0.81	0.92	0.53	0.00				0.88	0.00	0.41
Avail Cap(c_a), veh/h	546	464	454	1106	2465	0				732	0	648
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	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	33.8	33.9	35.3	32.2	13.1	0.0				30.6	0.0	25.3
Incr Delay (d2), s/veh	1.4	2.2	7.7	8.9	0.2	0.0				9.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	4.5	6.2	9.3	5.9	0.0				11.2	0.0	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	36.1	43.0	41.1	13.3	0.0				40.3	0.0	25.8
LnGrp LOS	D	D	D	D	B	A				D	A	C
Approach Vol, veh/h		730			1824						681	
Approach Delay, s/veh		38.3			25.5						36.1	
Approach LOS		D			C						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			32.6	26.1		35.9		58.7				
Change Period (Y+Rc), s			4.6	5.8		5.8		5.8				
Max Green Setting (Gmax), s			35.4	28.2		40.2		68.2				
Max Q Clear Time (g_c+I1), s			26.8	17.7		27.2		19.8				
Green Ext Time (p_c), s			1.2	2.6		2.9		8.3				
Intersection Summary												
HCM 6th Ctrl Delay			30.7									
HCM 6th LOS			C									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations		 	  			 	  
Traffic Volume (vph)	122	669	1238	450	404	2	457
Future Volume (vph)	122	669	1238	450	404	2	457
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	27.0	80.0	53.0	53.0	40.0	40.0	40.0
Total Split (%)	22.5%	66.7%	44.2%	44.2%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	11.7	51.6	35.0	35.0	19.3	19.3	19.3
Actuated g/C Ratio	0.14	0.62	0.42	0.42	0.23	0.23	0.23
v/c Ratio	0.56	0.33	0.62	0.51	0.59	0.56	0.51
Control Delay	47.8	8.5	21.4	4.2	37.8	36.4	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	8.5	21.4	4.2	37.8	36.4	6.0
LOS	D	A	C	A	D	D	A
Approach Delay		14.5	16.8			20.6	
Approach LOS		B	B			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 83.3

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 17.2

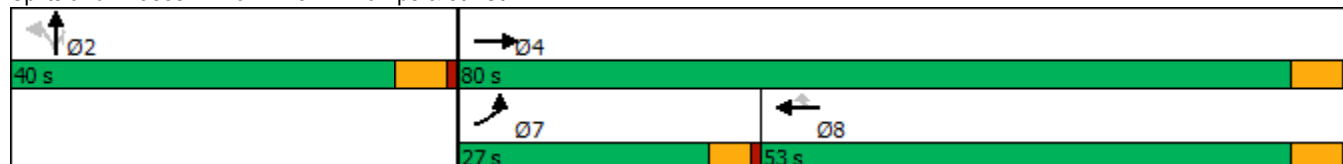
Intersection LOS: B

Intersection Capacity Utilization 63.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	122	669	0	0	1238	450	404	2	457	0	0	0
Future Volume (veh/h)	122	669	0	0	1238	450	404	2	457	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	126	690	0	0	1276	359	417	0	271			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	158	2093	0	0	2150	658	630	0	561			
Arrive On Green	0.10	0.61	0.00	0.00	0.44	0.44	0.19	0.00	0.19			
Sat Flow, veh/h	1619	3510	0	0	5076	1505	3238	0	2881			
Grp Volume(v), veh/h	126	690	0	0	1276	359	417	0	271			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1505	1619	0	1441			
Q Serve(g_s), s	4.6	5.9	0.0	0.0	11.8	10.6	7.1	0.0	5.0			
Cycle Q Clear(g_c), s	4.6	5.9	0.0	0.0	11.8	10.6	7.1	0.0	5.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	158	2093	0	0	2150	658	630	0	561			
V/C Ratio(X)	0.80	0.33	0.00	0.00	0.59	0.55	0.66	0.00	0.48			
Avail Cap(c_a), veh/h	605	4230	0	0	3866	1184	1846	0	1643			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.5	5.7	0.0	0.0	12.8	12.5	22.3	0.0	21.5			
Incr Delay (d2), s/veh	3.4	0.1	0.0	0.0	0.3	0.7	1.2	0.0	0.6			
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	1.7	1.3	0.0	0.0	3.4	2.9	2.5	0.0	1.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	5.7	0.0	0.0	13.1	13.2	23.5	0.0	22.1			
LnGrp LOS	C	A	A	A	B	B	C	A	C			
Approach Vol, veh/h	816			1635			688					
Approach Delay, s/veh	9.5			13.1			23.0					
Approach LOS	A			B			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	17.5			42.5			10.5			32.0		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	34.2			74.2			22.4			47.2		
Max Q Clear Time (g_c+I1), s	9.1			7.9			6.6			13.8		
Green Ext Time (p_c), s	2.5			4.9			0.1			12.4		
Intersection Summary												
HCM 6th Ctrl Delay	14.3											
HCM 6th LOS	B											
Notes												

Intersection												
Int Delay, s/veh	9.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↕
Traffic Vol, veh/h	41	85	26	16	71	24	19	527	25	25	357	31
Future Vol, veh/h	41	85	26	16	71	24	19	527	25	25	357	31
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	-	-	-	-	-	-	-	-	-	-	-	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	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	43	89	27	17	75	25	20	555	26	26	376	33

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	783	1049	188	893	1069	291	409	0	0	581	0	0
Stage 1	428	428	-	608	608	-	-	-	-	-	-	-
Stage 2	355	621	-	285	461	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	288	229	828	239	223	712	1161	-	-	1003	-	-
Stage 1	581	588	-	454	489	-	-	-	-	-	-	-
Stage 2	641	482	-	704	569	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	192	215	828	150	210	712	1161	-	-	1003	-	-
Mov Cap-2 Maneuver	192	215	-	150	210	-	-	-	-	-	-	-
Stage 1	566	568	-	442	476	-	-	-	-	-	-	-
Stage 2	508	469	-	554	550	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	46.9		35.3		0.4		0.6	
HCM LOS	E		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1161	-	-	237	232	1003	-
HCM Lane V/C Ratio	0.017	-	-	0.675	0.504	0.026	-
HCM Control Delay (s)	8.2	0.1	-	46.9	35.3	8.7	0.1
HCM Lane LOS	A	A	-	E	E	A	A
HCM 95th %tile Q(veh)	0.1	-	-	4.3	2.6	0.1	-

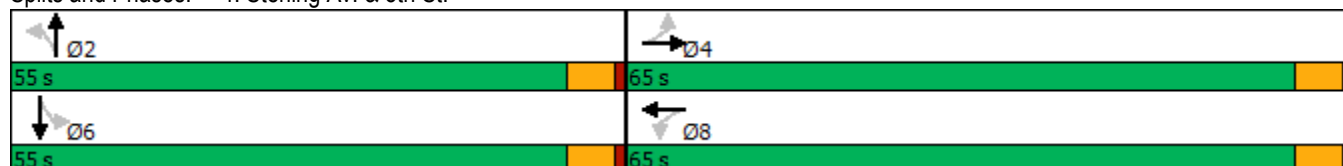
Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	109	366	21	217	5	409	68	277
Future Volume (vph)	109	366	21	217	5	409	68	277
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	65.0	65.0	65.0	65.0	55.0	55.0	55.0	55.0
Total Split (%)	54.2%	54.2%	54.2%	54.2%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		14.1		14.1	11.9	11.9	11.9	11.9
Actuated g/C Ratio		0.38		0.38	0.32	0.32	0.32	0.32
v/c Ratio		0.54		0.27	0.02	0.42	0.27	0.32
Control Delay		11.0		7.8	10.0	11.6	13.5	10.3
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		11.0		7.8	10.0	11.6	13.5	10.3
LOS		B		A	A	B	B	B
Approach Delay		11.0		7.8		11.6		10.9
Approach LOS		B		A		B		B
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 37								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.54								
Intersection Signal Delay: 10.5				Intersection LOS: B				
Intersection Capacity Utilization 64.4%				ICU Level of Service C				
Analysis Period (min) 15								

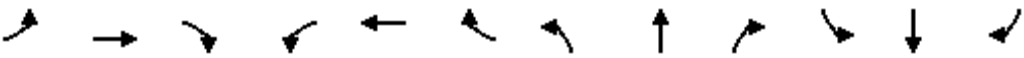
Splits and Phases: 4: Sterling Av. & 5th St.



HCM 6th Signalized Intersection Summary
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

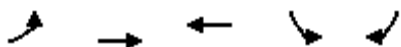
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↔	↔↔		↔	↔↔	
Traffic Volume (veh/h)	109	366	66	21	217	55	5	409	30	68	277	55
Future Volume (veh/h)	109	366	66	21	217	55	5	409	30	68	277	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	114	381	46	22	226	48	5	426	28	71	289	40
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	311	772	92	165	853	174	488	1057	69	433	979	134
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	452	2373	284	97	2621	534	1008	3258	213	899	3017	413
Grp Volume(v), veh/h	285	0	256	158	0	138	5	223	231	71	162	167
Grp Sat Flow(s),veh/h/ln	1527	0	1582	1718	0	1534	1008	1710	1762	899	1710	1719
Q Serve(g_s), s	2.2	0.0	4.0	0.0	0.0	2.1	0.1	3.1	3.1	2.1	2.2	2.2
Cycle Q Clear(g_c), s	4.4	0.0	4.0	2.0	0.0	2.1	2.3	3.1	3.1	5.2	2.2	2.2
Prop In Lane	0.40		0.18	0.14		0.35	1.00		0.12	1.00		0.24
Lane Grp Cap(c), veh/h	660	0	515	692	0	499	488	555	571	433	555	558
V/C Ratio(X)	0.43	0.00	0.50	0.23	0.00	0.28	0.01	0.40	0.40	0.16	0.29	0.30
Avail Cap(c_a), veh/h	2992	0	3059	3282	0	2966	1783	2751	2834	1588	2751	2766
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.4	0.0	8.4	7.7	0.0	7.7	8.7	8.1	8.1	10.1	7.8	7.8
Incr Delay (d2), s/veh	0.4	0.0	0.7	0.2	0.0	0.3	0.0	0.5	0.5	0.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.8	0.4	0.0	0.4	0.0	0.7	0.7	0.3	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.9	0.0	9.1	7.9	0.0	8.0	8.7	8.6	8.6	10.3	8.1	8.1
LnGrp LOS	A	A	A	A	A	A	A	A	A	B	A	A
Approach Vol, veh/h		541			296			459			400	
Approach Delay, s/veh		9.0			7.9			8.6			8.5	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.4		15.4		15.4		15.4				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		49.6		59.6		49.6		59.6				
Max Q Clear Time (g_c+I1), s		5.1		6.4		7.2		4.1				
Green Ext Time (p_c), s		2.7		3.6		2.3		1.8				
Intersection Summary												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	385	1044	296	169	193
Future Volume (vph)	385	1044	296	169	193
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	55.0	85.0	30.0	35.0	55.0
Total Split (%)	45.8%	70.8%	25.0%	29.2%	45.8%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	23.0	42.0	14.1	14.5	43.2
Actuated g/C Ratio	0.34	0.62	0.21	0.21	0.64
v/c Ratio	0.75	0.53	0.54	0.52	0.12
Control Delay	30.1	8.3	28.1	32.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	8.3	28.1	32.6	1.0
LOS	C	A	C	C	A
Approach Delay		14.2	28.1	15.7	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 67.9

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 16.8

Intersection LOS: B

Intersection Capacity Utilization 57.8%

ICU Level of Service B

Analysis Period (min) 15

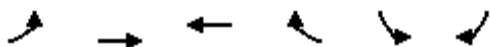
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	385	1044	296	59	169	193	
Future Volume (veh/h)	385	1044	296	59	169	193	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700	
Adj Flow Rate, veh/h	410	1111	315	45	180	89	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	471	1995	602	85	324	1246	
Arrive On Green	0.29	0.58	0.20	0.20	0.20	0.20	
Sat Flow, veh/h	1619	3510	3098	426	1619	2536	
Grp Volume(v), veh/h	410	1111	178	182	180	89	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1723	1619	1268	
Q Serve(g_s), s	12.0	10.0	4.6	4.7	5.0	0.9	
Cycle Q Clear(g_c), s	12.0	10.0	4.6	4.7	5.0	0.9	
Prop In Lane	1.00			0.25	1.00	1.00	
Lane Grp Cap(c), veh/h	471	1995	342	345	324	1246	
V/C Ratio(X)	0.87	0.56	0.52	0.53	0.56	0.07	
Avail Cap(c_a), veh/h	1634	5452	843	849	960	2241	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.8	6.4	17.8	17.9	18.0	6.7	
Incr Delay (d2), s/veh	2.0	0.2	1.2	1.3	1.5	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.8	2.1	1.7	1.7	1.7	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.8	6.7	19.0	19.1	19.4	6.7	
LnGrp LOS	B	A	B	B	B	A	
Approach Vol, veh/h		1521	360	269			
Approach Delay, s/veh		9.9	19.1	15.2			
Approach LOS		A	B	B			
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				34.5	15.4	19.1	15.4
Change Period (Y+Rc), s				5.4	5.4	4.6	5.4
Max Green Setting (Gmax), s				79.6	29.6	50.4	24.6
Max Q Clear Time (g_c+I1), s				12.0	7.0	14.0	6.7
Green Ext Time (p_c), s				10.1	0.8	0.6	1.8
Intersection Summary							
HCM 6th Ctrl Delay			12.1				
HCM 6th LOS			B				

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	36	95	5	2	93	16	3	46	13	5	36	13
Future Vol, veh/h	36	95	5	2	93	16	3	46	13	5	36	13
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	39	102	5	2	100	17	3	49	14	5	39	14
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	118	0	0	107	0	0	320	302	102	328	299	111
Stage 1	-	-	-	-	-	-	180	180	-	114	114	-
Stage 2	-	-	-	-	-	-	140	122	-	214	185	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1483	-	-	1497	-	-	637	614	959	629	616	948
Stage 1	-	-	-	-	-	-	826	754	-	896	805	-
Stage 2	-	-	-	-	-	-	868	799	-	793	751	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1482	-	-	1497	-	-	583	596	959	567	598	946
Mov Cap-2 Maneuver	-	-	-	-	-	-	583	596	-	567	598	-
Stage 1	-	-	-	-	-	-	803	733	-	870	803	-
Stage 2	-	-	-	-	-	-	812	797	-	708	730	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2			0.1			11.2			11.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	647	1482	-	-	1497	-	-	652				
HCM Lane V/C Ratio	0.103	0.026	-	-	0.001	-	-	0.089				
HCM Control Delay (s)	11.2	7.5	0	-	7.4	0	-	11.1				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	12	440	9	2	271	15	10	35	7	13	21	10
Future Vol, veh/h	12	440	9	2	271	15	10	35	7	13	21	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	468	10	2	288	16	11	37	7	14	22	11
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	304	0	0	478	0	0	817	807	473	821	804	297
Stage 1	-	-	-	-	-	-	499	499	-	300	300	-
Stage 2	-	-	-	-	-	-	318	308	-	521	504	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1268	-	-	1095	-	-	298	317	595	296	319	747
Stage 1	-	-	-	-	-	-	557	547	-	713	669	-
Stage 2	-	-	-	-	-	-	698	664	-	542	544	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1268	-	-	1095	-	-	274	312	595	262	314	746
Mov Cap-2 Maneuver	-	-	-	-	-	-	274	312	-	262	314	-
Stage 1	-	-	-	-	-	-	549	539	-	703	668	-
Stage 2	-	-	-	-	-	-	663	663	-	491	536	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			18			17.3		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1		NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1		
Capacity (veh/h)	303		595	1268	-	-	1095	-	-	339		
HCM Lane V/C Ratio	0.158		0.013	0.01	-	-	0.002	-	-	0.138		
HCM Control Delay (s)	19.1		11.1	7.9	0	-	8.3	0	-	17.3		
HCM Lane LOS	C		B	A	A	-	A	A	-	C		
HCM 95th %tile Q(veh)	0.6		0	0	-	-	0	-	-	0.5		

Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	74	368	111	246	151	23	476	62	234
Future Volume (vph)	74	368	111	246	151	23	476	62	234
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	46.0	46.0	46.0	46.0	46.0	74.0	74.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	61.7%	61.7%	61.7%	61.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	14.0	14.0	14.0	14.0	14.0		18.4		18.4
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32		0.42		0.42
v/c Ratio	0.25	0.38	0.43	0.46	0.27		0.59		0.32
Control Delay	14.9	13.5	19.1	16.1	4.3		10.6		9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	14.9	13.5	19.1	16.1	4.3		10.6		9.7
LOS	B	B	B	B	A		B		A
Approach Delay		13.7		13.3			10.6		9.7
Approach LOS		B		B			B		A
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 44.2									
Natural Cycle: 55									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.59									
Intersection Signal Delay: 11.8					Intersection LOS: B				
Intersection Capacity Utilization 72.8%					ICU Level of Service C				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	368	17	111	246	151	23	476	242	62	234	20
Future Volume (veh/h)	74	368	17	111	246	151	23	476	242	62	234	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	79	391	18	118	262	154	24	506	244	66	249	18
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	379	1068	49	403	578	483	115	840	395	227	802	62
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	931	3330	153	937	1800	1504	41	2169	1020	238	2070	160
Grp Volume(v), veh/h	79	200	209	118	262	154	426	0	348	152	0	181
Grp Sat Flow(s),veh/h/ln	931	1710	1772	937	1800	1504	1776	0	1454	863	0	1605
Q Serve(g_s), s	2.8	3.5	3.5	4.3	4.4	3.0	0.0	0.0	7.4	0.8	0.0	3.0
Cycle Q Clear(g_c), s	7.3	3.5	3.5	7.7	4.4	3.0	7.3	0.0	7.4	8.2	0.0	3.0
Prop In Lane	1.00		0.09	1.00		1.00	0.06		0.70	0.43		0.10
Lane Grp Cap(c), veh/h	379	549	569	403	578	483	787	0	563	469	0	621
V/C Ratio(X)	0.21	0.37	0.37	0.29	0.45	0.32	0.54	0.00	0.62	0.33	0.00	0.29
Avail Cap(c_a), veh/h	1055	1791	1857	1084	1886	1576	3226	0	2600	2002	0	2869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.2	10.0	10.0	13.0	10.4	9.9	9.4	0.0	9.5	8.2	0.0	8.1
Incr Delay (d2), s/veh	0.3	0.4	0.4	0.4	0.6	0.4	0.6	0.0	1.1	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.9	0.9	0.7	1.2	0.7	1.9	0.0	1.6	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	10.4	10.4	13.4	10.9	10.2	10.0	0.0	10.6	8.6	0.0	8.4
LnGrp LOS	B	B	B	B	B	B	B	A	B	A	A	A
Approach Vol, veh/h	488			534			774			333		
Approach Delay, s/veh	10.9			11.3			10.3			8.5		
Approach LOS	B			B			B			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	20.3			18.1			20.3			18.1		
Change Period (Y+Rc), s	5.4			5.8			5.4			5.8		
Max Green Setting (Gmax), s	68.6			40.2			68.6			40.2		
Max Q Clear Time (g_c+I1), s	9.4			9.3			10.2			9.7		
Green Ext Time (p_c), s	5.5			2.7			2.4			2.6		
Intersection Summary												
HCM 6th Ctrl Delay	10.4											
HCM 6th LOS	B											

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	56	615	4	488	99	1	7	70	3
Future Volume (vph)	56	615	4	488	99	1	7	70	3
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	9.6	22.8	22.8	9.6	31.4	9.6	29.4
Total Split (s)	23.0	53.4	9.6	40.0	40.0	13.0	33.0	24.0	44.0
Total Split (%)	19.2%	44.5%	8.0%	33.3%	33.3%	10.8%	27.5%	20.0%	36.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effect Green (s)	7.2	20.5	5.5	15.6	15.6	5.5	10.9	7.7	18.8
Actuated g/C Ratio	0.13	0.38	0.10	0.29	0.29	0.10	0.20	0.14	0.34
v/c Ratio	0.27	0.49	0.02	0.51	0.18	0.01	0.05	0.31	0.06
Control Delay	29.4	15.1	30.0	20.4	0.8	30.0	18.5	29.4	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.4	15.1	30.0	20.4	0.8	30.0	18.5	29.4	9.4
LOS	C	B	C	C	A	C	B	C	A
Approach Delay		16.2		17.2			19.1		23.2
Approach LOS		B		B			B		C

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 54.5

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.51

Intersection Signal Delay: 17.2

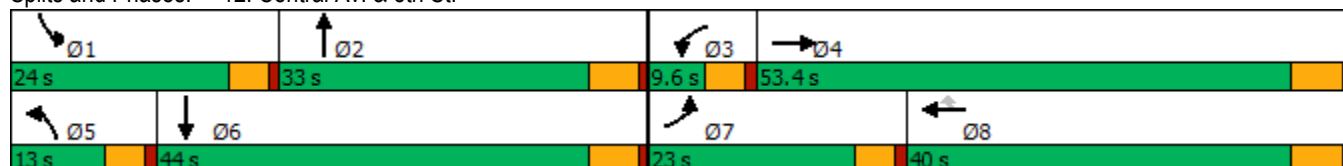
Intersection LOS: B

Intersection Capacity Utilization 46.3%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.



HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	615	0	4	488	99	1	7	10	70	3	28
Future Volume (veh/h)	56	615	0	4	488	99	1	7	10	70	3	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	57	628	0	4	498	90	1	7	7	71	3	16
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	90	1009	0	9	838	371	3	173	173	103	67	357
Arrive On Green	0.06	0.30	0.00	0.01	0.24	0.24	0.00	0.21	0.21	0.06	0.27	0.27
Sat Flow, veh/h	1619	3510	0	1619	3420	1516	1619	826	826	1619	247	1316
Grp Volume(v), veh/h	57	628	0	4	498	90	1	0	14	71	0	19
Grp Sat Flow(s),veh/h/ln	1619	1710	0	1619	1710	1516	1619	0	1651	1619	0	1563
Q Serve(g_s), s	1.6	7.6	0.0	0.1	6.2	2.3	0.0	0.0	0.3	2.1	0.0	0.4
Cycle Q Clear(g_c), s	1.6	7.6	0.0	0.1	6.2	2.3	0.0	0.0	0.3	2.1	0.0	0.4
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.50	1.00		0.84
Lane Grp Cap(c), veh/h	90	1009	0	9	838	371	3	0	345	103	0	424
V/C Ratio(X)	0.63	0.62	0.00	0.46	0.59	0.24	0.30	0.00	0.04	0.69	0.00	0.04
Avail Cap(c_a), veh/h	623	3404	0	169	2446	1084	284	0	953	657	0	1262
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.1	14.6	0.0	23.7	16.0	14.5	23.8	0.0	15.1	21.9	0.0	12.8
Incr Delay (d2), s/veh	2.7	0.6	0.0	13.1	0.7	0.3	17.0	0.0	0.0	3.0	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.3	0.0	0.1	2.0	0.6	0.0	0.0	0.1	0.8	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.8	15.2	0.0	36.9	16.6	14.8	40.8	0.0	15.1	24.9	0.0	12.9
LnGrp LOS	C	B	A	D	B	B	D	A	B	C	A	B
Approach Vol, veh/h	685			592			15			90		
Approach Delay, s/veh	16.0			16.5			16.8			22.4		
Approach LOS	B			B			B			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	15.4	4.9	19.9	4.7	18.4	7.3	17.5				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	19.4	27.6	5.0	47.6	8.4	38.6	18.4	34.2				
Max Q Clear Time (g_c+I1), s	4.1	2.3	2.1	9.6	2.0	2.4	3.6	8.2				
Green Ext Time (p_c), s	0.1	0.0	0.0	4.3	0.0	0.1	0.0	3.4				
Intersection Summary												
HCM 6th Ctrl Delay	16.6											
HCM 6th LOS	B											

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)
09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	587	217	432	127	535	161	340
Future Volume (vph)	55	587	217	432	127	535	161	340
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	14.2	32.8	26.0	44.6	19.3	40.2	21.0	41.9
Total Split (%)	11.8%	27.3%	21.7%	37.2%	16.1%	33.5%	17.5%	34.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	8.0	27.2	19.3	40.8	12.8	32.4	14.9	34.5
Actuated g/C Ratio	0.07	0.24	0.17	0.36	0.11	0.28	0.13	0.30
v/c Ratio	0.54	0.94	0.87	0.54	0.77	0.91	0.84	0.41
Control Delay	71.2	63.9	77.3	31.0	77.5	50.7	81.4	32.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.2	63.9	77.3	31.0	77.5	50.7	81.4	32.9
LOS	E	E	E	C	E	D	F	C
Approach Delay		64.4		43.5		54.3		47.1
Approach LOS		E		D		D		D

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 114.7

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.94

Intersection Signal Delay: 52.6

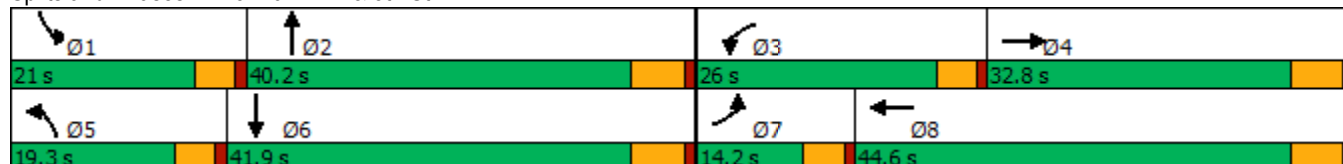
Intersection LOS: D

Intersection Capacity Utilization 86.3%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

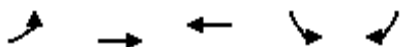
5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	587	108	217	432	156	127	535	272	161	340	48
Future Volume (veh/h)	55	587	108	217	432	156	127	535	272	161	340	48
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	60	638	85	236	470	147	138	582	257	175	370	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	75	712	95	263	899	279	164	657	290	202	967	96
Arrive On Green	0.05	0.24	0.24	0.16	0.35	0.35	0.10	0.28	0.28	0.12	0.31	0.31
Sat Flow, veh/h	1619	3028	403	1619	2559	794	1619	2308	1018	1619	3141	312
Grp Volume(v), veh/h	60	360	363	236	313	304	138	431	408	175	200	207
Grp Sat Flow(s),veh/h/ln	1619	1710	1721	1619	1710	1643	1619	1710	1616	1619	1710	1743
Q Serve(g_s), s	3.9	21.9	22.0	15.4	15.6	15.9	9.0	25.9	26.0	11.4	9.9	10.0
Cycle Q Clear(g_c), s	3.9	21.9	22.0	15.4	15.6	15.9	9.0	25.9	26.0	11.4	9.9	10.0
Prop In Lane	1.00		0.23	1.00		0.48	1.00		0.63	1.00		0.18
Lane Grp Cap(c), veh/h	75	402	405	263	601	577	164	487	460	202	527	537
V/C Ratio(X)	0.80	0.90	0.90	0.90	0.52	0.53	0.84	0.89	0.89	0.87	0.38	0.38
Avail Cap(c_a), veh/h	144	429	432	322	617	592	221	547	517	247	574	585
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.8	39.9	39.9	44.2	27.7	27.8	47.5	36.8	36.8	46.2	29.2	29.2
Incr Delay (d2), s/veh	7.2	20.0	20.3	20.9	0.7	0.8	15.0	14.9	15.8	20.3	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	11.0	11.2	7.5	6.2	6.0	4.2	12.3	11.7	5.6	4.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.1	59.9	60.2	65.0	28.4	28.6	62.5	51.7	52.6	66.5	29.6	29.7
LnGrp LOS	E	E	E	E	C	C	E	D	D	E	C	C
Approach Vol, veh/h		783			853			977			582	
Approach Delay, s/veh		59.9			38.6			53.6			40.7	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	36.4	22.1	31.1	15.5	38.9	9.6	43.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	34.4	21.4	27.0	14.7	36.1	9.6	38.8				
Max Q Clear Time (g_c+I1), s	13.4	28.0	17.4	24.0	11.0	12.0	5.9	17.9				
Green Ext Time (p_c), s	0.1	2.6	0.1	1.2	0.1	2.1	0.0	3.4				
Intersection Summary												
HCM 6th Ctrl Delay			48.8									
HCM 6th LOS			D									

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023

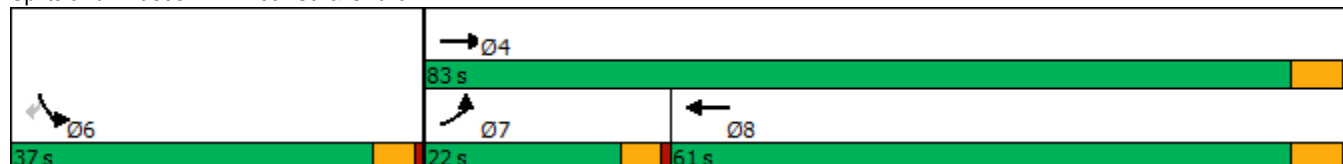


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	←
Traffic Volume (vph)	59	994	783	88	40
Future Volume (vph)	59	994	783	88	40
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	22.0	83.0	61.0	37.0	37.0
Total Split (%)	18.3%	69.2%	50.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	7.5	37.5	30.7	11.7	11.7
Actuated g/C Ratio	0.14	0.70	0.57	0.22	0.22
v/c Ratio	0.28	0.45	0.50	0.27	0.12
Control Delay	28.6	5.9	12.2	24.9	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.6	5.9	12.2	24.9	9.7
LOS	C	A	B	C	A
Approach Delay		7.2	12.2	20.2	
Approach LOS		A	B	C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 53.5
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.50
 Intersection Signal Delay: 10.2
 Intersection LOS: B
 Intersection Capacity Utilization 51.5%
 ICU Level of Service A
 Analysis Period (min) 15

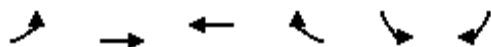
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	59	994	783	108	88	40	
Future Volume (veh/h)	59	994	783	108	88	40	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	64	1080	851	103	96	14	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	100	2016	1289	156	275	259	
Arrive On Green	0.06	0.59	0.42	0.42	0.17	0.17	
Sat Flow, veh/h	1619	3510	3153	371	1619	1525	
Grp Volume(v), veh/h	64	1080	475	479	96	14	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1724	1619	1525	
Q Serve(g_s), s	1.7	8.2	9.6	9.6	2.3	0.3	
Cycle Q Clear(g_c), s	1.7	8.2	9.6	9.6	2.3	0.3	
Prop In Lane	1.00			0.22	1.00	1.00	
Lane Grp Cap(c), veh/h	100	2016	720	726	275	259	
V/C Ratio(X)	0.64	0.54	0.66	0.66	0.35	0.05	
Avail Cap(c_a), veh/h	652	6115	2186	2204	1215	1145	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	19.8	5.3	10.0	10.0	15.8	15.0	
Incr Delay (d2), s/veh	2.5	0.2	1.0	1.0	0.8	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.6	1.2	2.4	2.5	0.7	0.3	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	22.3	5.5	11.1	11.1	16.6	15.1	
LnGrp LOS	C	A	B	B	B	B	
Approach Vol, veh/h		1144	954		110		
Approach Delay, s/veh		6.5	11.1		16.4		
Approach LOS		A	B		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				31.3	11.9	7.3	24.0
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				77.2	32.4	17.4	55.2
Max Q Clear Time (g_c+I1), s				10.2	4.3	3.7	11.6
Green Ext Time (p_c), s				9.2	0.3	0.0	6.6
Intersection Summary							
HCM 6th Ctrl Delay			9.0				
HCM 6th LOS			A				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↘
Traffic Volume (vph)	795	327	394	661	4	229
Future Volume (vph)	795	327	394	661	4	229
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	42.0	42.0	22.0	64.0	56.0	56.0
Total Split (%)	35.0%	35.0%	18.3%	53.3%	46.7%	46.7%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	33.1	33.1	17.6	55.3	46.3	46.3
Actuated g/C Ratio	0.29	0.29	0.16	0.49	0.41	0.41
v/c Ratio	0.85	0.58	0.92	0.42	0.93	0.34
Control Delay	47.2	16.1	74.9	20.1	53.8	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	16.1	74.9	20.1	53.8	11.0
LOS	D	B	E	C	D	B
Approach Delay	38.2			40.6	42.2	
Approach LOS	D			D	D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 113.3

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 40.1

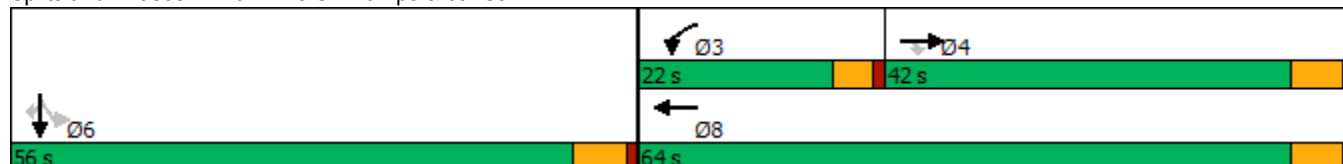
Intersection LOS: D

Intersection Capacity Utilization 85.9%

ICU Level of Service E

Analysis Period (min) 15

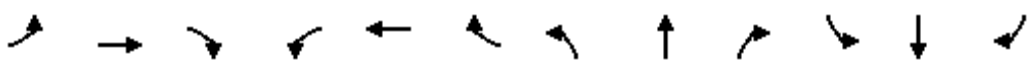
Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	795	327	394	661	0	0	0	0	609	4	229
Future Volume (veh/h)	0	795	327	394	661	0	0	0	0	609	4	229
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	846	275	419	703	0				648	4	139
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	985	433	465	1666	0				695	4	622
Arrive On Green	0.00	0.29	0.29	0.16	0.49	0.00				0.41	0.41	0.41
Sat Flow, veh/h	0	3510	1504	2956	3510	0				1704	11	1525
Grp Volume(v), veh/h	0	846	275	419	703	0				652	0	139
Grp Sat Flow(s),veh/h/ln	0	1710	1504	1478	1710	0				1715	0	1525
Q Serve(g_s), s	0.0	25.8	17.6	15.4	14.6	0.0				40.1	0.0	6.6
Cycle Q Clear(g_c), s	0.0	25.8	17.6	15.4	14.6	0.0				40.1	0.0	6.6
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	985	433	465	1666	0				699	0	622
V/C Ratio(X)	0.00	0.86	0.63	0.90	0.42	0.00				0.93	0.00	0.22
Avail Cap(c_a), veh/h	0	1122	494	466	1804	0				780	0	694
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.1	34.2	45.6	18.3	0.0				31.2	0.0	21.3
Incr Delay (d2), s/veh	0.0	6.2	2.2	19.8	0.2	0.0				17.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.1	6.4	6.7	5.4	0.0				18.6	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	43.3	36.4	65.4	18.4	0.0				48.2	0.0	21.5
LnGrp LOS	A	D	D	E	B	A				D	A	C
Approach Vol, veh/h		1121			1122						791	
Approach Delay, s/veh		41.6			36.0						43.5	
Approach LOS		D			D						D	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			22.0	37.6		50.8			59.5			
Change Period (Y+Rc), s			4.6	5.8		5.8			5.8			
Max Green Setting (Gmax), s			17.4	36.2		50.2			58.2			
Max Q Clear Time (g_c+I1), s			17.4	27.8		42.1			16.6			
Green Ext Time (p_c), s			0.0	4.0		2.9			4.9			
Intersection Summary												
HCM 6th Ctrl Delay			40.0									
HCM 6th LOS			D									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	237	1167	779	531	277	3	576
Future Volume (vph)	237	1167	779	531	277	3	576
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	36.0	83.0	47.0	47.0	37.0	37.0	37.0
Total Split (%)	30.0%	69.2%	39.2%	39.2%	30.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	18.4	49.0	25.7	25.7	23.1	23.1	23.1
Actuated g/C Ratio	0.22	0.58	0.30	0.30	0.27	0.27	0.27
v/c Ratio	0.71	0.62	0.55	0.66	0.35	0.33	0.75
Control Delay	44.8	13.3	27.2	6.7	30.3	29.8	28.9
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	13.4	27.2	6.7	30.3	29.8	28.9
LOS	D	B	C	A	C	C	C
Approach Delay		18.7	18.9			29.3	
Approach LOS		B	B			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 84.5

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 21.3

Intersection LOS: C

Intersection Capacity Utilization 85.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	237	1167	0	0	779	531	277	3	576	0	0	0
Future Volume (veh/h)	237	1167	0	0	779	531	277	3	576	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	249	1228	0	0	820	427	294	0	358			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	295	2182	0	0	1894	580	594	0	528			
Arrive On Green	0.18	0.64	0.00	0.00	0.39	0.39	0.18	0.00	0.18			
Sat Flow, veh/h	1619	3510	0	0	5076	1506	3238	0	2881			
Grp Volume(v), veh/h	249	1228	0	0	820	427	294	0	358			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1506	1619	0	1441			
Q Serve(g_s), s	9.7	13.2	0.0	0.0	8.0	15.8	5.3	0.0	7.5			
Cycle Q Clear(g_c), s	9.7	13.2	0.0	0.0	8.0	15.8	5.3	0.0	7.5			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	295	2182	0	0	1894	580	594	0	528			
V/C Ratio(X)	0.84	0.56	0.00	0.00	0.43	0.74	0.50	0.00	0.68			
Avail Cap(c_a), veh/h	782	4063	0	0	3115	955	1555	0	1383			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.7	6.6	0.0	0.0	14.7	17.1	23.8	0.0	24.7			
Incr Delay (d2), s/veh	2.6	0.2	0.0	0.0	0.2	1.8	0.6	0.0	1.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	3.5	2.9	0.0	0.0	2.5	4.8	1.9	0.0	2.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.3	6.9	0.0	0.0	14.9	19.0	24.5	0.0	26.3			
LnGrp LOS	C	A	A	A	B	B	C	A	C			
Approach Vol, veh/h	1477			1247			652					
Approach Delay, s/veh	10.5			16.3			25.5					
Approach LOS	B			B			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	17.7			47.3			16.4			30.8		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	31.2			77.2			31.4			41.2		
Max Q Clear Time (g_c+l1), s	9.5			15.2			11.7			17.8		
Green Ext Time (p_c), s	2.4			11.2			0.3			7.2		
Intersection Summary												
HCM 6th Ctrl Delay	15.5											
HCM 6th LOS	B											
Notes												

APPENDIX 7.2: EAPC (2026) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	14.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	84	22	21	97	19	17	253	17	34	516	53
Future Vol, veh/h	61	84	22	21	97	19	17	253	17	34	516	53
Conflicting Peds, #/hr	0	0	0	0	0	2	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	-	-	-	-	-	-	100	-	-	-	-	200
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	66	90	24	23	104	20	18	272	18	37	555	57
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	855	955	278	714	1003	147	612	0	0	290	0	0
Stage 1	629	629	-	317	317	-	-	-	-	-	-	-
Stage 2	226	326	-	397	686	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	255	260	725	322	244	880	977	-	-	1283	-	-
Stage 1	442	478	-	674	658	-	-	-	-	-	-	-
Stage 2	762	652	-	605	451	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	153	244	725	212	229	878	977	-	-	1283	-	-
Mov Cap-2 Maneuver	153	244	-	212	229	-	-	-	-	-	-	-
Stage 1	434	457	-	662	646	-	-	-	-	-	-	-
Stage 2	611	640	-	449	431	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	71.3		37.6		0.5		0.6					
HCM LOS	F		E									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	977	-	-	216	252	1283	-	-				
HCM Lane V/C Ratio	0.019	-	-	0.831	0.585	0.028	-	-				
HCM Control Delay (s)	8.8	-	-	71.3	37.6	7.9	0.2	-				
HCM Lane LOS	A	-	-	F	E	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	6.2	3.4	0.1	-	-				

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	0	287	7	1	557
Future Vol, veh/h	1	0	287	7	1	557
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	1	0	312	8	1	605

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	621	160	0	0	320
Stage 1	316	-	-	-	-
Stage 2	305	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	424	863	-	-	1251
Stage 1	718	-	-	-	-
Stage 2	727	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	424	863	-	-	1251
Mov Cap-2 Maneuver	591	-	-	-	-
Stage 1	718	-	-	-	-
Stage 2	726	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	591	1251
HCM Lane V/C Ratio	-	-	0.002	0.001
HCM Control Delay (s)	-	-	11.1	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	0	294	12	0	558
Future Vol, veh/h	2	0	294	12	0	558
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	0	320	13	0	607
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	631	167	0	0	333	0
Stage 1	327	-	-	-	-	-
Stage 2	304	-	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2	-
Pot Cap-1 Maneuver	418	854	-	-	1238	-
Stage 1	709	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	418	854	-	-	1238	-
Mov Cap-2 Maneuver	587	-	-	-	-	-
Stage 1	709	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	11.2	0	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	587	1238	-	
HCM Lane V/C Ratio	-	-	0.004	-	-	
HCM Control Delay (s)	-	-	11.2	0	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	35	144	37	330	2	185	46	430
Future Volume (vph)	35	144	37	330	2	185	46	430
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	54.0	54.0	54.0	54.0	66.0	66.0	66.0	66.0
Total Split (%)	45.0%	45.0%	45.0%	45.0%	55.0%	55.0%	55.0%	55.0%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		12.7		12.7	13.9	13.9	13.9	13.9
Actuated g/C Ratio		0.34		0.34	0.37	0.37	0.37	0.37
v/c Ratio		0.24		0.50	0.01	0.18	0.14	0.47
Control Delay		9.9		11.7	8.5	8.5	9.5	10.3
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		9.9		11.7	8.5	8.5	9.5	10.3
LOS		A		B	A	A	A	B
Approach Delay		9.9		11.7		8.5		10.2
Approach LOS		A		B		A		B
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 37.7								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.50								
Intersection Signal Delay: 10.4					Intersection LOS: B			
Intersection Capacity Utilization 63.6%					ICU Level of Service B			
Analysis Period (min) 15								

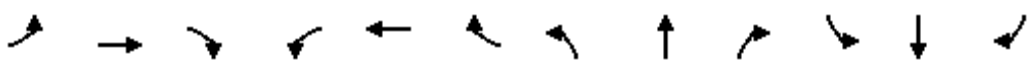
Splits and Phases: 4: Sterling Av. & 5th St.

	
Ø2	Ø4
66 s	54 s
	
Ø6	Ø8
66 s	54 s

HCM 6th Signalized Intersection Summary 4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↔↔		↗	↔↔	
Traffic Volume (veh/h)	35	144	15	37	330	84	2	185	8	46	430	84
Future Volume (veh/h)	35	144	15	37	330	84	2	185	8	46	430	84
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	40	166	14	43	379	88	2	213	7	53	494	81
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	252	821	69	182	823	185	386	1102	36	546	960	157
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	294	2537	214	144	2543	571	804	3379	111	1114	2943	480
Grp Volume(v), veh/h	115	0	105	275	0	235	2	107	113	53	286	289
Grp Sat Flow(s),veh/h/ln	1445	0	1600	1732	0	1527	804	1710	1780	1114	1710	1714
Q Serve(g_s), s	0.0	0.0	1.5	0.0	0.0	3.8	0.1	1.4	1.4	1.1	4.2	4.2
Cycle Q Clear(g_c), s	3.8	0.0	1.5	3.8	0.0	3.8	4.3	1.4	1.4	2.5	4.2	4.2
Prop In Lane	0.35		0.13	0.16		0.37	1.00		0.06	1.00		0.28
Lane Grp Cap(c), veh/h	625	0	518	696	0	494	386	558	580	546	558	559
V/C Ratio(X)	0.18	0.00	0.20	0.40	0.00	0.48	0.01	0.19	0.19	0.10	0.51	0.52
Avail Cap(c_a), veh/h	2336	0	2521	2795	0	2406	1703	3361	3498	2372	3361	3367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.5	0.0	7.5	8.3	0.0	8.3	10.2	7.5	7.5	8.4	8.4	8.4
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.4	0.0	0.7	0.0	0.2	0.2	0.1	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	0.3	0.9	0.0	0.8	0.0	0.3	0.3	0.2	0.9	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.7	0.0	7.7	8.7	0.0	9.0	10.2	7.6	7.6	8.5	9.1	9.2
LnGrp LOS	A	A	A	A	A	A	B	A	A	A	A	A
Approach Vol, veh/h		220			510			222			628	
Approach Delay, s/veh		7.7			8.9			7.7			9.1	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.5		15.4		15.5		15.4				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		60.6		48.6		60.6		48.6				
Max Q Clear Time (g_c+I1), s		6.3		5.8		6.2		5.8				
Green Ext Time (p_c), s		1.2		1.3		3.8		3.2				
Intersection Summary												
HCM 6th Ctrl Delay			8.6									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	163	332	691	100	382
Future Volume (vph)	163	332	691	100	382
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	33.0	86.0	53.0	34.0	33.0
Total Split (%)	27.5%	71.7%	44.2%	28.3%	27.5%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	13.8	43.8	25.2	12.4	31.8
Actuated g/C Ratio	0.20	0.65	0.37	0.18	0.47
v/c Ratio	0.60	0.18	0.69	0.41	0.37
Control Delay	34.5	4.8	21.4	32.8	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	34.5	4.8	21.4	32.8	9.9
LOS	C	A	C	C	A
Approach Delay		14.5	21.4	14.6	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 67.5

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 17.5

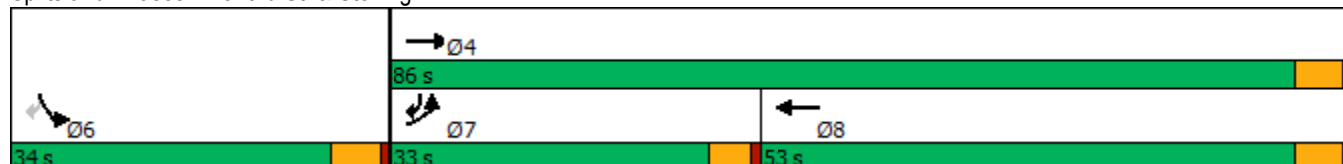
Intersection LOS: B

Intersection Capacity Utilization 52.5%

ICU Level of Service A

Analysis Period (min) 15

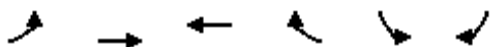
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	163	332	691	33	100	382
Future Volume (veh/h)	163	332	691	33	100	382
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700
Adj Flow Rate, veh/h	196	400	833	40	120	173
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	244	2059	1206	58	310	867
Arrive On Green	0.15	0.60	0.36	0.36	0.19	0.19
Sat Flow, veh/h	1619	3510	3407	159	1619	2536
Grp Volume(v), veh/h	196	400	429	444	120	173
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1767	1619	1268
Q Serve(g_s), s	6.1	2.8	11.2	11.2	3.4	2.5
Cycle Q Clear(g_c), s	6.1	2.8	11.2	11.2	3.4	2.5
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	244	2059	622	642	310	867
V/C Ratio(X)	0.80	0.19	0.69	0.69	0.39	0.20
Avail Cap(c_a), veh/h	880	5273	1557	1609	886	1769
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	4.7	14.1	14.1	18.5	12.2
Incr Delay (d2), s/veh	2.4	0.0	1.4	1.3	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.6	3.6	3.7	1.2	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	23.8	4.7	15.5	15.5	19.3	12.3
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		596	873		293	
Approach Delay, s/veh		11.0	15.5		15.1	
Approach LOS		B	B		B	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			36.9		15.4	12.5
Change Period (Y+Rc), s			5.4		5.4	4.6
Max Green Setting (Gmax), s			80.6		28.6	28.4
Max Q Clear Time (g_c+I1), s			4.8		5.4	8.1
Green Ext Time (p_c), s			2.7		1.0	0.2
Intersection Summary						
HCM 6th Ctrl Delay			13.9			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑			↗
Traffic Vol, veh/h	0	197	447	5	0	2
Future Vol, veh/h	0	197	447	5	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	214	486	5	0	2
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	246
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	760
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	760
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		9.8		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	760		
HCM Lane V/C Ratio	-	-	-	0.003		
HCM Control Delay (s)	-	-	-	9.8		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0		

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↖	↑	↘	
Traffic Vol, veh/h	113	0	3	123	0	1
Future Vol, veh/h	113	0	3	123	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	123	0	3	134	0	1
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	123	0	263	62
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	140	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1477	-	720	996
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	892	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1477	-	719	996
Mov Cap-2 Maneuver	-	-	-	-	735	-
Stage 1	-	-	-	-	895	-
Stage 2	-	-	-	-	890	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.2		8.6	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	996	-	-	1477	-	
HCM Lane V/C Ratio	0.001	-	-	0.002	-	
HCM Control Delay (s)	8.6	-	-	7.4	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	4	191	454	13	13	0
Future Vol, veh/h	4	191	454	13	13	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	4	208	493	14	14	0
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	507	0	-	0	716	254
Stage 1	-	-	-	-	500	-
Stage 2	-	-	-	-	216	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1068	-	-	-	384	752
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	825	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1068	-	-	-	382	752
Mov Cap-2 Maneuver	-	-	-	-	473	-
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	825	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.2	0		12.8		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1068	-	-	-	473	
HCM Lane V/C Ratio	0.004	-	-	-	0.03	
HCM Control Delay (s)	8.4	-	-	-	12.8	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	91	4	9	95	1	5	20	2	7	44	26
Future Vol, veh/h	18	91	4	9	95	1	5	20	2	7	44	26
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	90	90	90	90	90	90	90	90	90
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	20	101	4	10	106	1	6	22	2	8	49	29
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	107	0	0	105	0	0	307	268	101	282	272	107
Stage 1	-	-	-	-	-	-	141	141	-	127	127	-
Stage 2	-	-	-	-	-	-	166	127	-	155	145	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1497	-	-	1499	-	-	649	641	960	674	638	953
Stage 1	-	-	-	-	-	-	867	784	-	882	795	-
Stage 2	-	-	-	-	-	-	841	795	-	852	781	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1497	-	-	1499	-	-	582	628	960	644	625	953
Mov Cap-2 Maneuver	-	-	-	-	-	-	582	628	-	644	625	-
Stage 1	-	-	-	-	-	-	855	773	-	870	789	-
Stage 2	-	-	-	-	-	-	760	789	-	814	770	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.2			0.6			11			10.8		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	635	1497	-	-	1499	-	-	709				
HCM Lane V/C Ratio	0.047	0.013	-	-	0.007	-	-	0.121				
HCM Control Delay (s)	11	7.4	0	-	7.4	0	-	10.8				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.4				

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	5	198	0	3	449	10	0	12	7	20	19	19
Future Vol, veh/h	5	198	0	3	449	10	0	12	7	20	19	19
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	82	82	82	82	82	82	82	82	82
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	6	241	0	4	548	12	0	15	9	24	23	23
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	560	0	0	241	0	0	838	821	241	827	815	554
Stage 1	-	-	-	-	-	-	253	253	-	562	562	-
Stage 2	-	-	-	-	-	-	585	568	-	265	253	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1021	-	-	1337	-	-	288	312	803	293	314	536
Stage 1	-	-	-	-	-	-	756	701	-	515	513	-
Stage 2	-	-	-	-	-	-	501	510	-	745	701	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1021	-	-	1337	-	-	258	309	803	277	311	536
Mov Cap-2 Maneuver	-	-	-	-	-	-	258	309	-	277	311	-
Stage 1	-	-	-	-	-	-	751	696	-	511	511	-
Stage 2	-	-	-	-	-	-	456	508	-	717	696	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			14.4			18.2		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	309	803	1021	-	-	1337	-	-	344			
HCM Lane V/C Ratio	0.047	0.011	0.006	-	-	0.003	-	-	0.206			
HCM Control Delay (s)	17.2	9.5	8.5	0	-	7.7	0	-	18.2			
HCM Lane LOS	C	A	A	A	-	A	A	-	C			
HCM 95th %tile Q(veh)	0.1	0	0	-	-	0	-	-	0.8			

Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	21	180	360	425	86	5	95	83	324
Future Volume (vph)	21	180	360	425	86	5	95	83	324
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	73.0	73.0	73.0	73.0	73.0	47.0	47.0	47.0	47.0
Total Split (%)	60.8%	60.8%	60.8%	60.8%	60.8%	39.2%	39.2%	39.2%	39.2%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effect Green (s)	37.1	37.1	37.1	37.1	37.1		20.3		20.3
Actuated g/C Ratio	0.53	0.53	0.53	0.53	0.53		0.29		0.29
v/c Ratio	0.07	0.13	0.78	0.52	0.12		0.20		0.62
Control Delay	8.9	7.7	24.8	12.8	2.3		15.8		27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	8.9	7.7	24.8	12.8	2.3		15.8		27.4
LOS	A	A	C	B	A		B		C
Approach Delay		7.8		16.7			15.8		27.4
Approach LOS		A		B			B		C

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 70

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 18.2

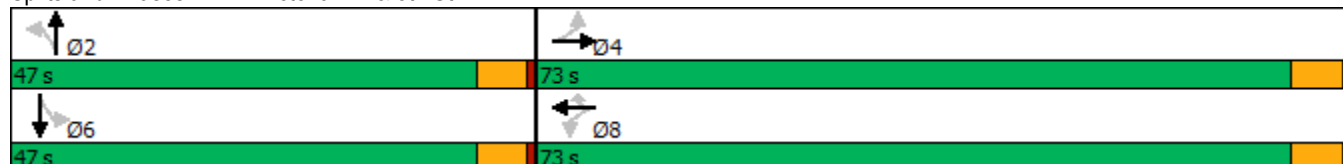
Intersection LOS: B

Intersection Capacity Utilization 72.1%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 11: Victoria Av. & 5th St.



HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	180	23	360	425	86	5	95	54	83	324	33
Future Volume (veh/h)	21	180	23	360	425	86	5	95	54	83	324	33
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	25	212	26	424	500	93	6	112	60	98	381	37
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	411	1598	194	676	936	783	85	543	267	215	630	61
Arrive On Green	0.52	0.52	0.52	0.52	0.52	0.52	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	791	3071	372	1096	1800	1505	32	2139	1051	459	2480	241
Grp Volume(v), veh/h	25	117	121	424	500	93	95	0	83	271	0	245
Grp Sat Flow(s),veh/h/ln	791	1710	1733	1096	1800	1505	1774	0	1449	1585	0	1595
Q Serve(g_s), s	1.1	1.7	1.8	16.1	9.2	1.6	0.0	0.0	2.2	5.2	0.0	6.7
Cycle Q Clear(g_c), s	10.2	1.7	1.8	17.9	9.2	1.6	2.1	0.0	2.2	7.5	0.0	6.7
Prop In Lane	1.00		0.21	1.00		1.00	0.06		0.73	0.36		0.15
Lane Grp Cap(c), veh/h	411	890	902	676	936	783	528	0	368	501	0	405
V/C Ratio(X)	0.06	0.13	0.13	0.63	0.53	0.12	0.18	0.00	0.22	0.54	0.00	0.61
Avail Cap(c_a), veh/h	1070	2317	2348	1590	2439	2039	1528	0	1215	1403	0	1337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.3	6.1	6.1	10.8	7.9	6.1	14.6	0.0	14.6	16.5	0.0	16.3
Incr Delay (d2), s/veh	0.1	0.1	0.1	1.0	0.5	0.1	0.2	0.0	0.3	0.9	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	0.4	2.6	2.2	0.3	0.7	0.0	0.6	2.4	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	6.2	6.2	11.7	8.4	6.2	14.7	0.0	14.9	17.4	0.0	17.8
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	B
Approach Vol, veh/h	263			1017			178			516		
Approach Delay, s/veh	6.7			9.6			14.8			17.6		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	18.0			31.6			18.0			31.6		
Change Period (Y+Rc), s	5.4			5.8			5.4			5.8		
Max Green Setting (Gmax), s	41.6			67.2			41.6			67.2		
Max Q Clear Time (g_c+I1), s	4.2			12.2			9.5			19.9		
Green Ext Time (p_c), s	1.0			1.5			3.1			5.9		
Intersection Summary												
HCM 6th Ctrl Delay				11.8								
HCM 6th LOS				B								

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	9	307	9	833	49	2	2	56	3
Future Volume (vph)	9	307	9	833	49	2	2	56	3
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	9.6	22.8	22.8	9.6	31.4	9.6	29.4
Total Split (s)	12.0	54.0	12.0	54.0	54.0	12.0	34.0	20.0	42.0
Total Split (%)	10.0%	45.0%	10.0%	45.0%	45.0%	10.0%	28.3%	16.7%	35.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effect Green (s)	5.8	24.9	5.8	24.9	24.9	5.5	10.9	7.8	19.2
Actuated g/C Ratio	0.10	0.42	0.10	0.42	0.42	0.09	0.18	0.13	0.32
v/c Ratio	0.07	0.26	0.07	0.68	0.08	0.01	0.01	0.31	0.11
Control Delay	33.2	12.3	33.2	17.3	0.2	34.0	26.7	32.2	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.2	12.3	33.2	17.3	0.2	34.0	26.7	32.2	9.0
LOS	C	B	C	B	A	C	C	C	A
Approach Delay		12.9		16.6			29.6		21.2
Approach LOS		B		B			C		C

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 59.1

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 43.8%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.

			
20 s	34 s	12 s	54 s
			
12 s	42 s	12 s	54 s

HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	307	7	9	833	49	2	2	1	56	3	47
Future Volume (veh/h)	9	307	7	9	833	49	2	2	1	56	3	47
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	11	361	4	11	980	27	2	2	1	66	4	23
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	23	1398	15	23	1380	601	4	195	97	92	52	298
Arrive On Green	0.01	0.40	0.40	0.01	0.40	0.40	0.00	0.17	0.17	0.06	0.23	0.23
Sat Flow, veh/h	1619	3465	38	1619	3420	1491	1619	1126	563	1619	229	1314
Grp Volume(v), veh/h	11	178	187	11	980	27	2	0	3	66	0	27
Grp Sat Flow(s),veh/h/ln	1619	1710	1793	1619	1710	1491	1619	0	1690	1619	0	1543
Q Serve(g_s), s	0.4	4.0	4.0	0.4	13.8	0.6	0.1	0.0	0.1	2.3	0.0	0.8
Cycle Q Clear(g_c), s	0.4	4.0	4.0	0.4	13.8	0.6	0.1	0.0	0.1	2.3	0.0	0.8
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.33	1.00		0.85
Lane Grp Cap(c), veh/h	23	690	723	23	1380	601	4	0	292	92	0	350
V/C Ratio(X)	0.49	0.26	0.26	0.49	0.71	0.04	0.45	0.00	0.01	0.72	0.00	0.08
Avail Cap(c_a), veh/h	207	1426	1496	207	2853	1243	207	0	836	431	0	977
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.3	11.5	11.5	28.3	14.4	10.5	28.8	0.0	19.8	26.8	0.0	17.6
Incr Delay (d2), s/veh	5.9	0.2	0.2	5.9	0.7	0.0	24.5	0.0	0.0	4.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.2	1.3	0.2	4.3	0.2	0.1	0.0	0.0	0.9	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.1	11.7	11.7	34.1	15.1	10.5	53.2	0.0	19.8	30.8	0.0	17.7
LnGrp LOS	C	B	B	C	B	B	D	A	B	C	A	B
Approach Vol, veh/h		376			1018			5			93	
Approach Delay, s/veh		12.3			15.2			33.2			27.0	
Approach LOS		B			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	15.4	5.4	29.1	4.8	18.5	5.4	29.1				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	15.4	28.6	7.4	48.2	7.4	36.6	7.4	48.2				
Max Q Clear Time (g_c+I1), s	4.3	2.1	2.4	6.0	2.1	2.8	2.4	15.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.0	0.0	0.1	0.0	7.5				
Intersection Summary												
HCM 6th Ctrl Delay			15.3									
HCM 6th LOS			B									

Timings
13: Palm Av. & 5th St.

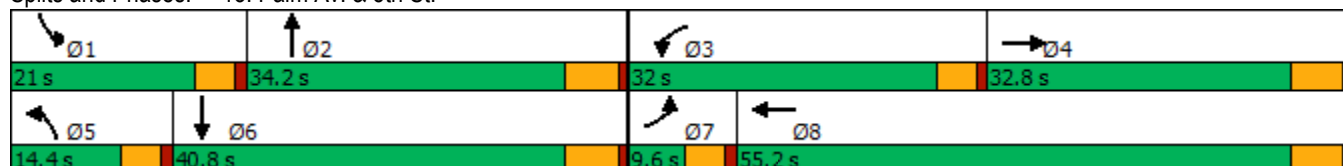
5th & Sterling TA (JN:14057)
09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	19	300	292	705	80	198	151	425
Future Volume (vph)	19	300	292	705	80	198	151	425
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	9.6	32.8	32.0	55.2	14.4	34.2	21.0	40.8
Total Split (%)	8.0%	27.3%	26.7%	46.0%	12.0%	28.5%	17.5%	34.0%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	5.2	16.5	22.1	40.1	8.6	15.2	13.2	22.8
Actuated g/C Ratio	0.06	0.19	0.25	0.45	0.10	0.17	0.15	0.26
v/c Ratio	0.21	0.65	0.77	0.56	0.54	0.54	0.67	0.61
Control Delay	52.6	37.6	47.1	20.6	56.7	24.8	53.2	34.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.6	37.6	47.1	20.6	56.7	24.8	53.2	34.1
LOS	D	D	D	C	E	C	D	C
Approach Delay		38.3		27.7		31.0		38.6
Approach LOS		D		C		C		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 88.6
 Natural Cycle: 105
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 32.7
 Intersection LOS: C
 Intersection Capacity Utilization 67.3%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.



HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

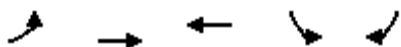
5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	300	91	292	705	96	80	198	137	151	425	73
Future Volume (veh/h)	19	300	91	292	705	96	80	198	137	151	425	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	20	319	82	311	750	91	85	211	90	161	452	52
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	38	470	119	358	1139	138	105	374	154	198	667	76
Arrive On Green	0.02	0.17	0.17	0.22	0.37	0.37	0.07	0.16	0.16	0.12	0.22	0.22
Sat Flow, veh/h	1619	2703	684	1619	3065	372	1619	2361	973	1619	3092	354
Grp Volume(v), veh/h	20	200	201	311	418	423	85	151	150	161	249	255
Grp Sat Flow(s),veh/h/ln	1619	1710	1677	1619	1710	1727	1619	1710	1625	1619	1710	1736
Q Serve(g_s), s	0.8	7.0	7.2	11.9	13.1	13.1	3.3	5.2	5.5	6.2	8.6	8.7
Cycle Q Clear(g_c), s	0.8	7.0	7.2	11.9	13.1	13.1	3.3	5.2	5.5	6.2	8.6	8.7
Prop In Lane	1.00		0.41	1.00		0.22	1.00		0.60	1.00		0.20
Lane Grp Cap(c), veh/h	38	297	292	358	635	642	105	271	257	198	369	374
V/C Ratio(X)	0.53	0.67	0.69	0.87	0.66	0.66	0.81	0.56	0.58	0.81	0.68	0.68
Avail Cap(c_a), veh/h	126	720	706	691	1317	1330	247	757	719	414	933	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	24.8	24.9	24.1	16.8	16.8	29.6	24.9	25.0	27.4	23.1	23.1
Incr Delay (d2), s/veh	4.2	2.6	2.9	2.6	1.2	1.2	5.4	1.8	2.1	3.0	2.2	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.7	2.8	4.2	4.4	4.5	1.3	2.0	2.0	2.3	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.2	27.4	27.8	26.7	17.9	17.9	35.0	26.7	27.1	30.4	25.3	25.3
LnGrp LOS	D	C	C	C	B	B	C	C	C	C	C	C
Approach Vol, veh/h	421		1152				386		665			
Approach Delay, s/veh	28.0		20.3				28.7		26.5			
Approach LOS	C		C				C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	16.0	18.8	17.0	8.8	19.6	6.1	29.6				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	28.4	27.4	27.0	9.8	35.0	5.0	49.4				
Max Q Clear Time (g_c+I1), s	8.2	7.5	13.9	9.2	5.3	10.7	2.8	15.1				
Green Ext Time (p_c), s	0.1	1.5	0.4	1.9	0.0	2.7	0.0	5.4				
Intersection Summary												
HCM 6th Ctrl Delay	24.3											
HCM 6th LOS	C											

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023

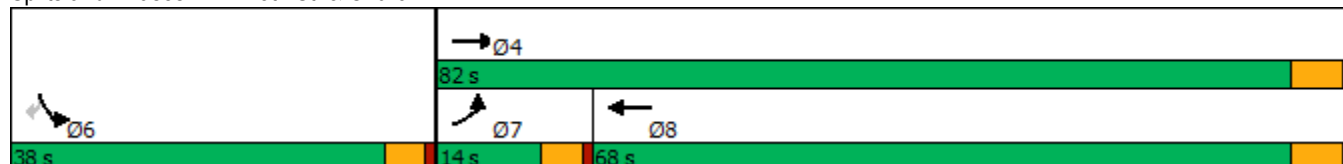


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	←	↑↑	↑↑	←	←
Traffic Volume (vph)	25	679	1142	127	59
Future Volume (vph)	25	679	1142	127	59
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	14.0	82.0	68.0	38.0	38.0
Total Split (%)	11.7%	68.3%	56.7%	31.7%	31.7%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	6.4	42.9	39.1	13.4	13.4
Actuated g/C Ratio	0.09	0.64	0.58	0.20	0.20
v/c Ratio	0.18	0.34	0.68	0.43	0.18
Control Delay	38.4	5.9	13.1	31.9	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.4	5.9	13.1	31.9	10.3
LOS	D	A	B	C	B
Approach Delay		7.1	13.1	25.1	
Approach LOS		A	B	C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 67.5
 Natural Cycle: 75
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 12.2
 Intersection LOS: B
 Intersection Capacity Utilization 53.9%
 ICU Level of Service A
 Analysis Period (min) 15

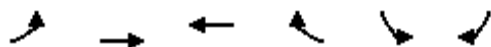
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	25	679	1142	96	127	59	
Future Volume (veh/h)	25	679	1142	96	127	59	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800	
Adj Flow Rate, veh/h	27	730	1228	90	137	59	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	50	2185	1695	124	279	263	
Arrive On Green	0.03	0.64	0.52	0.52	0.17	0.17	
Sat Flow, veh/h	1619	3510	3321	236	1619	1525	
Grp Volume(v), veh/h	27	730	649	669	137	59	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1757	1619	1525	
Q Serve(g_s), s	0.9	5.4	16.0	16.1	4.2	1.8	
Cycle Q Clear(g_c), s	0.9	5.4	16.0	16.1	4.2	1.8	
Prop In Lane	1.00			0.13	1.00	1.00	
Lane Grp Cap(c), veh/h	50	2185	897	922	279	263	
V/C Ratio(X)	0.54	0.33	0.72	0.73	0.49	0.22	
Avail Cap(c_a), veh/h	276	4729	1930	1983	981	925	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	26.3	4.6	10.0	10.1	20.6	19.6	
Incr Delay (d2), s/veh	3.4	0.1	1.1	1.1	1.3	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	0.9	4.1	4.3	1.5	0.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	29.7	4.7	11.2	11.2	21.9	20.1	
LnGrp LOS	C	A	B	B	C	C	
Approach Vol, veh/h		757	1318		196		
Approach Delay, s/veh		5.6	11.2		21.4		
Approach LOS		A	B		C		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				41.0	14.1	6.3	34.7
Change Period (Y+Rc), s				5.8	4.6	4.6	5.8
Max Green Setting (Gmax), s				76.2	33.4	9.4	62.2
Max Q Clear Time (g_c+I1), s				7.4	6.2	2.9	18.1
Green Ext Time (p_c), s				5.3	0.5	0.0	10.8
Intersection Summary							
HCM 6th Ctrl Delay			10.2				
HCM 6th LOS			B				

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑	↑	↑
Traffic Volume (vph)	11	412	393	721	937	48	301
Future Volume (vph)	11	412	393	721	937	48	301
Turn Type	Perm	NA	Perm	Prot	NA	NA	Perm
Protected Phases		4		3	8	6	
Permitted Phases	4		4				6
Detector Phase	4	4	4	3	8	6	6
Switch Phase							
Minimum Initial (s)	10.0	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	34.0	34.0	34.0	40.0	74.0	46.0	46.0
Total Split (%)	28.3%	28.3%	28.3%	33.3%	61.7%	38.3%	38.3%
Yellow Time (s)	4.8	4.8	4.8	3.6	4.8	4.8	4.8
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
Total Lost Time (s)		5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			
Recall Mode	None	None	None	None	None	Min	Min
Act Effect Green (s)		22.9	22.9	32.1	59.7	34.6	34.6
Actuated g/C Ratio		0.22	0.22	0.30	0.56	0.33	0.33
v/c Ratio		0.70	0.66	0.90	0.54	0.86	0.59
Control Delay		46.0	8.8	51.2	16.3	51.4	26.7
Queue Delay		0.0	0.0	0.0	0.4	0.0	0.0
Total Delay		46.0	8.8	51.2	16.7	51.4	26.7
LOS		D	A	D	B	D	C
Approach Delay		28.1			31.7	41.3	
Approach LOS		C			C	D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 106.2

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 33.0

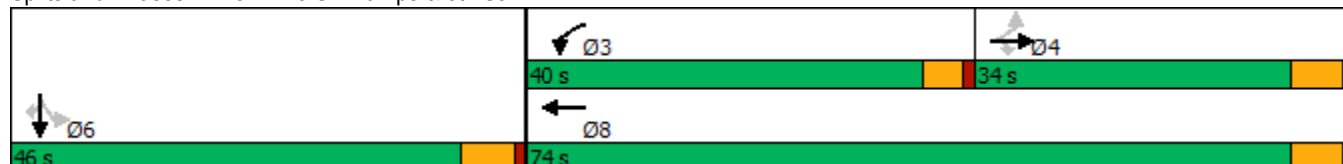
Intersection LOS: C

Intersection Capacity Utilization 93.0%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	11	412	393	721	937	0	0	0	0	388	48	301
Future Volume (veh/h)	11	412	393	721	937	0	0	0	0	388	48	301
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	1800	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	12	458	274	801	1041	0				431	53	207
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	46	711	333	873	1921	0				487	60	484
Arrive On Green	0.22	0.22	0.22	0.30	0.56	0.00				0.32	0.32	0.32
Sat Flow, veh/h	33	3249	1523	2956	3510	0				1535	189	1525
Grp Volume(v), veh/h	248	222	274	801	1041	0				484	0	207
Grp Sat Flow(s),veh/h/ln	1726	1556	1523	1478	1710	0				1723	0	1525
Q Serve(g_s), s	0.0	12.5	16.5	25.2	18.4	0.0				25.6	0.0	10.3
Cycle Q Clear(g_c), s	12.0	12.5	16.5	25.2	18.4	0.0				25.6	0.0	10.3
Prop In Lane	0.05		1.00	1.00		0.00				0.89		1.00
Lane Grp Cap(c), veh/h	417	340	333	873	1921	0				547	0	484
V/C Ratio(X)	0.60	0.65	0.82	0.92	0.54	0.00				0.88	0.00	0.43
Avail Cap(c_a), veh/h	538	457	447	1089	2427	0				721	0	638
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	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	34.0	34.2	35.8	32.7	13.3	0.0				31.1	0.0	25.9
Incr Delay (d2), s/veh	1.4	2.1	8.9	9.4	0.2	0.0				10.2	0.0	0.6
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	5.1	4.7	6.6	9.5	6.2	0.0				11.4	0.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	36.3	44.6	42.2	13.5	0.0				41.3	0.0	26.5
LnGrp LOS	D	D	D	D	B	A				D	A	C
Approach Vol, veh/h		744			1842						691	
Approach Delay, s/veh		39.1			26.0						36.9	
Approach LOS		D			C						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			33.0	26.8		36.3		59.8				
Change Period (Y+Rc), s			4.6	5.8		5.8		5.8				
Max Green Setting (Gmax), s			35.4	28.2		40.2		68.2				
Max Q Clear Time (g_c+I1), s			27.2	18.5		27.6		20.4				
Green Ext Time (p_c), s			1.2	2.6		2.9		8.5				
Intersection Summary												
HCM 6th Ctrl Delay			31.2									
HCM 6th LOS			C									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	126	670	1240	450	418	2	457
Future Volume (vph)	126	670	1240	450	418	2	457
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	27.0	80.0	53.0	53.0	40.0	40.0	40.0
Total Split (%)	22.5%	66.7%	44.2%	44.2%	33.3%	33.3%	33.3%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	12.0	52.2	35.3	35.3	20.0	20.0	20.0
Actuated g/C Ratio	0.14	0.62	0.42	0.42	0.24	0.24	0.24
v/c Ratio	0.57	0.33	0.62	0.52	0.59	0.57	0.50
Control Delay	48.6	8.7	21.9	4.3	38.1	36.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	8.7	21.9	4.3	38.1	36.8	6.0
LOS	D	A	C	A	D	D	A
Approach Delay		15.0	17.2			21.1	
Approach LOS		B	B			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 84.6

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 17.7

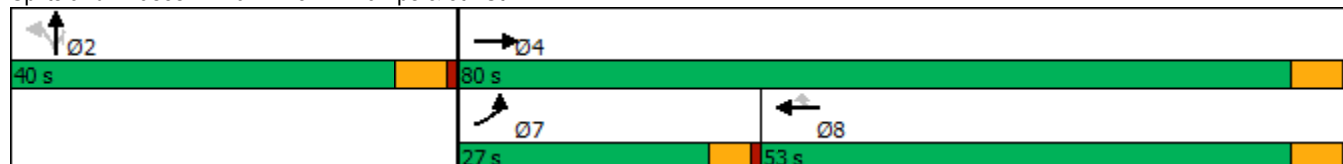
Intersection LOS: B

Intersection Capacity Utilization 63.7%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	126	670	0	0	1240	450	418	2	457	0	0	0
Future Volume (veh/h)	126	670	0	0	1240	450	418	2	457	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	130	691	0	0	1278	359	432	0	271			
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	163	2090	0	0	2136	654	643	0	573			
Arrive On Green	0.10	0.61	0.00	0.00	0.43	0.43	0.20	0.00	0.20			
Sat Flow, veh/h	1619	3510	0	0	5076	1505	3238	0	2881			
Grp Volume(v), veh/h	130	691	0	0	1278	359	432	0	271			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1505	1619	0	1441			
Q Serve(g_s), s	4.8	6.0	0.0	0.0	12.1	10.8	7.5	0.0	5.1			
Cycle Q Clear(g_c), s	4.8	6.0	0.0	0.0	12.1	10.8	7.5	0.0	5.1			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	163	2090	0	0	2136	654	643	0	573			
V/C Ratio(X)	0.80	0.33	0.00	0.00	0.60	0.55	0.67	0.00	0.47			
Avail Cap(c_a), veh/h	595	4162	0	0	3804	1165	1816	0	1616			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	26.8	5.8	0.0	0.0	13.2	12.8	22.6	0.0	21.6			
Incr Delay (d2), s/veh	3.3	0.1	0.0	0.0	0.3	0.7	1.2	0.0	0.6			
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	1.8	1.3	0.0	0.0	3.5	3.0	2.6	0.0	1.5			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.1	5.9	0.0	0.0	13.4	13.5	23.8	0.0	22.2			
LnGrp LOS	C	A	A	A	B	B	C	A	C			
Approach Vol, veh/h	821			1637			703					
Approach Delay, s/veh	9.7			13.5			23.2					
Approach LOS	A			B			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	17.9			43.1			10.7			32.3		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	34.2			74.2			22.4			47.2		
Max Q Clear Time (g_c+I1), s	9.5			8.0			6.8			14.1		
Green Ext Time (p_c), s	2.6			4.9			0.1			12.4		
Intersection Summary												
HCM 6th Ctrl Delay	14.6											
HCM 6th LOS	B											
Notes												

Intersection												
Int Delay, s/veh	9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	41	85	26	16	71	24	19	529	25	25	358	31
Future Vol, veh/h	41	85	26	16	71	24	19	529	25	25	358	31
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	-	-	-	-	-	-	100	-	-	-	-	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	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	43	89	27	17	75	25	20	557	26	26	377	33

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	785	1052	189	895	1072	292	410	0	0	583	0	0
Stage 1	429	429	-	610	610	-	-	-	-	-	-	-
Stage 2	356	623	-	285	462	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	287	228	827	239	222	710	1160	-	-	1001	-	-
Stage 1	580	587	-	453	488	-	-	-	-	-	-	-
Stage 2	640	481	-	704	568	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	193	217	827	151	211	710	1160	-	-	1001	-	-
Mov Cap-2 Maneuver	193	217	-	151	211	-	-	-	-	-	-	-
Stage 1	570	567	-	445	480	-	-	-	-	-	-	-
Stage 2	512	473	-	554	549	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	46	35	0.3	0.6
HCM LOS	E	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1160	-	-	239 233	1001	-	-
HCM Lane V/C Ratio	0.017	-	-	0.669 0.501	0.026	-	-
HCM Control Delay (s)	8.2	-	-	46 35	8.7 0.1	-	-
HCM Lane LOS	A	-	-	E E	A A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	4.2 2.6	0.1	-	-

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	2	572	3	1	398
Future Vol, veh/h	9	2	572	3	1	398
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	10	2	622	3	1	433

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	843	313	0
Stage 1	624	-	-
Stage 2	219	-	-
Critical Hdwy	6.8	6.9	-
Critical Hdwy Stg 1	5.8	-	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	307	689	-
Stage 1	502	-	-
Stage 2	802	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	307	689	-
Mov Cap-2 Maneuver	458	-	-
Stage 1	502	-	-
Stage 2	801	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	488	966
HCM Lane V/C Ratio	-	-	0.025	0.001
HCM Control Delay (s)	-	-	12.6	8.7
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	0	575	5	0	407
Future Vol, veh/h	15	0	575	5	0	407
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	2	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	16	0	625	5	0	442

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	849	315	0
Stage 1	628	-	-
Stage 2	221	-	-
Critical Hdwy	6.8	6.9	-
Critical Hdwy Stg 1	5.8	-	-
Critical Hdwy Stg 2	5.8	-	-
Follow-up Hdwy	3.5	3.3	-
Pot Cap-1 Maneuver	304	687	-
Stage 1	500	-	-
Stage 2	801	-	-
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	304	687	-
Mov Cap-2 Maneuver	456	-	-
Stage 1	500	-	-
Stage 2	801	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	456	962
HCM Lane V/C Ratio	-	-	0.036	-
HCM Control Delay (s)	-	-	13.2	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

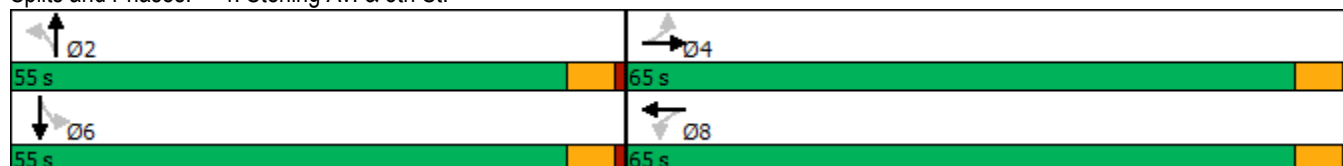
Timings
4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	110	368	21	220	5	410	88	279
Future Volume (vph)	110	368	21	220	5	410	88	279
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	23.4	23.4	23.4	23.4	24.4	24.4	24.4	24.4
Total Split (s)	65.0	65.0	65.0	65.0	55.0	55.0	55.0	55.0
Total Split (%)	54.2%	54.2%	54.2%	54.2%	45.8%	45.8%	45.8%	45.8%
Yellow Time (s)	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	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
Total Lost Time (s)		5.4		5.4	5.4	5.4	5.4	5.4
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)		14.5		14.5	12.4	12.4	12.4	12.4
Actuated g/C Ratio		0.38		0.38	0.33	0.33	0.33	0.33
v/c Ratio		0.55		0.27	0.02	0.41	0.34	0.32
Control Delay		11.3		8.0	10.2	11.6	14.9	10.4
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0
Total Delay		11.3		8.0	10.2	11.6	14.9	10.4
LOS		B		A	B	B	B	B
Approach Delay		11.3		8.0		11.6		11.3
Approach LOS		B		A		B		B
Intersection Summary								
Cycle Length: 120								
Actuated Cycle Length: 38								
Natural Cycle: 50								
Control Type: Actuated-Uncoordinated								
Maximum v/c Ratio: 0.55								
Intersection Signal Delay: 10.8				Intersection LOS: B				
Intersection Capacity Utilization 64.8%				ICU Level of Service C				
Analysis Period (min) 15								

Splits and Phases: 4: Sterling Av. & 5th St.



HCM 6th Signalized Intersection Summary

4: Sterling Av. & 5th St.

5th & Sterling TA (JN:14057)

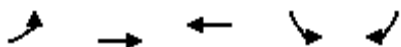
09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	368	66	21	220	62	5	410	30	88	279	57
Future Volume (veh/h)	110	368	66	21	220	62	5	410	30	88	279	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1800	1800	1800	1800	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	115	383	46	22	229	56	5	427	28	92	291	42
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	308	767	91	160	828	194	489	1081	71	436	995	142
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	454	2365	282	94	2552	597	1005	3259	213	898	2999	428
Grp Volume(v), veh/h	286	0	258	164	0	143	5	223	232	92	164	169
Grp Sat Flow(s),veh/h/ln	1519	0	1583	1720	0	1522	1005	1710	1762	898	1710	1717
Q Serve(g_s), s	2.4	0.0	4.1	0.0	0.0	2.2	0.1	3.2	3.2	2.8	2.2	2.3
Cycle Q Clear(g_c), s	4.6	0.0	4.1	2.1	0.0	2.2	2.4	3.2	3.2	5.9	2.2	2.3
Prop In Lane	0.40		0.18	0.13		0.39	1.00		0.12	1.00		0.25
Lane Grp Cap(c), veh/h	653	0	513	688	0	494	489	567	584	436	567	569
V/C Ratio(X)	0.44	0.00	0.50	0.24	0.00	0.29	0.01	0.39	0.40	0.21	0.29	0.30
Avail Cap(c_a), veh/h	2920	0	3003	3231	0	2887	1743	2701	2782	1557	2701	2711
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.6	0.0	8.6	7.9	0.0	7.9	8.7	8.1	8.1	10.4	7.8	7.8
Incr Delay (d2), s/veh	0.5	0.0	0.8	0.2	0.0	0.3	0.0	0.4	0.4	0.2	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.9	0.5	0.0	0.4	0.0	0.7	0.7	0.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	0.0	9.3	8.1	0.0	8.2	8.7	8.5	8.5	10.6	8.0	8.1
LnGrp LOS	A	A	A	A	A	A	A	A	A	B	A	A
Approach Vol, veh/h		544			307			460			425	
Approach Delay, s/veh		9.2			8.1			8.5			8.6	
Approach LOS		A			A			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.8		15.6		15.8		15.6				
Change Period (Y+Rc), s		5.4		5.4		5.4		5.4				
Max Green Setting (Gmax), s		49.6		59.6		49.6		59.6				
Max Q Clear Time (g_c+I1), s		5.2		6.6		7.9		4.2				
Green Ext Time (p_c), s		2.7		3.6		2.5		1.9				
Intersection Summary												
HCM 6th Ctrl Delay			8.7									
HCM 6th LOS			A									

Timings
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	386	1044	296	169	195
Future Volume (vph)	386	1044	296	169	195
Turn Type	Prot	NA	NA	Prot	pm+ov
Protected Phases	7	4	8	6	7
Permitted Phases					6
Detector Phase	7	4	8	6	7
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	5.0
Minimum Split (s)	9.6	15.4	26.4	26.4	9.6
Total Split (s)	55.0	85.0	30.0	35.0	55.0
Total Split (%)	45.8%	70.8%	25.0%	29.2%	45.8%
Yellow Time (s)	3.6	4.4	4.4	4.4	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.4	5.4	5.4	4.6
Lead/Lag	Lead		Lag		Lead
Lead-Lag Optimize?	Yes		Yes		Yes
Recall Mode	None	None	None	Min	None
Act Effect Green (s)	23.1	42.0	14.1	14.5	43.3
Actuated g/C Ratio	0.34	0.62	0.21	0.21	0.64
v/c Ratio	0.75	0.53	0.54	0.52	0.12
Control Delay	30.1	8.3	28.2	32.6	1.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	30.1	8.3	28.2	32.6	1.0
LOS	C	A	C	C	A
Approach Delay		14.2	28.2	15.7	
Approach LOS		B	C	B	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 68

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 16.8

Intersection LOS: B

Intersection Capacity Utilization 57.8%

ICU Level of Service B

Analysis Period (min) 15

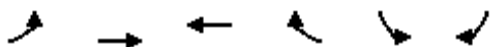
Splits and Phases: 5: 3rd St. & Sterling Av.



HCM 6th Signalized Intersection Summary
5: 3rd St. & Sterling Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR	
Lane Configurations							
Traffic Volume (veh/h)	386	1044	296	59	169	195	
Future Volume (veh/h)	386	1044	296	59	169	195	
Initial Q (Qb), veh	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00	
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1700	
Adj Flow Rate, veh/h	411	1111	315	45	180	91	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	0	0	0	0	0	0	
Cap, veh/h	472	1996	602	85	324	1247	
Arrive On Green	0.29	0.58	0.20	0.20	0.20	0.20	
Sat Flow, veh/h	1619	3510	3098	426	1619	2536	
Grp Volume(v), veh/h	411	1111	178	182	180	91	
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1723	1619	1268	
Q Serve(g_s), s	12.0	10.0	4.6	4.7	5.0	0.9	
Cycle Q Clear(g_c), s	12.0	10.0	4.6	4.7	5.0	0.9	
Prop In Lane	1.00			0.25	1.00	1.00	
Lane Grp Cap(c), veh/h	472	1996	342	345	324	1247	
V/C Ratio(X)	0.87	0.56	0.52	0.53	0.56	0.07	
Avail Cap(c_a), veh/h	1633	5448	842	848	959	2241	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	16.8	6.4	17.8	17.9	18.0	6.7	
Incr Delay (d2), s/veh	2.0	0.2	1.2	1.3	1.5	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.8	2.1	1.7	1.7	1.7	1.0	
Unsig. Movement Delay, s/veh							
LnGrp Delay(d),s/veh	18.8	6.7	19.1	19.1	19.5	6.7	
LnGrp LOS	B	A	B	B	B	A	
Approach Vol, veh/h		1522	360		271		
Approach Delay, s/veh		9.9	19.1		15.2		
Approach LOS		A	B		B		
Timer - Assigned Phs				4	6	7	8
Phs Duration (G+Y+Rc), s				34.6	15.4	19.2	15.4
Change Period (Y+Rc), s				5.4	5.4	4.6	5.4
Max Green Setting (Gmax), s				79.6	29.6	50.4	24.6
Max Q Clear Time (g_c+I1), s				12.0	7.0	14.0	6.7
Green Ext Time (p_c), s				10.1	0.8	0.6	1.8
Intersection Summary							
HCM 6th Ctrl Delay			12.1				
HCM 6th LOS			B				

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑↑			↗
Traffic Vol, veh/h	0	484	302	2	0	1
Future Vol, veh/h	0	484	302	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	0	526	328	2	0	1
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	-	0	-	0	-	165
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	857
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	857
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		9.2		
HCM LOS	A					
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	857		
HCM Lane V/C Ratio	-	-	-	0.001		
HCM Control Delay (s)	-	-	-	9.2		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	0		

Intersection						
Int Delay, s/veh	0.1					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↱	↑	↲	
Traffic Vol, veh/h	137	0	1	109	0	3
Future Vol, veh/h	137	0	1	109	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	149	0	1	118	0	3
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	149	0	269	75
Stage 1	-	-	-	-	149	-
Stage 2	-	-	-	-	120	-
Critical Hdwy	-	-	4.1	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1445	-	714	978
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	910	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1445	-	713	978
Mov Cap-2 Maneuver	-	-	-	-	730	-
Stage 1	-	-	-	-	869	-
Stage 2	-	-	-	-	909	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		8.7	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	978	-	-	1445	-	
HCM Lane V/C Ratio	0.003	-	-	0.001	-	
HCM Control Delay (s)	8.7	-	-	7.5	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0	-	-	0	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	2	481	299	6	12	2
Future Vol, veh/h	2	481	299	6	12	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	2	523	325	7	13	2
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	332	0	-	0	856	166
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	527	-
Critical Hdwy	4.1	-	-	-	6.6	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1239	-	-	-	315	856
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	596	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1239	-	-	-	314	856
Mov Cap-2 Maneuver	-	-	-	-	436	-
Stage 1	-	-	-	-	706	-
Stage 2	-	-	-	-	596	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		12.9		
HCM LOS	B					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1239	-	-	-	469	
HCM Lane V/C Ratio	0.002	-	-	-	0.032	
HCM Control Delay (s)	7.9	-	-	-	12.9	
HCM Lane LOS	A	-	-	-	B	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

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	39	95	5	2	93	16	3	46	13	5	36	14
Future Vol, veh/h	39	95	5	2	93	16	3	46	13	5	36	14
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	-	-	-	-	-	-	-
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, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	42	102	5	2	100	17	3	49	14	5	39	15
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	118	0	0	107	0	0	327	308	102	334	305	111
Stage 1	-	-	-	-	-	-	186	186	-	114	114	-
Stage 2	-	-	-	-	-	-	141	122	-	220	191	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1483	-	-	1497	-	-	630	609	959	623	612	948
Stage 1	-	-	-	-	-	-	820	750	-	896	805	-
Stage 2	-	-	-	-	-	-	867	799	-	787	746	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1482	-	-	1497	-	-	575	590	959	561	592	946
Mov Cap-2 Maneuver	-	-	-	-	-	-	575	590	-	561	592	-
Stage 1	-	-	-	-	-	-	795	728	-	868	803	-
Stage 2	-	-	-	-	-	-	810	797	-	701	724	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			0.1			11.3			11.1		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	641	1482	-	-	1497	-	-	651				
HCM Lane V/C Ratio	0.104	0.028	-	-	0.001	-	-	0.091				
HCM Control Delay (s)	11.3	7.5	0	-	7.4	0	-	11.1				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	
Traffic Vol, veh/h	12	473	9	2	286	15	10	35	7	13	21	10
Future Vol, veh/h	12	473	9	2	286	15	10	35	7	13	21	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	13	503	10	2	304	16	11	37	7	14	22	11
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	320	0	0	513	0	0	868	858	508	872	855	313
Stage 1	-	-	-	-	-	-	534	534	-	316	316	-
Stage 2	-	-	-	-	-	-	334	324	-	556	539	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1251	-	-	1063	-	-	275	297	569	273	298	732
Stage 1	-	-	-	-	-	-	534	528	-	699	659	-
Stage 2	-	-	-	-	-	-	684	653	-	519	525	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1251	-	-	1063	-	-	252	292	569	240	293	731
Mov Cap-2 Maneuver	-	-	-	-	-	-	252	292	-	240	293	-
Stage 1	-	-	-	-	-	-	526	520	-	689	658	-
Stage 2	-	-	-	-	-	-	649	652	-	468	517	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			19.2			18.4		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	282	569	1251	-	-	1063	-	-	315			
HCM Lane V/C Ratio	0.17	0.013	0.01	-	-	0.002	-	-	0.149			
HCM Control Delay (s)	20.4	11.4	7.9	0	-	8.4	0	-	18.4			
HCM Lane LOS	C	B	A	A	-	A	A	-	C			
HCM 95th %tile Q(veh)	0.6	0	0	-	-	0	-	-	0.5			

Timings
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	76	399	111	260	151	23	476	62	234
Future Volume (vph)	76	399	111	260	151	23	476	62	234
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	NA
Protected Phases		4		8			2		6
Permitted Phases	4		8		8	2		6	
Detector Phase	4	4	8	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	24.8	24.8	24.8	24.8	24.8	27.4	27.4	27.4	27.4
Total Split (s)	46.0	46.0	46.0	46.0	46.0	74.0	74.0	74.0	74.0
Total Split (%)	38.3%	38.3%	38.3%	38.3%	38.3%	61.7%	61.7%	61.7%	61.7%
Yellow Time (s)	4.8	4.8	4.8	4.8	4.8	4.4	4.4	4.4	4.4
All-Red Time (s)	1.0	1.0	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)	5.8	5.8	5.8	5.8	5.8		5.4		5.4
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	Min	Min	Min	Min
Act Effct Green (s)	14.7	14.7	14.7	14.7	14.7		18.9		18.9
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32		0.42		0.42
v/c Ratio	0.25	0.40	0.43	0.48	0.27		0.59		0.32
Control Delay	15.1	13.7	19.4	16.4	4.2		11.0		10.0
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	15.1	13.7	19.4	16.4	4.2		11.0		10.0
LOS	B	B	B	B	A		B		A
Approach Delay		13.9		13.5			11.0		10.0
Approach LOS		B		B			B		A
Intersection Summary									
Cycle Length: 120									
Actuated Cycle Length: 45.5									
Natural Cycle: 55									
Control Type: Actuated-Uncoordinated									
Maximum v/c Ratio: 0.59									
Intersection Signal Delay: 12.2					Intersection LOS: B				
Intersection Capacity Utilization 73.6%					ICU Level of Service D				
Analysis Period (min) 15									

Splits and Phases: 11: Victoria Av. & 5th St.

 Ø2	 Ø4
74 s	46 s
 Ø6	 Ø8
74 s	46 s

HCM 6th Signalized Intersection Summary
11: Victoria Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	399	17	111	260	151	23	476	242	62	234	21
Future Volume (veh/h)	76	399	17	111	260	151	23	476	242	62	234	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1800	1800	1800	1800	1800	1800
Adj Flow Rate, veh/h	81	424	18	118	277	154	24	506	244	66	249	19
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	376	1107	47	396	596	498	113	832	392	221	787	64
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	918	3343	142	909	1800	1504	41	2168	1020	235	2051	168
Grp Volume(v), veh/h	81	216	226	118	277	154	426	0	348	152	0	182
Grp Sat Flow(s),veh/h/ln	918	1710	1775	909	1800	1504	1776	0	1454	851	0	1603
Q Serve(g_s), s	3.0	3.8	3.8	4.5	4.8	3.0	0.0	0.0	7.6	0.8	0.0	3.1
Cycle Q Clear(g_c), s	7.8	3.8	3.8	8.3	4.8	3.0	7.5	0.0	7.6	8.4	0.0	3.1
Prop In Lane	1.00		0.08	1.00		1.00	0.06		0.70	0.43		0.10
Lane Grp Cap(c), veh/h	376	566	588	396	596	498	778	0	558	458	0	615
V/C Ratio(X)	0.22	0.38	0.38	0.30	0.46	0.31	0.55	0.00	0.62	0.33	0.00	0.30
Avail Cap(c_a), veh/h	1011	1749	1815	1024	1841	1538	3150	0	2538	1948	0	2798
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.5	10.1	10.1	13.3	10.4	9.8	9.8	0.0	9.8	8.5	0.0	8.4
Incr Delay (d2), s/veh	0.3	0.4	0.4	0.4	0.6	0.3	0.6	0.0	1.1	0.4	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.0	1.0	0.7	1.3	0.7	2.0	0.0	1.7	0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	10.5	10.5	13.7	11.0	10.1	10.4	0.0	11.0	9.0	0.0	8.7
LnGrp LOS	B	B	B	B	B	B	B	A	B	A	A	A
Approach Vol, veh/h		523			549			774			334	
Approach Delay, s/veh		11.0			11.3			10.6			8.8	
Approach LOS		B			B			B			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.5		18.8		20.5		18.8				
Change Period (Y+Rc), s		5.4		5.8		5.4		5.8				
Max Green Setting (Gmax), s		68.6		40.2		68.6		40.2				
Max Q Clear Time (g_c+I1), s		9.6		9.8		10.4		10.3				
Green Ext Time (p_c), s		5.5		2.9		2.4		2.7				
Intersection Summary												
HCM 6th Ctrl Delay				10.6								
HCM 6th LOS				B								

Timings
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

									
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	58	644	4	502	99	1	7	70	3
Future Volume (vph)	58	644	4	502	99	1	7	70	3
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Prot	NA
Protected Phases	7	4	3	8		5	2	1	6
Permitted Phases					8				
Detector Phase	7	4	3	8	8	5	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	10.0	5.0	10.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	22.8	9.6	22.8	22.8	9.6	31.4	9.6	29.4
Total Split (s)	23.0	53.4	9.6	40.0	40.0	13.0	33.0	24.0	44.0
Total Split (%)	19.2%	44.5%	8.0%	33.3%	33.3%	10.8%	27.5%	20.0%	36.7%
Yellow Time (s)	3.6	4.8	3.6	4.8	4.8	3.6	4.4	3.6	4.4
All-Red Time (s)	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	5.8	4.6	5.4	4.6	5.4
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	Min	None	Min
Act Effect Green (s)	7.3	20.9	5.5	15.8	15.8	5.5	10.9	7.7	18.9
Actuated g/C Ratio	0.13	0.38	0.10	0.29	0.29	0.10	0.20	0.14	0.34
v/c Ratio	0.28	0.51	0.02	0.52	0.18	0.01	0.05	0.31	0.06
Control Delay	29.7	15.2	30.2	20.5	0.8	30.0	18.7	29.7	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.7	15.2	30.2	20.5	0.8	30.0	18.7	29.7	9.4
LOS	C	B	C	C	A	C	B	C	A
Approach Delay		16.4		17.3			19.3		23.3
Approach LOS		B		B			B		C

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 54.9

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.52

Intersection Signal Delay: 17.3

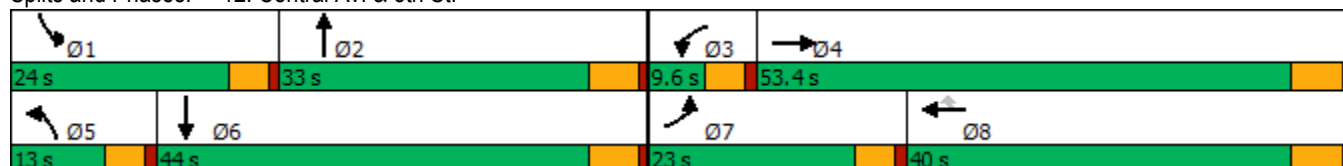
Intersection LOS: B

Intersection Capacity Utilization 47.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 12: Central Av. & 5th St.



HCM 6th Signalized Intersection Summary
12: Central Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Traffic Volume (veh/h)	58	644	0	4	502	99	1	7	10	70	3	29
Future Volume (veh/h)	58	644	0	4	502	99	1	7	10	70	3	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	59	657	0	4	512	90	1	7	7	71	3	17
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	92	1033	0	9	858	381	3	171	171	103	63	357
Arrive On Green	0.06	0.30	0.00	0.01	0.25	0.25	0.00	0.21	0.21	0.06	0.27	0.27
Sat Flow, veh/h	1619	3510	0	1619	3420	1516	1619	826	826	1619	234	1327
Grp Volume(v), veh/h	59	657	0	4	512	90	1	0	14	71	0	20
Grp Sat Flow(s),veh/h/ln	1619	1710	0	1619	1710	1516	1619	0	1651	1619	0	1561
Q Serve(g_s), s	1.7	8.0	0.0	0.1	6.4	2.3	0.0	0.0	0.3	2.1	0.0	0.5
Cycle Q Clear(g_c), s	1.7	8.0	0.0	0.1	6.4	2.3	0.0	0.0	0.3	2.1	0.0	0.5
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.50	1.00		0.85
Lane Grp Cap(c), veh/h	92	1033	0	9	858	381	3	0	342	103	0	420
V/C Ratio(X)	0.64	0.64	0.00	0.46	0.60	0.24	0.30	0.00	0.04	0.69	0.00	0.05
Avail Cap(c_a), veh/h	616	3368	0	167	2420	1073	281	0	943	650	0	1247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.3	14.6	0.0	24.0	15.9	14.4	24.1	0.0	15.3	22.2	0.0	13.1
Incr Delay (d2), s/veh	2.8	0.7	0.0	13.2	0.7	0.3	17.4	0.0	0.0	3.1	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	2.4	0.0	0.1	2.0	0.7	0.0	0.0	0.1	0.8	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	15.2	0.0	37.1	16.6	14.7	41.5	0.0	15.4	25.2	0.0	13.1
LnGrp LOS	C	B	A	D	B	B	D	A	B	C	A	B
Approach Vol, veh/h	716			606			15			91		
Approach Delay, s/veh	16.0			16.5			17.1			22.6		
Approach LOS	B			B			B			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	15.4	4.9	20.4	4.7	18.4	7.3	17.9				
Change Period (Y+Rc), s	4.6	5.4	4.6	5.8	4.6	5.4	4.6	5.8				
Max Green Setting (Gmax), s	19.4	27.6	5.0	47.6	8.4	38.6	18.4	34.2				
Max Q Clear Time (g_c+I1), s	4.1	2.3	2.1	10.0	2.0	2.5	3.7	8.4				
Green Ext Time (p_c), s	0.1	0.0	0.0	4.5	0.0	0.1	0.0	3.5				
Intersection Summary												
HCM 6th Ctrl Delay	16.7											
HCM 6th LOS	B											

Timings
13: Palm Av. & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	57	611	217	444	128	535	161	340
Future Volume (vph)	57	611	217	444	128	535	161	340
Turn Type	Prot	NA	Prot	NA	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	5	2	1	6
Permitted Phases								
Detector Phase	7	4	3	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	10.0	5.0	10.0	5.0	10.0	5.0	10.0
Minimum Split (s)	9.6	32.8	9.6	32.8	9.6	32.8	9.6	30.8
Total Split (s)	14.2	32.8	26.0	44.6	19.3	40.2	21.0	41.9
Total Split (%)	11.8%	27.3%	21.7%	37.2%	16.1%	33.5%	17.5%	34.9%
Yellow Time (s)	3.6	4.8	3.6	4.8	3.6	4.8	3.6	4.8
All-Red Time (s)	1.0	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	0.0
Total Lost Time (s)	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	None	None	None	None
Act Effect Green (s)	8.0	27.2	19.3	40.7	12.9	32.4	14.9	34.5
Actuated g/C Ratio	0.07	0.24	0.17	0.35	0.11	0.28	0.13	0.30
v/c Ratio	0.55	0.98	0.87	0.55	0.77	0.91	0.84	0.42
Control Delay	72.1	71.0	77.3	31.4	77.7	50.7	81.4	33.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.1	71.0	77.3	31.4	77.7	50.7	81.4	33.0
LOS	E	E	E	C	E	D	F	C
Approach Delay		71.1		43.6		54.4		47.1
Approach LOS		E		D		D		D

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 114.7

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 54.4

Intersection LOS: D

Intersection Capacity Utilization 87.1%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 13: Palm Av. & 5th St.

			
Ø1	Ø2	Ø3	Ø4
21 s	40.2 s	26 s	32.8 s
			
Ø5	Ø6	Ø7	Ø8
19.3 s	41.9 s	14.2 s	44.6 s

HCM 6th Signalized Intersection Summary
13: Palm Av. & 5th St.

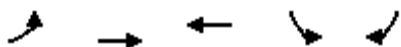
5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	611	111	217	444	156	128	535	272	161	340	49
Future Volume (veh/h)	57	611	111	217	444	156	128	535	272	161	340	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1700	1800	1800	1700	1800	1800	1700	1800	1800	1700	1800	1800
Adj Flow Rate, veh/h	62	664	89	236	483	147	139	582	257	175	370	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0	0	0	0
Cap, veh/h	77	725	97	263	912	276	165	654	288	201	958	98
Arrive On Green	0.05	0.24	0.24	0.16	0.35	0.35	0.10	0.28	0.28	0.12	0.31	0.31
Sat Flow, veh/h	1619	3026	405	1619	2577	779	1619	2308	1018	1619	3132	320
Grp Volume(v), veh/h	62	375	378	236	319	311	139	431	408	175	201	207
Grp Sat Flow(s),veh/h/ln	1619	1710	1721	1619	1710	1646	1619	1710	1616	1619	1710	1742
Q Serve(g_s), s	4.1	23.3	23.4	15.6	16.2	16.4	9.2	26.4	26.4	11.6	10.1	10.2
Cycle Q Clear(g_c), s	4.1	23.3	23.4	15.6	16.2	16.4	9.2	26.4	26.4	11.6	10.1	10.2
Prop In Lane	1.00		0.24	1.00		0.47	1.00		0.63	1.00		0.18
Lane Grp Cap(c), veh/h	77	410	412	263	605	583	165	484	458	201	523	533
V/C Ratio(X)	0.80	0.92	0.92	0.90	0.53	0.53	0.84	0.89	0.89	0.87	0.38	0.39
Avail Cap(c_a), veh/h	142	423	426	318	608	585	218	539	509	243	566	576
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.4	40.4	40.4	44.8	28.0	28.1	48.2	37.5	37.5	46.9	29.8	29.8
Incr Delay (d2), s/veh	7.0	23.9	24.2	21.7	0.8	0.9	16.1	15.7	16.6	21.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	12.1	12.2	7.6	6.4	6.3	4.3	12.6	12.0	5.7	4.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.4	64.4	64.6	66.5	28.8	29.0	64.3	53.1	54.1	68.0	30.2	30.3
LnGrp LOS	E	E	E	E	C	C	E	D	D	E	C	C
Approach Vol, veh/h		815			866			978			583	
Approach Delay, s/veh		64.0			39.2			55.1			41.6	
Approach LOS		E			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.2	36.7	22.3	31.9	15.7	39.2	9.8	44.4				
Change Period (Y+Rc), s	4.6	5.8	4.6	5.8	4.6	5.8	4.6	5.8				
Max Green Setting (Gmax), s	16.4	34.4	21.4	27.0	14.7	36.1	9.6	38.8				
Max Q Clear Time (g_c+I1), s	13.6	28.4	17.6	25.4	11.2	12.2	6.1	18.4				
Green Ext Time (p_c), s	0.1	2.5	0.1	0.7	0.1	2.1	0.0	3.5				
Intersection Summary												
HCM 6th Ctrl Delay			50.7									
HCM 6th LOS			D									

Timings
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)
09/13/2023

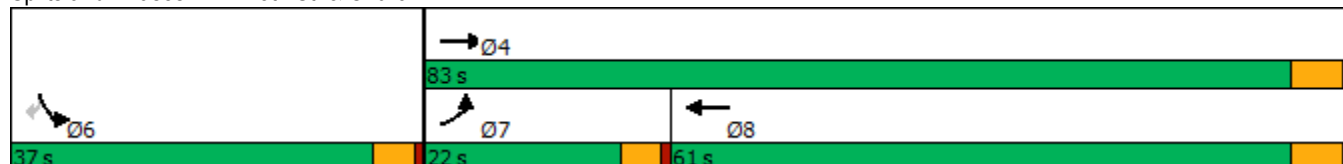


Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations	↰	↱↱	↰↱	↰	↰
Traffic Volume (vph)	59	1018	795	88	40
Future Volume (vph)	59	1018	795	88	40
Turn Type	Prot	NA	NA	Prot	Perm
Protected Phases	7	4	8	6	
Permitted Phases					6
Detector Phase	7	4	8	6	6
Switch Phase					
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	15.8	22.8	28.6	28.6
Total Split (s)	22.0	83.0	61.0	37.0	37.0
Total Split (%)	18.3%	69.2%	50.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	3.6	3.6
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.6	5.8	5.8	4.6	4.6
Lead/Lag	Lead		Lag		
Lead-Lag Optimize?	Yes		Yes		
Recall Mode	None	Min	Min	None	None
Act Effect Green (s)	7.6	38.2	31.5	11.8	11.8
Actuated g/C Ratio	0.14	0.70	0.58	0.22	0.22
v/c Ratio	0.28	0.46	0.50	0.28	0.12
Control Delay	29.2	6.0	12.2	25.5	9.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	6.0	12.2	25.5	9.9
LOS	C	A	B	C	A
Approach Delay		7.2	12.2	20.7	
Approach LOS		A	B	C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 54.3
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.50
 Intersection Signal Delay: 10.2
 Intersection LOS: B
 Intersection Capacity Utilization 51.8%
 ICU Level of Service A
 Analysis Period (min) 15

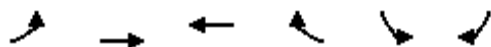
Splits and Phases: 14: 5th St. & Church Av.



HCM 6th Signalized Intersection Summary
14: 5th St. & Church Av.

5th & Sterling TA (JN:14057)

09/13/2023



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↶↶	↰↶		↰	↶
Traffic Volume (veh/h)	59	1018	795	108	88	40
Future Volume (veh/h)	59	1018	795	108	88	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			0.98	1.00	1.00
Parking Bus, Adj	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	1700	1800	1800	1800	1700	1800
Adj Flow Rate, veh/h	64	1107	864	103	96	14
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	100	2025	1303	155	274	258
Arrive On Green	0.06	0.59	0.42	0.42	0.17	0.17
Sat Flow, veh/h	1619	3510	3159	366	1619	1525
Grp Volume(v), veh/h	64	1107	481	486	96	14
Grp Sat Flow(s),veh/h/ln	1619	1710	1710	1725	1619	1525
Q Serve(g_s), s	1.7	8.5	9.8	9.8	2.3	0.3
Cycle Q Clear(g_c), s	1.7	8.5	9.8	9.8	2.3	0.3
Prop In Lane	1.00			0.21	1.00	1.00
Lane Grp Cap(c), veh/h	100	2025	726	733	274	258
V/C Ratio(X)	0.64	0.55	0.66	0.66	0.35	0.05
Avail Cap(c_a), veh/h	647	6064	2168	2187	1205	1135
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	5.4	10.0	10.0	16.0	15.2
Incr Delay (d2), s/veh	2.5	0.2	1.0	1.0	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.2	2.5	2.5	0.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.5	5.6	11.1	11.1	16.8	15.3
LnGrp LOS	C	A	B	B	B	B
Approach Vol, veh/h		1171	967		110	
Approach Delay, s/veh		6.5	11.1		16.6	
Approach LOS		A	B		B	
Timer - Assigned Phs			4		6	7
Phs Duration (G+Y+Rc), s			31.6		12.0	7.3
Change Period (Y+Rc), s			5.8		4.6	4.6
Max Green Setting (Gmax), s			77.2		32.4	17.4
Max Q Clear Time (g_c+I1), s			10.5		4.3	3.7
Green Ext Time (p_c), s			9.5		0.3	0.0
Intersection Summary						
HCM 6th Ctrl Delay			9.0			
HCM 6th LOS			A			

Timings
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

	→	↘	↙	←	↓	↙
Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations	↑↑	↑	↘↙	↑↑	↑	↘
Traffic Volume (vph)	806	340	394	668	4	233
Future Volume (vph)	806	340	394	668	4	233
Turn Type	NA	Perm	Prot	NA	NA	Perm
Protected Phases	4		3	8	6	
Permitted Phases		4				6
Detector Phase	4	4	3	8	6	6
Switch Phase						
Minimum Initial (s)	10.0	10.0	5.0	10.0	10.0	10.0
Minimum Split (s)	22.8	22.8	9.6	22.8	15.8	15.8
Total Split (s)	42.0	42.0	22.0	64.0	56.0	56.0
Total Split (%)	35.0%	35.0%	18.3%	53.3%	46.7%	46.7%
Yellow Time (s)	4.8	4.8	3.6	4.8	4.8	4.8
All-Red Time (s)	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
Total Lost Time (s)	5.8	5.8	4.6	5.8	5.8	5.8
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	None	None	None	None	Min	Min
Act Effect Green (s)	33.5	33.5	17.6	55.7	46.5	46.5
Actuated g/C Ratio	0.29	0.29	0.15	0.49	0.41	0.41
v/c Ratio	0.85	0.60	0.92	0.43	0.93	0.35
Control Delay	47.6	16.7	76.1	20.2	54.1	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	16.7	76.1	20.2	54.1	11.1
LOS	D	B	E	C	D	B
Approach Delay	38.4			40.9	42.3	
Approach LOS	D			D	D	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 113.9

Natural Cycle: 90

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 40.4

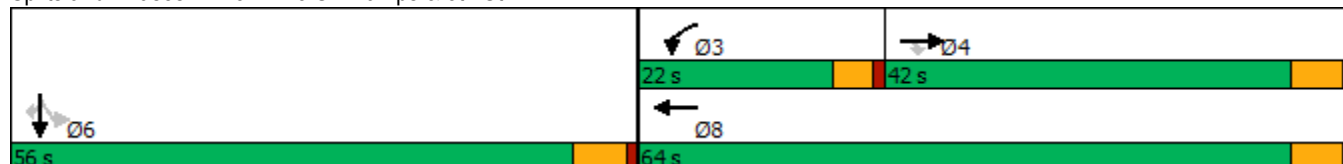
Intersection LOS: D

Intersection Capacity Utilization 86.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 15: I-215 SB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
15: I-215 SB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑↑	↑↑						↑	↑
Traffic Volume (veh/h)	0	806	340	394	668	0	0	0	0	609	4	233
Future Volume (veh/h)	0	806	340	394	668	0	0	0	0	609	4	233
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	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	0	1800	1800	1600	1800	0				1800	1800	1800
Adj Flow Rate, veh/h	0	857	289	419	711	0				648	4	143
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	0	0	0	0	0				0	0	0
Cap, veh/h	0	992	437	463	1670	0				694	4	621
Arrive On Green	0.00	0.29	0.29	0.16	0.49	0.00				0.41	0.41	0.41
Sat Flow, veh/h	0	3510	1504	2956	3510	0				1704	11	1525
Grp Volume(v), veh/h	0	857	289	419	711	0				652	0	143
Grp Sat Flow(s),veh/h/ln	0	1710	1504	1478	1710	0				1715	0	1525
Q Serve(g_s), s	0.0	26.3	18.7	15.5	14.9	0.0				40.4	0.0	6.8
Cycle Q Clear(g_c), s	0.0	26.3	18.7	15.5	14.9	0.0				40.4	0.0	6.8
Prop In Lane	0.00		1.00	1.00		0.00				0.99		1.00
Lane Grp Cap(c), veh/h	0	992	437	463	1670	0				698	0	621
V/C Ratio(X)	0.00	0.86	0.66	0.90	0.43	0.00				0.93	0.00	0.23
Avail Cap(c_a), veh/h	0	1115	491	463	1793	0				775	0	690
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	37.3	34.6	46.0	18.3	0.0				31.5	0.0	21.5
Incr Delay (d2), s/veh	0.0	6.6	2.8	20.5	0.2	0.0				17.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	11.4	6.9	6.8	5.5	0.0				18.8	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	43.9	37.4	66.5	18.5	0.0				48.8	0.0	21.7
LnGrp LOS	A	D	D	E	B	A				D	A	C
Approach Vol, veh/h		1146			1130						795	
Approach Delay, s/veh		42.3			36.3						43.9	
Approach LOS		D			D						D	
Timer - Assigned Phs			3	4		6			8			
Phs Duration (G+Y+Rc), s			22.0	38.0		51.0			60.0			
Change Period (Y+Rc), s			4.6	5.8		5.8			5.8			
Max Green Setting (Gmax), s			17.4	36.2		50.2			58.2			
Max Q Clear Time (g_c+I1), s			17.5	28.3		42.4			16.9			
Green Ext Time (p_c), s			0.0	3.9		2.8			5.0			
Intersection Summary												
HCM 6th Ctrl Delay			40.5									
HCM 6th LOS			D									

Timings
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

							
Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Configurations							
Traffic Volume (vph)	246	1169	780	531	283	3	576
Future Volume (vph)	246	1169	780	531	283	3	576
Turn Type	Prot	NA	NA	Perm	Perm	NA	Perm
Protected Phases	7	4	8			2	
Permitted Phases				8	2		2
Detector Phase	7	4	8	8	2	2	2
Switch Phase							
Minimum Initial (s)	5.0	10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	9.6	22.8	22.8	22.8	15.8	15.8	15.8
Total Split (s)	36.0	83.0	47.0	47.0	37.0	37.0	37.0
Total Split (%)	30.0%	69.2%	39.2%	39.2%	30.8%	30.8%	30.8%
Yellow Time (s)	3.6	4.8	4.8	4.8	4.8	4.8	4.8
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)	4.6	5.8	5.8	5.8	5.8	5.8	5.8
Lead/Lag	Lead		Lag	Lag			
Lead-Lag Optimize?	Yes		Yes	Yes			
Recall Mode	None	None	None	None	Min	Min	Min
Act Effect Green (s)	19.1	49.9	25.9	25.9	23.3	23.3	23.3
Actuated g/C Ratio	0.22	0.58	0.30	0.30	0.27	0.27	0.27
v/c Ratio	0.72	0.62	0.55	0.66	0.36	0.34	0.76
Control Delay	45.2	13.3	27.6	6.7	30.9	30.5	29.4
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	13.4	27.6	6.7	30.9	30.5	29.4
LOS	D	B	C	A	C	C	C
Approach Delay		18.9	19.2			29.8	
Approach LOS		B	B			C	

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 85.6

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 21.6

Intersection LOS: C

Intersection Capacity Utilization 86.2%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 16: I-215 NB Ramps & 5th St.



HCM 6th Signalized Intersection Summary
16: I-215 NB Ramps & 5th St.

5th & Sterling TA (JN:14057)

09/13/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			  				 			
Traffic Volume (veh/h)	246	1169	0	0	780	531	283	3	576	0	0	0
Future Volume (veh/h)	246	1169	0	0	780	531	283	3	576	0	0	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		0.99	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	1700	1800	0	0	1800	1800	1700	1800	1700			
Adj Flow Rate, veh/h	259	1231	0	0	821	427	300	0	358			
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95			
Percent Heavy Veh, %	0	0	0	0	0	0	0	0	0			
Cap, veh/h	304	2194	0	0	1885	578	592	0	527			
Arrive On Green	0.19	0.64	0.00	0.00	0.38	0.38	0.18	0.00	0.18			
Sat Flow, veh/h	1619	3510	0	0	5076	1506	3238	0	2881			
Grp Volume(v), veh/h	259	1231	0	0	821	427	300	0	358			
Grp Sat Flow(s),veh/h/ln	1619	1710	0	0	1638	1506	1619	0	1441			
Q Serve(g_s), s	10.2	13.3	0.0	0.0	8.2	16.1	5.5	0.0	7.6			
Cycle Q Clear(g_c), s	10.2	13.3	0.0	0.0	8.2	16.1	5.5	0.0	7.6			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	304	2194	0	0	1885	578	592	0	527			
V/C Ratio(X)	0.85	0.56	0.00	0.00	0.44	0.74	0.51	0.00	0.68			
Avail Cap(c_a), veh/h	771	4002	0	0	3069	941	1532	0	1363			
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	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	25.9	6.6	0.0	0.0	15.0	17.5	24.3	0.0	25.2			
Incr Delay (d2), s/veh	2.6	0.2	0.0	0.0	0.2	1.9	0.7	0.0	1.6			
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	3.7	3.0	0.0	0.0	2.6	4.9	1.9	0.0	2.4			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.5	6.9	0.0	0.0	15.2	19.4	25.0	0.0	26.7			
LnGrp LOS	C	A	A	A	B	B	C	A	C			
Approach Vol, veh/h	1490			1248			658					
Approach Delay, s/veh	10.6			16.6			25.9					
Approach LOS	B			B			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	17.9			48.1			17.0			31.1		
Change Period (Y+Rc), s	5.8			5.8			4.6			5.8		
Max Green Setting (Gmax), s	31.2			77.2			31.4			41.2		
Max Q Clear Time (g_c+I1), s	9.6			15.3			12.2			18.1		
Green Ext Time (p_c), s	2.4			11.3			0.3			7.2		
Intersection Summary												
HCM 6th Ctrl Delay				15.8								
HCM 6th LOS				B								
Notes												

APPENDIX 7.3: EAC (2026) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = EAC (2026) Conditions - Weekday AM Peak Hour

Major Street Name = Sterling Av.

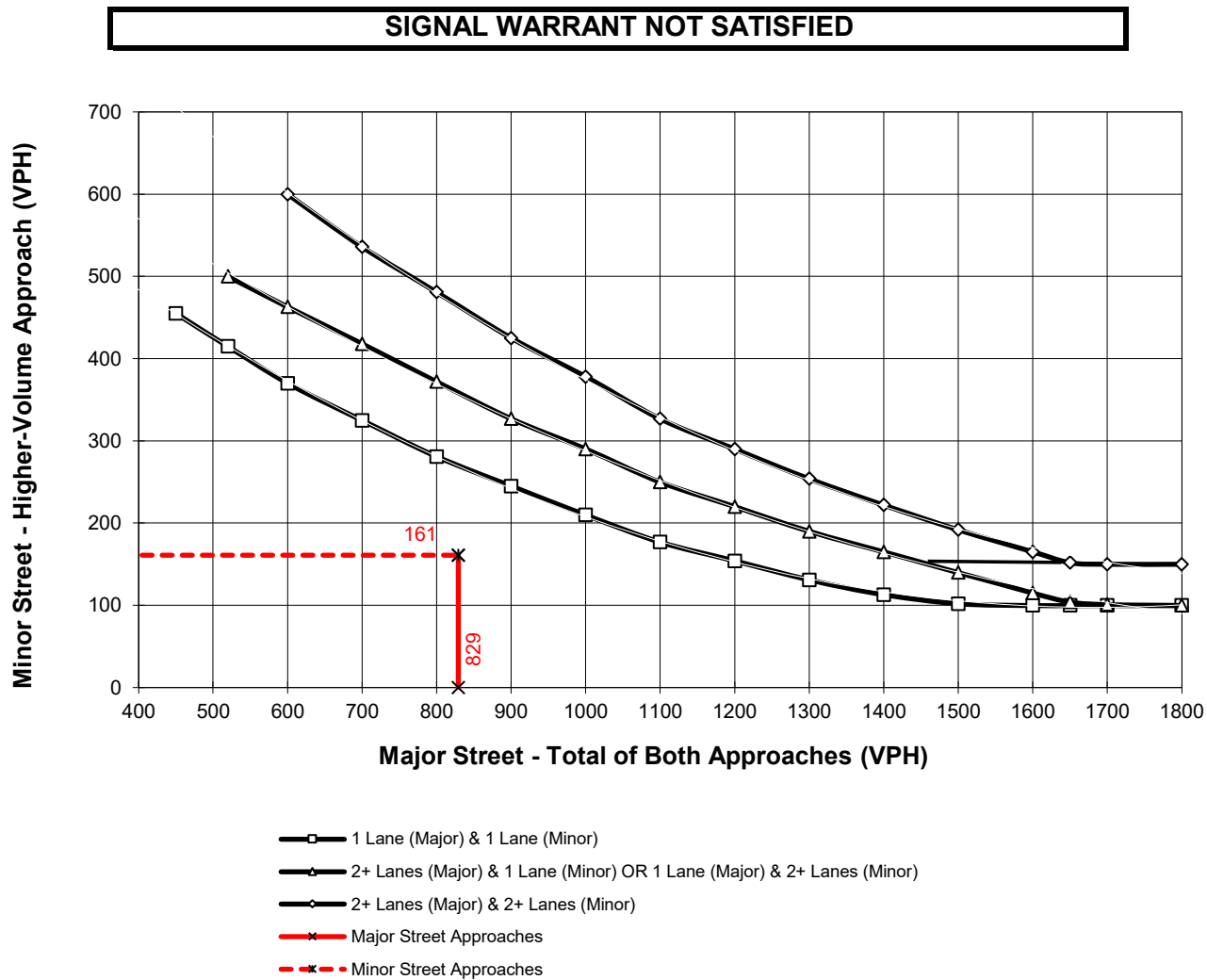
Total of Both Approaches (VPH) = 829

Number of Approach Lanes on Major Street = 2

Minor Street Name = 5th St.

High Volume Approach (VPH) = 161

Number of Approach Lanes On Minor Street = 1



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAC (2026) Conditions - Weekday AM Peak Hour**

Major Street Name = **6th St.**

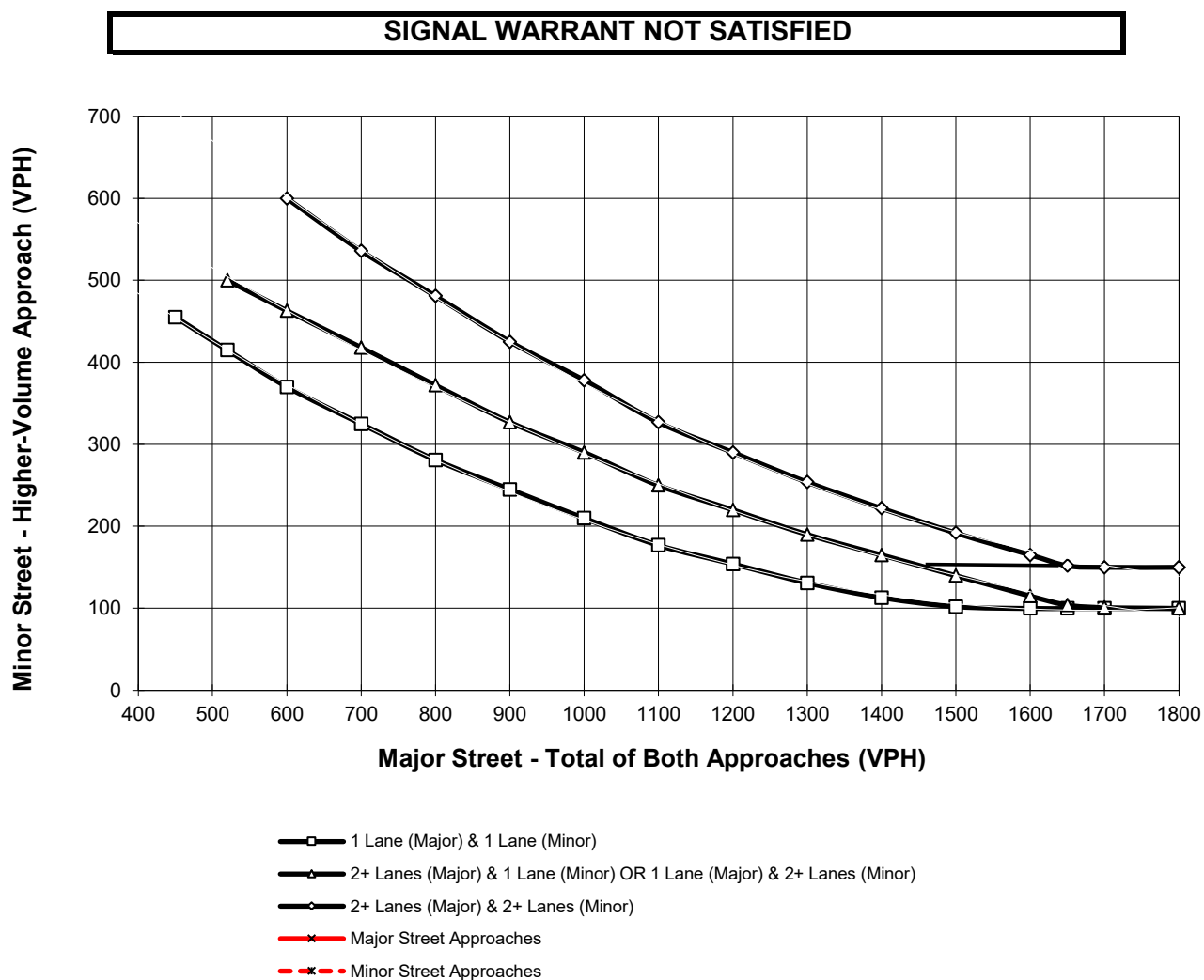
Total of Both Approaches (VPH) = **204**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **72**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EA (2026) Conditions - Weekday PM Peak Hour**

Major Street Name = **5th St.**

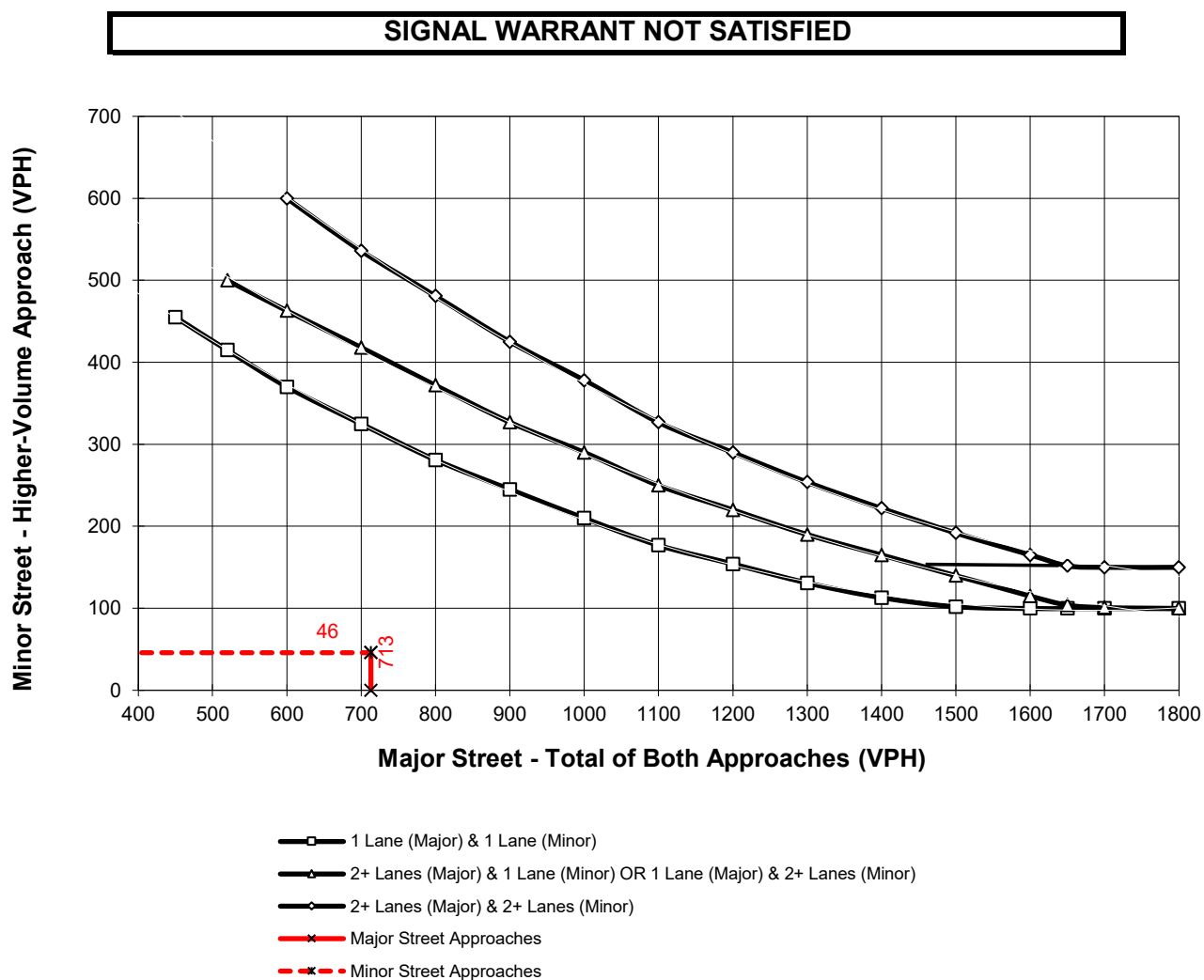
Total of Both Approaches (VPH) = **713**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **46**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

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APPENDIX 7.4: EAPC (2026) CONDITIONS TRAFFIC SIGNAL WARRANT ANALYSIS WORKSHEETS

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Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAPC (2026) Conditions - Weekday AM Peak Hour**

Major Street Name = **Sterling Av.**

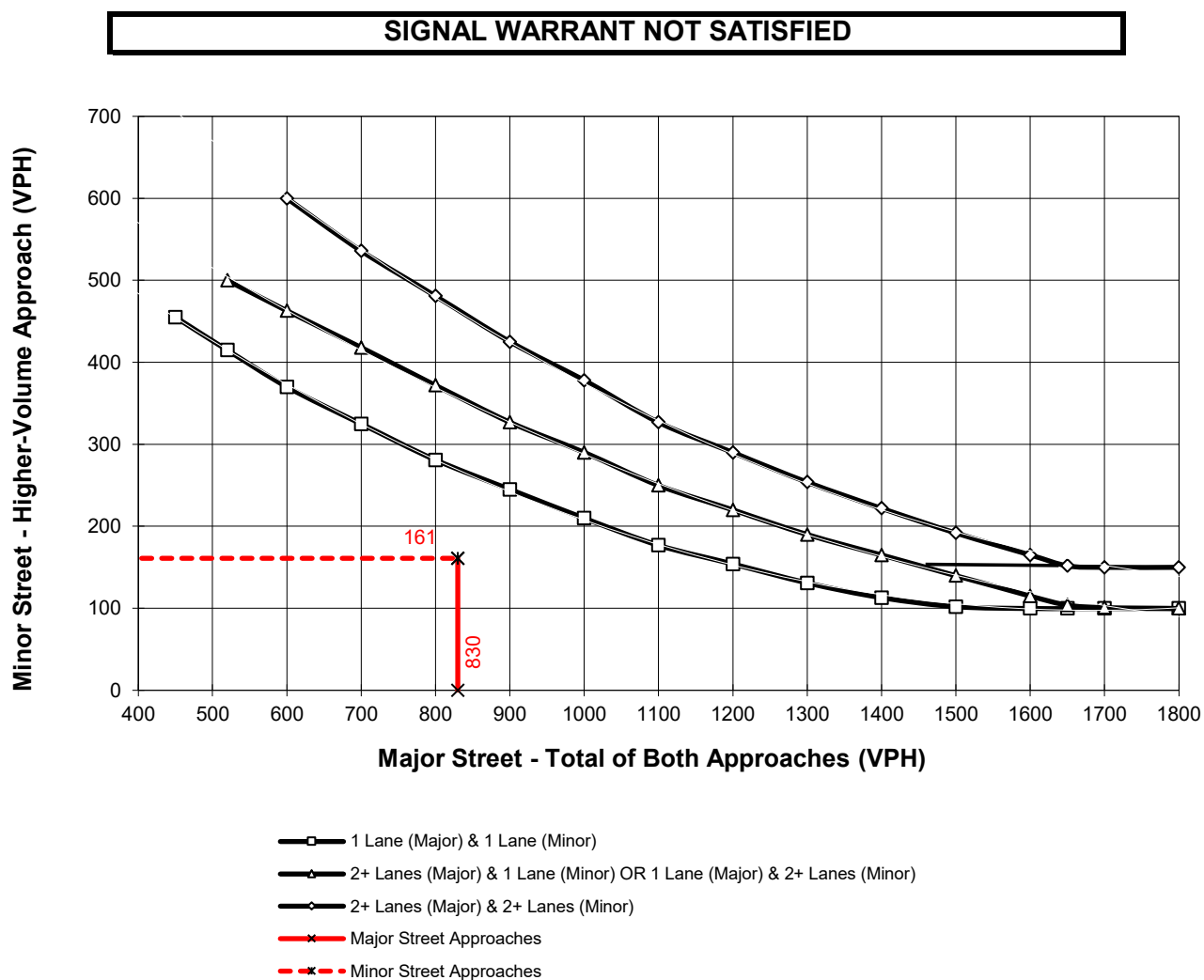
Total of Both Approaches (VPH) = **830**

Number of Approach Lanes on Major Street = **2**

Minor Street Name = **5th St.**

High Volume Approach (VPH) = **161**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

Traffic Conditions = **EAPC (2026) Conditions - Weekday AM Peak Hour**

Major Street Name = **6th St.**

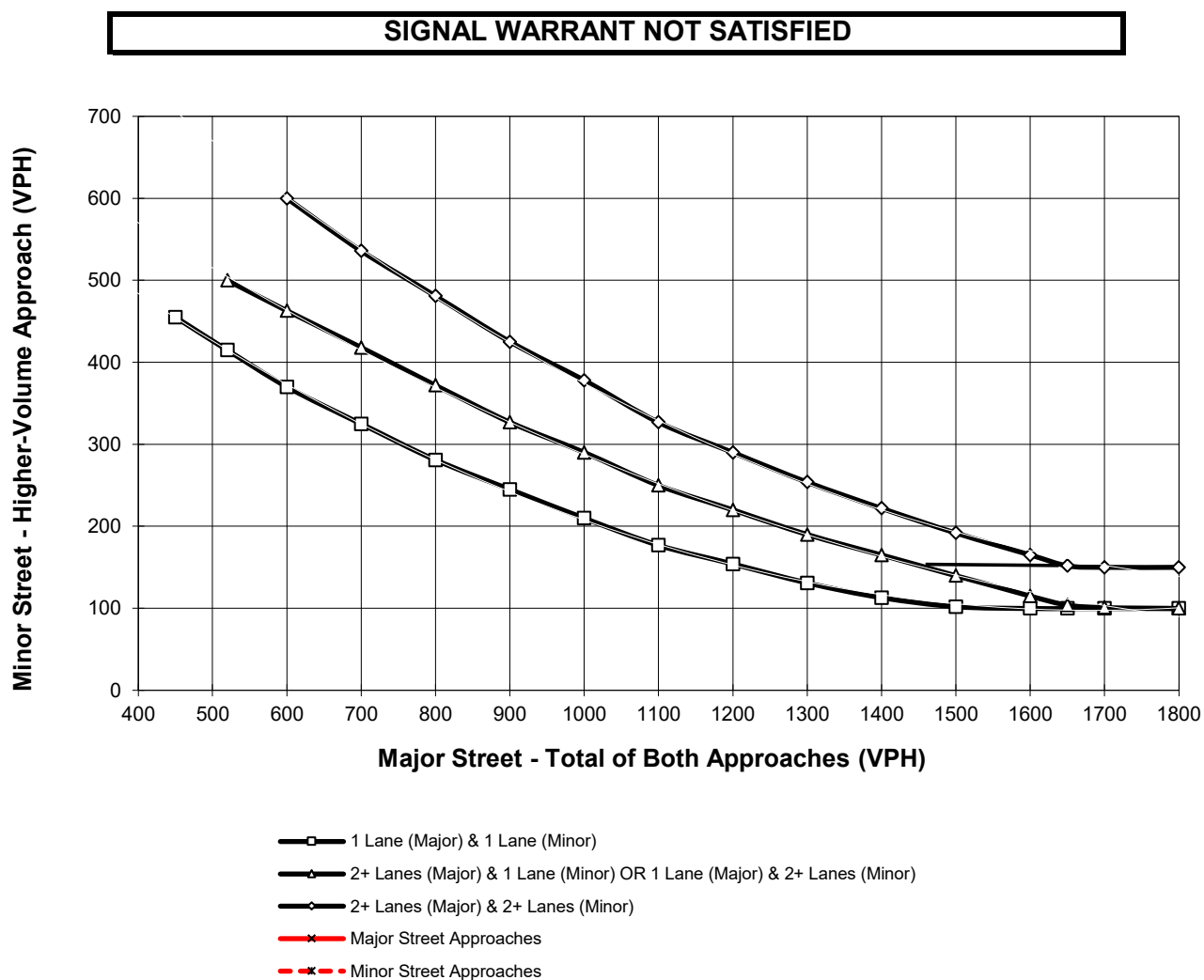
Total of Both Approaches (VPH) = **205**

Number of Approach Lanes on Major Street = **1**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **74**

Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-3. Warrant 3, Peak Hour

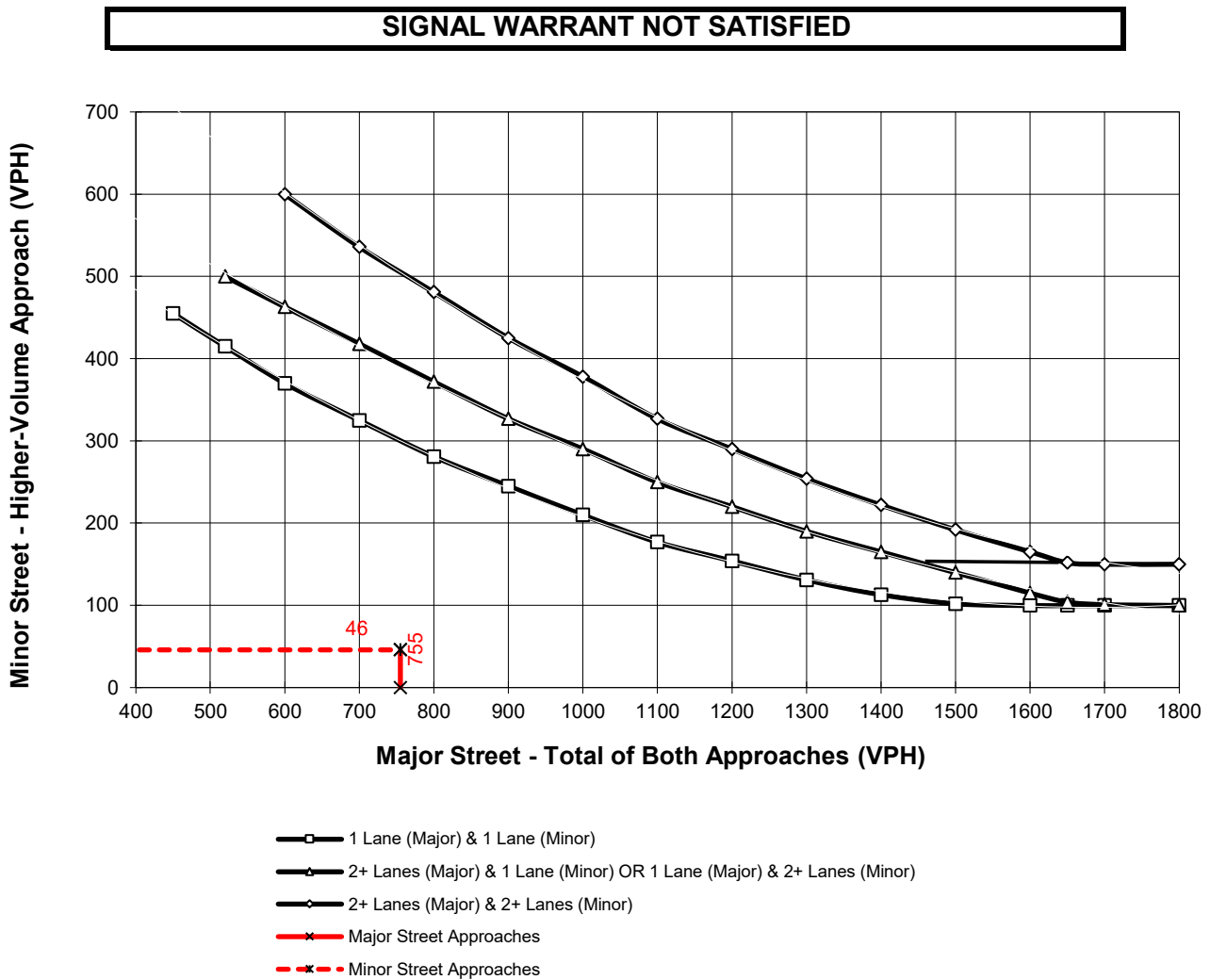
Traffic Conditions = **EAP (2026) Conditions - Weekday PM Peak Hour**

Major Street Name = **5th St.**

Total of Both Approaches (VPH) = **755**
Number of Approach Lanes on Major Street = **2**

Minor Street Name = **Lankershim Av.**

High Volume Approach (VPH) = **46**
Number of Approach Lanes On Minor Street = **1**



*Note: 150 vph applies as the lower threshold for a minor-street approach with two or more lanes
and 100 vph applies as the lower threshold for a minor-street approach with one lane

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	TRAFFIC CONDITIONS	EAPC (2026)
Jurisdiction: <u>City of San Bernardino</u>				CHK	<u>CP</u>	DATE <u>12/14/11</u>
Major Street: <u>Sterling Av.</u>						DATE <u>12/14/11</u>
Minor Street: <u>Driveway 1</u>					Critical Approach Speed (Major) <u>45</u> mph	
					Critical Approach Speed (Minor) <u>25</u> mph	
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>13,028</u> vpd				Minor Street Future ADT = <u>98</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒
						or
In built up area of isolated community of < 10,000 population						☐

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

URBAN		RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		8,000	5,600	2,400	1,680
<u>2 + 13,028</u>		<u>1 98</u>		9,600	6,720 *	2,400	1,680
<u>2 +</u>		<u>2 +</u>		9,600	6,720	3,200	2,240
<u>1</u>		<u>2 +</u>		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
Number of lanes for moving traffic on each approach		Number of lanes for moving traffic on each approach		Urban	Rural	Urban	Rural
<u>Major Street</u>		<u>Minor Street</u>					
<u>1</u>		<u>1</u>		12,000	8,400	1,200	850
<u>2 + 13,028</u>		<u>1 98</u>		14,400	10,080 *	1,200	850
<u>2 +</u>		<u>2 +</u>		14,400	10,080	1,600	1,120
<u>1</u>		<u>2 +</u>		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS 80%		2 CONDITIONS 80%	
<u>Satisfied</u>		<u>Not Satisfied</u>	XX				
No one condition satisfied, but following conditions fulfilled 80% of more							
		<u>A</u>	<u>B</u>				
		6%	12%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	EAPC (2026)
Jurisdiction: <u>City of San Bernardino</u>				CHK <u>CP</u>		DATE <u>12/14/11</u>
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major)		<u>45</u> mph
Minor Street: <u>Driveway 2</u>				Critical Approach Speed (Minor)		<u>25</u> mph
Major Street Approach Lanes = <u>2</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>13,226</u> vpd				Minor Street Future ADT = <u>132</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒
						or
In built up area of isolated community of < 10,000 population						☐

RURAL (R)**(Based on Estimated Average Daily Traffic - See Note)**

URBAN		RURAL		Minimum Requirements EADT			
CONDITION A - Minimum Vehicular Volume		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied		Not Satisfied					
		XX					
Number of lanes for moving traffic on each approach							
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			8,000	5,600	2,400	1,680
2 + 13,226	1 132			9,600	6,720 *	2,400	1,680
2 +	2 +			9,600	6,720	3,200	2,240
1	2 +			8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic				Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied		Not Satisfied					
		XX					
Number of lanes for moving traffic on each approach							
Major Street	Minor Street			Urban	Rural	Urban	Rural
1	1			12,000	8,400	1,200	850
2 + 13,226	1 132			14,400	10,080 *	1,200	850
2 +	2 +			14,400	10,080	1,600	1,120
1	2 +			12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B				2 CONDITIONS		2 CONDITIONS	
Satisfied		Not Satisfied		80%		80%	
		XX					
No one condition satisfied, but following conditions fulfilled 80% of more							
		A	B				
		8%	16%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

<u>DIST</u>	<u>CO</u>	<u>RTE</u>	<u>PM</u>	<u>CALC</u>	<u>CP</u>	<u>DATE</u>	<u>EAPC (2026)</u>
Jurisdiction:	<u>City of San Bernardino</u>			CHK	<u>CP</u>	DATE	<u>12/14/11</u>
Major Street:	<u>Sterling Av.</u>			Critical Approach Speed (Major)		<u>45 mph</u>	
Minor Street:	<u>Driveway 3</u>			Critical Approach Speed (Minor)		<u>25 mph</u>	
Major Street Approach Lanes = <u>1</u> lane				Minor Street Approach Lanes: <u>1</u> lane			
Major Street Future ADT = <u>3,431</u> vpd				Minor Street Future ADT = <u>26</u> vpd			
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒	RURAL (R)
In built up area of isolated community of < 10,000 population						☐	

(Based on Estimated Average Daily Traffic - See Note)

<u>URBAN</u>		<u>RURAL</u>		Minimum Requirements			
CONDITION A - Minimum Vehicular Volume		XX		EADT			
<u>Satisfied</u>		<u>Not Satisfied</u>		Vehicles Per Day on		Vehicles Per Day	
		XX		(Total of Both Approaches)		on Higher-Volume	
Number of lanes for moving traffic on each approach						Minor Street Approach	
<u>Major Street</u>	<u>Minor Street</u>			<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1 3,431	1 26			8,000	5,600	2,400	1,680
2 +	1			9,600	6,720	2,400	1,680
2 +	2 +			9,600	6,720	3,200	2,240
1	2 +			8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day		Vehicles Per Day	
<u>Satisfied</u>		<u>Not Satisfied</u>		(Total of Both Approaches)		on Higher-Volume	
Number of lanes for moving traffic on each approach						Minor Street Approach	
<u>Major Street</u>	<u>Minor Street</u>			<u>Urban</u>	<u>Rural</u>	<u>Urban</u>	<u>Rural</u>
1 3,431	1 26			12,000	8,400	1,200	850
2 +	1			14,400	10,080	1,200	850
2 +	2 +			14,400	10,080	1,600	1,120
1	2 +			12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS		2 CONDITIONS	
<u>Satisfied</u>		<u>Not Satisfied</u>		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more							
		A	B				
		2%	3%				

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

DIST	CO	RTE	PM	CALC	CP	EAPC (2026)
Jurisdiction: <u>City of San Bernardino</u>				CHK	CP	DATE <u>12/14/11</u>
Major Street: <u>Sterling Av.</u>				Critical Approach Speed (Major) <u>45</u> mph		
Minor Street: <u>Driveway 3</u>				Critical Approach Speed (Minor) <u>25</u> mph		
Major Street Approach Lanes = <u>1</u> lane				Minor Street Approach Lanes: <u>1</u> lane		
Major Street Future ADT = <u>10,191</u> vpd				Minor Street Future ADT = <u>121</u> vpd		
Speed limit or critical speed on major street traffic > 64 km/h (40 mph);						☒ or ☐
In built up area of isolated community of < 10,000 population						RURAL (R)

(Based on Estimated Average Daily Traffic - See Note)

URBAN		RURAL		Minimum Requirements			
CONDITION A - Minimum Vehicular Volume		XX		EADT			
Satisfied		Not Satisfied		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street		Minor Street		Urban	Rural	Urban	Rural
1 10,191		1 121		8,000	5,600 *	2,400	1,680
2 +		1		9,600	6,720	2,400	1,680
2 +		2 +		9,600	6,720	3,200	2,240
1		2 +		8,000	5,600	3,200	2,240
CONDITION B - Interruption of Continuous Traffic		XX		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Satisfied		Not Satisfied		Urban	Rural	Urban	Rural
Major Street		Minor Street					
1 10,191		1 121		12,000	8,400 *	1,200	850
2 +		1		14,400	10,080	1,200	850
2 +		2 +		14,400	10,080	1,600	1,120
1		2 +		12,000	8,400	1,600	1,120
Combination of CONDITIONS A + B		XX		2 CONDITIONS		2 CONDITIONS	
Satisfied		Not Satisfied		80%		80%	
No one condition satisfied, but following conditions fulfilled 80% of more		A					
		7%					
		B					
		14%					

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

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APPENDIX 7.5: EAC (2026) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	464	429	801	1023	484	324
v/c Ratio	0.70	0.65	0.90	0.53	0.86	0.57
Control Delay	45.9	8.8	50.9	16.2	51.1	25.3
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	45.9	8.8	50.9	16.5	51.1	25.3
Queue Length 50th (ft)	169	0	289	240	325	132
Queue Length 95th (ft)	229	90	#427	301	#524	236
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	852	725	1015	2268	673	659
Starvation Cap Reductn	0	0	0	627	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.59	0.79	0.62	0.72	0.49

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

5th & Sterling TA (JN:14057)

09/13/2023

16: I-215 NB Ramps & 5th St.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	126	690	1276	464	208	210	471
v/c Ratio	0.56	0.33	0.62	0.51	0.59	0.56	0.51
Control Delay	47.8	8.5	21.4	4.2	37.8	36.4	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.8	8.5	21.4	4.2	37.8	36.4	6.0
Queue Length 50th (ft)	61	77	179	0	100	100	5
Queue Length 95th (ft)	147	152	316	62	213	213	51
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	465	2954	2981	1097	674	716	1367
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.23	0.43	0.42	0.31	0.29	0.34
Intersection Summary							

Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	846	348	419	703	652	244
v/c Ratio	0.85	0.58	0.92	0.42	0.93	0.34
Control Delay	47.2	16.1	74.9	20.1	53.8	11.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.2	16.1	74.9	20.1	53.8	11.0
Queue Length 50th (ft)	320	72	169	180	467	48
Queue Length 95th (ft)	400	171	#273	230	#702	109
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1102	640	457	1773	767	763
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.54	0.92	0.40	0.85	0.32

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

5th & Sterling TA (JN:14057)

09/13/2023

16: I-215 NB Ramps & 5th St.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	249	1228	820	559	146	149	606
v/c Ratio	0.71	0.62	0.55	0.66	0.35	0.33	0.75
Control Delay	44.8	13.3	27.2	6.7	30.3	29.8	28.9
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	44.8	13.4	27.2	6.7	30.3	29.8	28.9
Queue Length 50th (ft)	120	203	129	0	63	64	121
Queue Length 95th (ft)	250	317	219	85	153	155	253
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	640	3048	2555	1054	604	641	1093
Starvation Cap Reductn	0	467	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.48	0.32	0.53	0.24	0.23	0.55
Intersection Summary							

APPENDIX 7.6: EAPC (2026) CONDITIONS OFF-RAMP QUEUING ANALYSIS WORKSHEETS

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Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	470	437	801	1041	484	334
v/c Ratio	0.70	0.66	0.90	0.54	0.86	0.59
Control Delay	46.0	8.8	51.2	16.3	51.4	26.7
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0
Total Delay	46.0	8.8	51.2	16.7	51.4	26.7
Queue Length 50th (ft)	172	0	289	246	326	142
Queue Length 95th (ft)	232	91	#427	308	#524	251
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	849	730	1012	2263	672	655
Starvation Cap Reductn	0	0	0	624	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.60	0.79	0.64	0.72	0.51

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

5th & Sterling TA (JN:14057)

09/13/2023

16: I-215 NB Ramps & 5th St.



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	130	691	1278	464	215	218	471
v/c Ratio	0.57	0.33	0.62	0.52	0.59	0.57	0.50
Control Delay	48.6	8.7	21.9	4.3	38.1	36.8	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.6	8.7	21.9	4.3	38.1	36.8	6.0
Queue Length 50th (ft)	64	79	182	0	105	105	5
Queue Length 95th (ft)	153	156	324	63	222	222	51
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	458	2932	2936	1088	664	705	1353
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.24	0.44	0.43	0.32	0.31	0.35
Intersection Summary							

Queues

5th & Sterling TA (JN:14057)

09/13/2023

15: I-215 SB Ramps & 5th St.



Lane Group	EBT	EBR	WBL	WBT	SBT	SBR
Lane Group Flow (vph)	857	362	419	711	652	248
v/c Ratio	0.85	0.60	0.92	0.43	0.93	0.35
Control Delay	47.6	16.7	76.1	20.2	54.1	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	47.6	16.7	76.1	20.2	54.1	11.1
Queue Length 50th (ft)	325	78	169	183	467	49
Queue Length 95th (ft)	406	181	#273	233	#702	110
Internal Link Dist (ft)	1326			400	526	
Turn Bay Length (ft)		145	200			160
Base Capacity (vph)	1096	642	454	1763	762	760
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.56	0.92	0.40	0.86	0.33

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Queues

5th & Sterling TA (JN:14057)

16: I-215 NB Ramps & 5th St.

09/13/2023



Lane Group	EBL	EBT	WBT	WBR	NBL	NBT	NBR
Lane Group Flow (vph)	259	1231	821	559	149	152	606
v/c Ratio	0.72	0.62	0.55	0.66	0.36	0.34	0.76
Control Delay	45.2	13.3	27.6	6.7	30.9	30.5	29.4
Queue Delay	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	45.2	13.4	27.6	6.7	30.9	30.5	29.4
Queue Length 50th (ft)	127	205	132	0	66	67	123
Queue Length 95th (ft)	260	317	223	86	160	161	258
Internal Link Dist (ft)		400	957			772	
Turn Bay Length (ft)							270
Base Capacity (vph)	632	2978	2523	1047	596	633	1081
Starvation Cap Reductn	0	483	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.49	0.33	0.53	0.25	0.24	0.56
Intersection Summary							

APPENDIX 7.7: EAC (2026) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	84	22	21	97	19	17	253	17	34	515	53
Future Vol, veh/h	61	84	22	21	97	19	17	253	17	34	515	53
Conflicting Peds, #/hr	0	0	0	0	0	2	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	0	-	-	0	-	-	100	-	-	0	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	66	90	24	23	104	20	18	272	18	37	554	57

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	883	983	306	713	1002	147	611	0	0	290	0	0
Stage 1	657	657	-	317	317	-	-	-	-	-	-	-
Stage 2	226	326	-	396	685	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	243	251	696	323	244	880	978	-	-	1283	-	-
Stage 1	425	465	-	674	658	-	-	-	-	-	-	-
Stage 2	762	652	-	606	451	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	173	239	696	240	233	878	978	-	-	1283	-	-
Mov Cap-2 Maneuver	296	341	-	342	330	-	-	-	-	-	-	-
Stage 1	417	452	-	662	646	-	-	-	-	-	-	-
Stage 2	611	640	-	455	438	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	19.2		19.2		0.5		0.4	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	978	-	-	296	381	342	368	1283	-	-
HCM Lane V/C Ratio	0.019	-	-	0.222	0.299	0.066	0.339	0.028	-	-
HCM Control Delay (s)	8.8	-	-	20.6	18.4	16.3	19.7	7.9	-	-
HCM Lane LOS	A	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	1.2	0.2	1.5	0.1	-	-

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	85	26	16	71	24	19	527	25	25	357	31
Future Vol, veh/h	41	85	26	16	71	24	19	527	25	25	357	31
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	0	-	-	0	-	-	100	-	-	0	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	43	89	27	17	75	25	20	555	26	26	376	33

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	800	1066	205	893	1069	291	409	0	0	581	0	0
Stage 1	445	445	-	608	608	-	-	-	-	-	-	-
Stage 2	355	621	-	285	461	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	280	224	808	239	223	712	1161	-	-	1003	-	-
Stage 1	567	578	-	454	489	-	-	-	-	-	-	-
Stage 2	641	482	-	704	569	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	216	214	808	176	213	712	1161	-	-	1003	-	-
Mov Cap-2 Maneuver	335	323	-	302	328	-	-	-	-	-	-	-
Stage 1	557	563	-	446	481	-	-	-	-	-	-	-
Stage 2	513	474	-	557	554	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.4		17.8		0.3		0.5	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1161	-	-	335	376	302	380	1003	-	-
HCM Lane V/C Ratio	0.017	-	-	0.129	0.311	0.056	0.263	0.026	-	-
HCM Control Delay (s)	8.2	-	-	17.3	18.8	17.6	17.8	8.7	-	-
HCM Lane LOS	A	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	1.3	0.2	1	0.1	-	-

APPENDIX 7.8: EAPC (2026) CONDITIONS INTERSECTION OPERATIONS ANALYSIS WORKSHEETS

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Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	61	84	22	21	97	19	17	253	17	34	516	53
Future Vol, veh/h	61	84	22	21	97	19	17	253	17	34	516	53
Conflicting Peds, #/hr	0	0	0	0	0	2	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	0	-	-	0	-	-	100	-	-	0	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	66	90	24	23	104	20	18	272	18	37	555	57

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	884	984	306	714	1003	147	612	0	0	290	0	0
Stage 1	658	658	-	317	317	-	-	-	-	-	-	-
Stage 2	226	326	-	397	686	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	243	250	696	322	244	880	977	-	-	1283	-	-
Stage 1	424	464	-	674	658	-	-	-	-	-	-	-
Stage 2	762	652	-	605	451	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	173	239	696	239	233	878	977	-	-	1283	-	-
Mov Cap-2 Maneuver	296	340	-	341	330	-	-	-	-	-	-	-
Stage 1	416	451	-	662	646	-	-	-	-	-	-	-
Stage 2	611	640	-	454	438	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	19.3		19.2		0.5		0.4	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	977	-	-	296	380	341	368	1283	-	-
HCM Lane V/C Ratio	0.019	-	-	0.222	0.3	0.066	0.339	0.028	-	-
HCM Control Delay (s)	8.8	-	-	20.6	18.5	16.3	19.7	7.9	-	-
HCM Lane LOS	A	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.8	1.2	0.2	1.5	0.1	-	-

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	85	26	16	71	24	19	529	25	25	358	31
Future Vol, veh/h	41	85	26	16	71	24	19	529	25	25	358	31
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	0	-	-	0	-	-	100	-	-	0	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	43	89	27	17	75	25	20	557	26	26	377	33

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	802	1069	205	895	1072	292	410	0	0	583	0	0
Stage 1	446	446	-	610	610	-	-	-	-	-	-	-
Stage 2	356	623	-	285	462	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.9	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	279	223	808	239	222	710	1160	-	-	1001	-	-
Stage 1	567	577	-	453	488	-	-	-	-	-	-	-
Stage 2	640	481	-	704	568	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	215	213	808	176	212	710	1160	-	-	1001	-	-
Mov Cap-2 Maneuver	334	322	-	301	327	-	-	-	-	-	-	-
Stage 1	557	562	-	445	480	-	-	-	-	-	-	-
Stage 2	512	473	-	557	553	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.5		17.9		0.3		0.5	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1160	-	-	334	375	301	379	1001	-	-
HCM Lane V/C Ratio	0.017	-	-	0.129	0.312	0.056	0.264	0.026	-	-
HCM Control Delay (s)	8.2	-	-	17.4	18.9	17.7	17.9	8.7	-	-
HCM Lane LOS	A	-	-	C	C	C	C	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	1.3	0.2	1	0.1	-	-