

**SWC US-395/PALMDALE ROAD (SR-18)
TRAFFIC IMPACT ANALYSIS
City of Victorville, California**

Prepared for:
BLUE PEAK ENGINEERING, INC.
18543 Yorba Linda Blvd, Suite 235
Yorba Linda, CA 92886

Prepared by:
TJW ENGINEERING, INC.
6 Venture, Suite 225
Irvine, CA 92618

Revised: March 13, 2019



March 13, 2019

Mr. Thomas Hawksworth, PE
Blue Peak Engineering, Inc.
18543 Yorba Linda Blvd, Suite 235
Yorba Linda, CA 92886

Subject: Traffic Impact Analysis: SWC UC395/SR18, City of Victorville

Dear Mr. Hawksworth:

TJW ENGINEERING, INC. (TJW) is pleased to present you with this revised traffic impact analysis for the proposed **SWC US395/SR18** project in the City of Victorville. The proposed project is located at the southwest corner of the US-395/Palmdale Road (SR-18) intersection and would consist of retail, fast-food restaurants, high-turnover sit down restaurants, and a gas station with convenience store.

This traffic study has been revised to incorporate the latest site plan dated October 8, 2018. This report is being submitted to you for review and forwarding to the City of Victorville.

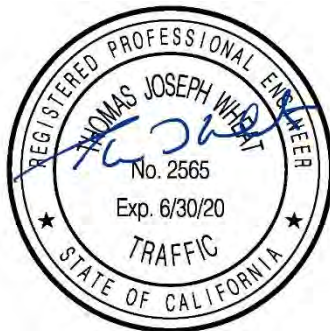
Please contact us at (949) 878-3509 if you have any questions regarding this analysis.

Sincerely,

Thomas Wheat, PE, TE
President

Registered Civil Engineer #69467
Registered Traffic Engineer #2565

Jeff Weckstein
Transportation Planner

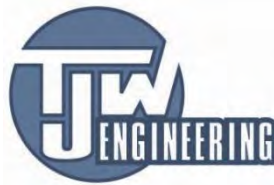


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JN: BPE-16-004

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1.0 EXECUTIVE SUMMARY

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed **SWC US-395/Palmdale Road (SR-18)** project in the City of Victorville. The purpose of this TIA is to evaluate the potential circulation system deficiencies that may result from development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared pursuant to applicable City of Victorville, San Bernardino Congestion Management Program (CMP) and Caltrans traffic impact analysis guidelines.

The proposed project is located at the southwest corner of the US-395/Palmdale Road (SR-18) intersection and would consist of the following land uses:

- 3,000 square foot automated car wash
- 8,800 square feet of fast food with drive-through land uses (4 fast food restaurants in total)
- 4,500 square feet of high turnover sit down (fast casual) restaurants
- 75,000 square feet of retail uses
- Gas Station (16 vehicle fueling positions) with convenience store (5,000 square feet)

The proposed project would have two access points on Palmdale Road (SR-18) and two access points on US-395. Site access is described in more detail below.

Palmdale Road (SR-18)

- 1) Full access at existing traffic signal serving the existing shopping center on the NWC corner of the US-395/SR-18 intersection. The project applicant will be responsible for constructing the 4th (south) leg of the intersection and any necessary modifications to signal timing and intersection infrastructure.
- 2) Right-in/Right-out only access at the existing driveway serving Burger King.

US-395

- 1) Right-in/Right-out only access at the existing driveway serving Burger King
- 2) Proposed Signalized access on US-395 at the southern edge of the property. The project applicant will be responsible for constructing the intersection and traffic signal, including synchronization with the US-395/Palmdale Road (SR-18) intersection as necessary.

The project site is currently vacant. The proposed project is projected to be built and generating trips in 2019.

Before accounting for pass-by trip discounts, the proposed project is projected to generate approximately 727 AM peak hour trips, 975 PM peak hour trips and 11,711 daily trips at the project driveways. After accounting for pass-by trips, the proposed project is projected to generate approximately 489 net new AM peak hour trips, 657 net new PM peak hour trips and 8,463 net new daily trips on the surrounding roadway network.

The following twenty-five (25) intersections in the vicinity of the project site have been included in the intersection level of service (LOS) analysis:

1. Pearmain Street/Palmdale Road (SR-18);
2. Stater Bros Drwy-Project Signalized Access/Palmdale Road (SR-18)
3. US-395/Seneca Road;
4. US-395/Palmdale Road (SR-18);
5. US-395/Project Signalized Access (with project scenarios only);
6. US-395/Dos Palmas Road;
7. US-395/Luna Road;
8. US-395/La Mesa Road;
9. US-395/Bear Valley Road;
10. Cantina Street/Palmdale Road (SR-18)
11. Mesa Linda Avenue/Dos Palmas Road;
12. Mesa Linda Avenue/Luna Road;
13. Mesa Linda Avenue/La Mesa Road;
14. Topaz Road/Luna Road;
15. Topaz Road/La Mesa Road;
16. Topaz Road/Bear Valley Road;
17. Cobalt Road/Palmdale Road (SR-18);
18. Cobalt Road/Luna Road;
19. Amethyst Road/Palmdale Road (SR-18);
20. Amethyst Road/Luna Road;
21. El Evado Road/Palmdale Road (SR-18);
22. Amargosa Road/Palmdale Road (SR-18);
23. Existing Driveway/Palmdale Road (SR-18) (with project scenarios only);
24. US-395/Existing Driveway (with project scenarios only); and
25. US-395/Crossroads.

The following ten (10) roadway segments have been included in the LOS analysis:

- RS1: Luna Road between US-395 and Mesa Linda Avenue.
RS2: Palmdale Road (SR-18) between Pearmain Road and US-395;
RS3: Palmdale Road (SR-18) between US-395 and Cobalt Road;
RS4: Palmdale Road (SR-18) between Cobalt Road and Amethyst Road;
RS5: Palmdale Road (SR-18) between Amethyst Road and El Evado Road;
RS6: US-395 between Seneca Road and Palmdale Road (SR-18);
RS7: US-395 between Palmdale Road (SR-18) and Dos Palmas Road;
RS8: US-395 between Dos Palmas Road and Luna Road;
RS9: US-395 between Luna Road La Mesa Road;
RS10: US-395 between La Mesa Road and Bear Valley Road; and

The study intersections and roadway segments have been analyzed for the following study scenarios:

- (1) *Existing Traffic Conditions;*
- (2) *Existing Plus Project Conditions;*
- (3) *Opening Year (2019) Without Project Conditions;*
- (4) *Opening Year (2019) With Project Conditions;*
- (5) *Interim Year Without Project Conditions;*
- (6) *Interim Year With Project Conditions;*

- (7) General Plan (2040) Without Project Conditions; and
 (8) General Plan (2040) With Project Conditions.

1.1 SUMMARY OF INTERSECTION ANALYSIS RESULTS

Table ES-1 Summary of Deficiencies at Study Intersections

No.	Intersection	Existing Plus Project	Opening Year With Project	Interim Year With Project	General Plan With Project
1	Pearmain St/Palmdale Rd (SR-18)	D	D		
2	Stater Bros Drwy/Palmdale Rd (SR-18)	1	1		
3	US-395/Seneca Rd	D	D	D	D
4	US-395/Palmdale Rd (SR-18)	D	D	D	D
5	US-395/Proposed Signalized Access	1	1		
6	US-395/Dos Palmas Rd			D	D
7	US-395/Luna Rd				D
8	US-395/La Mesa				
9	US-395/Bear Valley Rd				D
10	Cantina St/Palmdale Rd (SR-18)				
11	Mesa Linda Rd/Dos Palmas Rd		D	D	D
12	Mesa Linda Rd /Luna Rd				
13	Mesa Linda Rd /La Mesa Rd				
14	Topaz Rd/Luna Rd		D		
15	Topaz Rd/La Mesa Rd				
16	Topaz Rd/Bear Valley Rd				
17	Cobalt Rd/Palmdale Rd (SR-18)				
18	Cobalt Rd/Luna Rd				
19	Amethyst Rd/Palmdale Rd (SR-18)				
20	Amethyst Rd/Luna Rd				
21	El Evado Rd/Palmdale Rd (SR-18)				
22	Amargosa Rd/Palmdale Rd (SR-18)				
23	Driveway/Palmdale Rd (SR-18)				
24	US-395/Driveway				
25	US-395/Crossroads				D

Note: Note: D – denotes deficient operation prior to recommended improvements

1 = Project applicant responsible for 100% of improvement costs at existing signal on SR-18 and proposed signal on US-395

1.2 SUMMARY OF ROADWAY SEGMENT ANALYSIS RESULTS

Table ES-2 Summary of Deficiencies at Study Roadway Segments

No.	Roadway Segment	Existing Plus Project	Opening Year With Project	Interim Year With Project	General Plan With Project
RS1	Luna between US-395 & Mesa Linda				
RS2	Palmdale between Pearmain & US-395				
RS3	Palmdale between US-395 & Cobalt				
RS4	Palmdale between Cobalt & Amethyst				
RS5	Palmdale between Amethyst & El Evado				
RS6	US-395 between Seneca & Palmdale			D	D
RS7	US-395 between Palmdale & Dos Palmas	D	D	D	D
RS8	US-395 between Dos Palmas & Luna		D	D	D
RS9	US-395 between Luna & La Mesa	D	D	D	D
RS10	US-395 between La Mesa & Bear Valley	D	D	D	D

Note: D – denotes deficient operation prior to recommended improvements

1.3 SUMMARY OF RECOMMENDED IMPROVEMENTS

Table ES-3: Recommended Improvements – Existing Plus Project

Deficient Facility (Jurisdiction)	Improvement	Estimated Construction Cost	Fair Share
#1: Pearmain St/Palmdale Rd (SR-18) Caltrans	Signalize Intersection	\$500,000	1.43%
#2: Stater Bros Drwy/Palmdale Rd (SR-18) Caltrans	Construction of south leg of intersection, signal timing modification	Project applicant responsibility (100%)	
#3: US-395/Seneca Road Caltrans	Signalize Intersection	\$500,000	0.97%
#4: US-395/Palmdale Road (SR-18) Caltrans	Install eastbound right-turn overlap phase. Restrict U-turn movements from northbound US-395 to southbound US-395	\$15,000	10.92%
#5: US-395/Proposed Signalized Access Caltrans	Construction and signalization of intersection	Project applicant responsibility (100%)	
RS7: US-395 between Palmdale & Dos Palmas Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	17.04%
RS9: US-395 between Luna and La Mesa Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	3.32%
RS10: US-395 between La Mesa and Bear Valley Caltrans	Add northbound and southbound travel lane (1.0 miles of widening)	\$1,600,000	2.15%

Table ES-4: Recommended Improvements – Opening Year With Project

Deficient Facility (Jurisdiction)	Improvement	Estimated Construction Cost	Fair Share
#1: Pearmain St/Palmdale Rd (SR-18) Caltrans	Signalize Intersection	\$500,000	1.43%
#3: US-395/Seneca Road Caltrans	Signalize Intersection	\$500,000	0.97%
#4: US-395/Palmdale Road (SR-18) Caltrans	Install eastbound right-turn overlap phase. Restrict U-turn movements from northbound US-395 to southbound US-395	\$15,000	8.28%
#11: Mesa Linda Road/Dos Palmas Road City of Victorville	Install stop signs on the eastbound and westbound Dos Palmas Road approaches	\$3,000	10.92%
#14: Topaz Road/Luna Road City of Victorville	Add eastbound through lane	\$150,000	42.99%
RS7: US-395 between Palmdale & Dos Palmas, Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	17.04%
RS8: US-395 between Dos Palmas and Luna Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	11.52%
RS9: US-395 between Luna and La Mesa Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	3.32%
RS10: US-395 between La Mesa and Bear Valley Caltrans	Add northbound and southbound travel lane (1.0 miles of widening)	\$1,600,000	2.15%

Tables ES-5: Recommended Improvements – Interim Year With Project

Deficient Facility (Jurisdiction)	Improvement	Estimated Construction Cost	Fair Share
#3: US-395/Seneca Road Caltrans	1) Signalize Intersection 2) Add northbound through lane 3) Add southbound through lane	\$500,000 * *	0.97%
#4: US-395/Palmdale Road (SR-18) Caltrans	1) Install eastbound right-turn overlap phase. Restrict U-turn movements from northbound US-395 to southbound US-395 2) Add a northbound left-turn lane	\$15,000 \$250,000	8.28%
#6: US-395/Dos Palmas Road Caltrans	1) Add westbound right-turn lane 2) Add southbound right-turn lane 3) Install westbound right-turn overlap phase. Restrict U-turn movements from southbound US-395 to northbound US-395	\$150,000 \$150,000 \$15,000	11.89%
#11: Mesa Linda Road/Dos Palmas Road City of Victorville	1) Install stop signs on the eastbound and westbound Dos Palmas Road approaches	\$3,000	10.92%
RS6: US-395 between Seneca & Palmdale Caltrans	1) Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	2.92%
RS7: US-395 between Palmdale & Dos Palmas Caltrans	1) Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	17.04%
RS8: US-395 between Dos Palmas and Luna Caltrans	1) Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	11.52%
RS9: US-395 between Luna and La Mesa Caltrans	1) Add two northbound and two southbound travel lanes (0.50 miles of widening)	\$1,600,000	3.32%
RS10: US-395 between La Mesa and Bear Valley Caltrans	1) Add two northbound and two southbound travel lanes (1.0 miles of widening)	\$3,200,000	2.15%

* = Cost included in the estimated cost of roadway segment widening

Tables ES-6: Recommended Improvements – General Plan With Project

Deficient Facility (Jurisdiction)	Improvement	Estimated Construction Cost	Fair Share
#3: US-395/Seneca Road Caltrans	Signalize Intersection	\$500,000	0.97%
	Add two northbound through lanes	*	
	Add two southbound through lanes Add a northbound left-turn lane	\$200,000	1.86%
#4: US-395/Palmdale Road (SR-18) Caltrans	Install eastbound right-turn overlap phase. Restrict U-turn movements from northbound US-395 to southbound US-395	\$15,000	
	Add a northbound left-turn lane	\$200,000	
	Add a northbound through lane	*	8.28%
	Add a southbound through lane	*	
	Add an eastbound left-turn lane Add a southbound left-turn lane	\$200,000 \$200,000	
#6: US-395/Dos Palmas Road Caltrans	Add westbound right-turn lane	\$150,000	
	Add southbound right-turn lane	\$150,000	
	Add northbound through lane	*	
	Add southbound through lane	*	11.89%
	Install westbound right-turn overlap phase. Restrict U-turn movements from southbound US-395 to northbound US-395	\$15,000	
#7: US-395/Luna Road Caltrans	Add a northbound through lane	*	
	Add a southbound through lane	*	10.37%
	Add a westbound right-turn lane	\$125,000	
#9: US-395/Bear Valley Road Caltrans	Add a northbound through lane	*	
	Add a southbound through lane	*	
	Add a westbound left-turn lane	\$200,000	2.33%
	Add a northbound left-turn lane	\$200,000	
	Add a southbound left-turn lane	\$200,000	
#25: US-395/Crossroads (Caltrans)	Add a southbound through lane	*	1.77%
#11: Mesa Linda Road/Dos Palmas Road City of Victorville	Install stop signs on the eastbound and westbound Dos Palmas Road approaches	\$3,000	10.92%
RS6: US-395 between Seneca & Palmdale Caltrans	Add two northbound and two southbound travel lanes (0.50 miles of widening)	\$1,600,000	2.92%
RS7: US-395 between Palmdale & Dos Palmas Caltrans	Add two northbound and two southbound travel lanes (0.50 miles of widening)	\$1,600,000	17.04%
RS8: US-395 between Dos Palmas and Luna Caltrans	Add two northbound and two southbound travel lanes (0.50 miles of widening)	\$1,600,000	11.52%
RS9: US-395 between Luna and La Mesa Caltrans	Add three northbound and three southbound travel lanes (0.50 miles of widening)	\$2,400,000	3.32%
RS10: US-395 between La Mesa and Bear Valley Caltrans	Add three northbound and three southbound travel lanes (1.0 miles of widening)	\$4,800,000	2.15%

* = Cost included in the estimated cost of roadway segment widening

1.4 ON-SITE ROADWAY AND SITE ACCESS IMPROVEMENTS

Wherever required, roadways adjacent to the proposed project site and site access points will be constructed in compliance with recommended roadway classifications and respective cross-sections in the City of Victorville General Plan Circulation Element.

Sight distance at each project access point should be reviewed with respect to standard Caltrans and City sight distance standards at the time of final grading, landscaping and street improvement plans.

Signing/striping should be implemented in conjunction with detailed construction plans for the project site.

2.0 INTRODUCTION

This traffic impact analysis (TIA) analyzes the projected traffic operations associated with the proposed **SWC US-395/Palmdale Road (SR-18)** project in the City of Victorville. The purpose of this TIA is to evaluate the potential circulation system deficiencies that may result from development of the proposed project, and to recommend improvements to achieve acceptable operations, if applicable. This analysis has been prepared pursuant to applicable City of Victorville, San Bernardino Congestion Management Program (CMP) and Caltrans traffic impact analysis guidelines.

2.1 PROJECT DESCRIPTION

The proposed project is located at the southwest corner of the US-395/Palmdale Road (SR-18) intersection and would consist of the following land uses:

- 3,000 square foot automated car wash
- 8,800 square feet of fast food with drive-through land uses (4 fast food restaurants in total)
- 4,500 square feet of high turnover sit down (fast casual) restaurants
- 75,000 square feet of retail uses
- Gas Station (16 vehicle fueling positions) with convenience store (5,000 square feet)

The proposed project would have two access points on Palmdale Road (SR-18) and two access points on US-395. Site access is described in more detail below.

Palmdale Road (SR-18)

- 1) Full access at existing traffic signal serving the existing shopping center on the NWC corner of the US-395/SR-18 intersection. The project applicant will be responsible for constructing the 4th (south) leg of the intersection and any necessary modifications to signal timing and intersection infrastructure.
- 2) Right-in/Right-out only access at the existing driveway serving Burger King.

US-395

- 1) Right-in/Right-out only access at the existing driveway serving Burger King
- 2) Proposed Signalized access on US-395 at the southern edge of the property. The project applicant will be responsible for constructing the intersection and traffic signal, including synchronization with the US-395/Palmdale Road (SR-18) intersection as necessary.

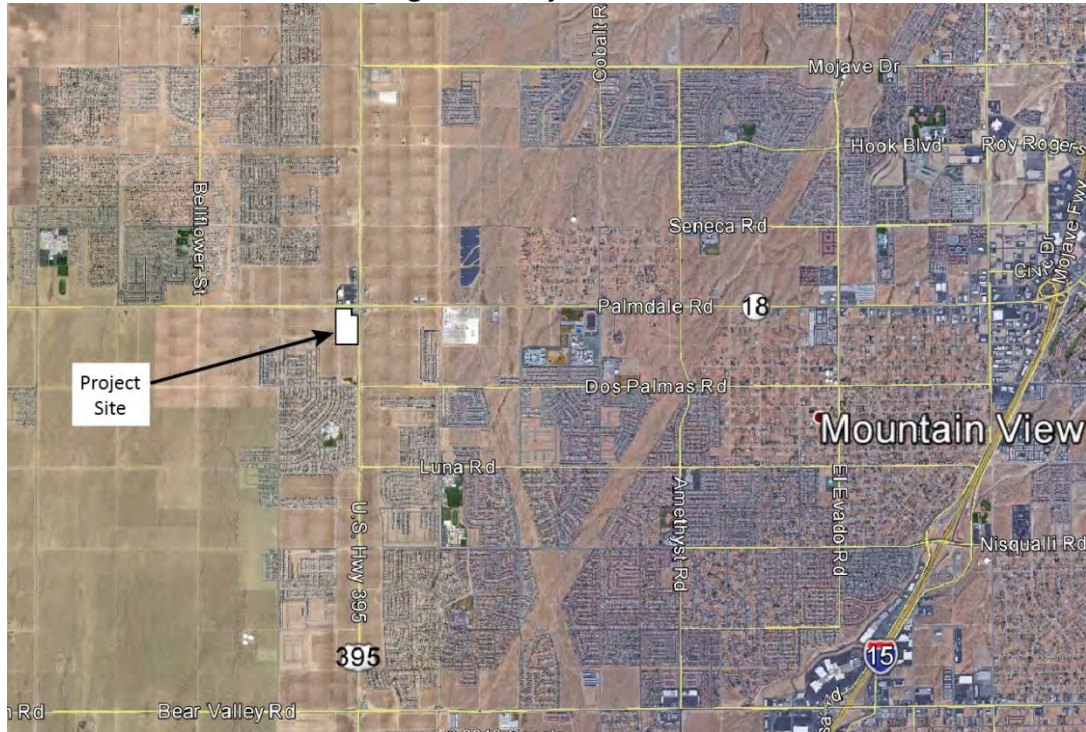
The project site is currently vacant. The proposed project is projected to be built and generating trips in 2019.

Before accounting for pass-by trip discounts, the proposed project is projected to generate approximately 727 AM peak hour trips, 975 PM peak hour trips and 11,711 daily trips at the project driveways. After accounting for pass-by trips, the proposed project is projected to generate approximately 489 net new AM peak hour trips, 657 net new PM peak hour trips and 8,463 net new daily trips on the surrounding roadway network.

Exhibit 1 shows the proposed project site plan.

Figure 1 shows the project site location.

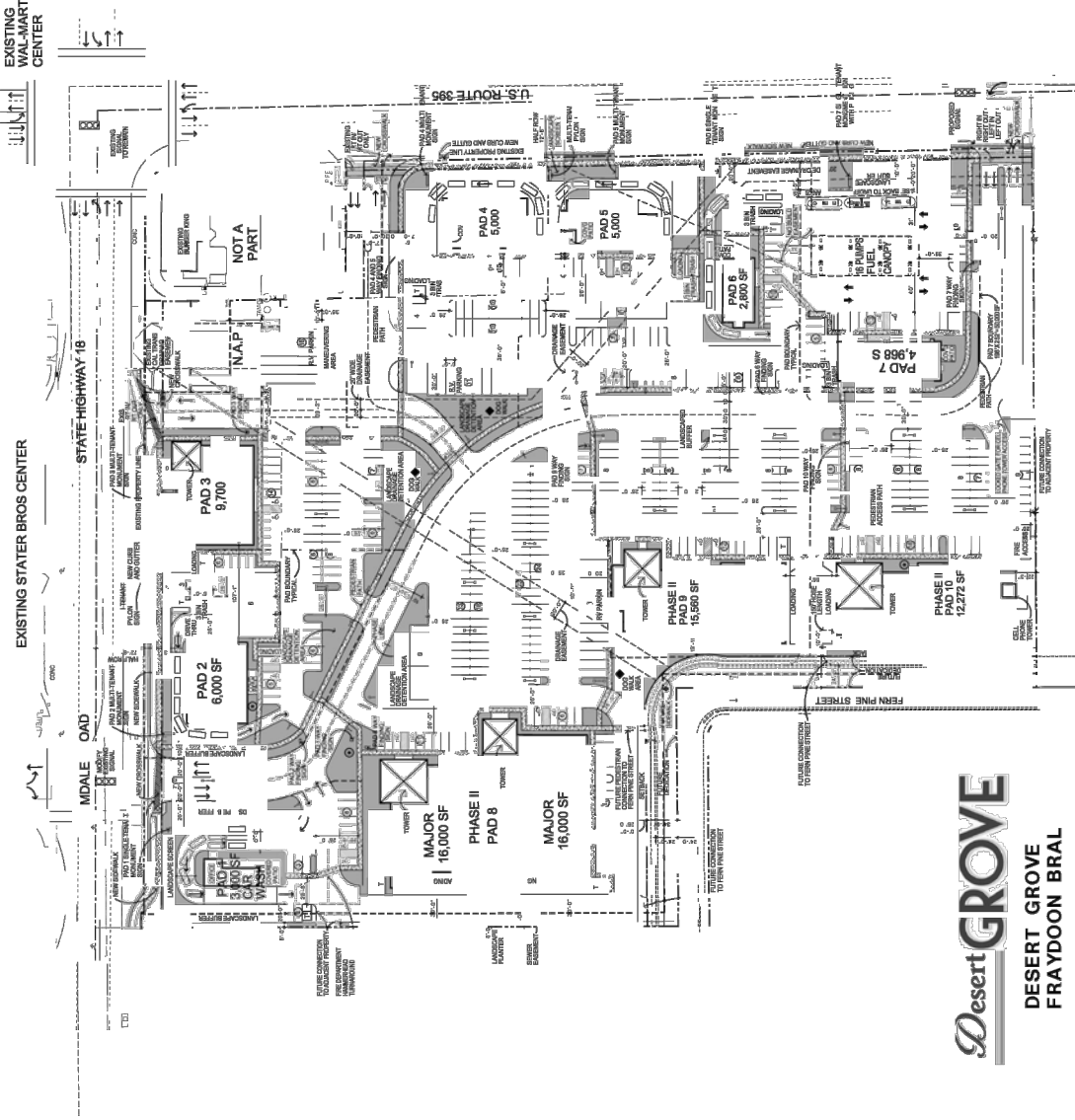
Figure 1– Project Location



2.2 STUDY AREA

The following twenty-five (25) intersections in the vicinity of the project site have been included in the intersection level of service (LOS) analysis based on execution of a scoping agreement with City staff:

1. Pearmain Street/Palmdale Road (SR-18);
2. Project Signalized Access/Palmdale Road (SR-18)
3. US-395/Seneca Road;
4. US-395/Palmdale Road (SR-18);
5. US-395/Project Signalized Access (with project scenarios only);
6. US-395/Dos Palmas Road;
7. US-395/Luna Road;
8. US-395/La Mesa Road;
9. US-395/Bear Valley Road;
10. Cantina Street/Palmdale Road (SR-18)
11. Mesa Linda Avenue/Dos Palmas Road;
12. Mesa Linda Avenue/Luna Road;
13. Mesa Linda Avenue/La Mesa Road;
14. Topaz Road/Luna Road;
15. Topaz Road/La Mesa Road;
16. Topaz Road/Bear Valley Road;



Desert GROVE
 DESERT GROVE
 FRAYDOON BRAL



AVALON ARCHITECTURAL
 18006 SKYDARK CIRCLE
 IRVINE, CA 92614
 PHONE: 949-640-0606 WEBSITE: www.avalonarchitectural.com



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Exhibit 1: Proposed Project Site Plan

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



Not to Scale

17. Cobalt Road/Palmdale Road (SR-18);
18. Cobalt Road/Luna Road;
19. Amethyst Road/Palmdale Road (SR-18);
20. Amethyst Road/Luna Road;
21. El Evado Road/Palmdale Road (SR-18);
22. Amargosa Road/Palmdale Road (SR-18);
23. Existing Driveway/Palmdale Road (SR-18);
24. US-395/Existing Driveway; and
25. US-395/Crossroads.

The following ten (10) roadway segments have been included in the LOS analysis:

- RS1: Luna Road between US-395 and Mesa Linda Avenue;
- RS2: Palmdale Road (SR-18) between Pearmain Road and US-395;
- RS3: Palmdale Road (SR-18) between US-395 and Cobalt Road;
- RS4: Palmdale Road (SR-18) between Cobalt Road and Amethyst Road;
- RS5: Palmdale Road (SR-18) between Amethyst Road and El Evado Road;
- RS6: US-395 between Seneca Road and Palmdale Road (SR-18);
- RS7: US-395 between Palmdale Road (SR-18) and Dos Palmas Road;
- RS8: US-395 between Dos Palmas Road and Luna Road;
- RS9: US-395 between Luna Road La Mesa Road; and
- RS1-: US-395 between La Mesa Road and Bear Valley Road.

The study intersections and roadways are generally either under the jurisdiction of Caltrans or the City of Victorville. The City of Adelanto is adjacent the project site to the west; study intersections within Adelanto City limits are all Caltrans maintained intersections. TJW submitted a traffic impact analysis letter to the City of Victorville in December 2016 and received comments and approval of the scope from the City via email. The scoping agreement approved by the City is provided in **Appendix A**.

This traffic analysis follows applicable City of Victorville, County of San Bernardino and Caltrans traffic study requirements and guidelines.

Exhibit 2 shows the location of the study intersections and roadway segments, which are analyzed for the following study scenarios:

- (1) *Existing Traffic Conditions;*
- (2) *Existing Plus Project Conditions;*
- (3) *Opening Year (2019) Without Project Conditions;*
- (4) *Opening Year (2019) With Project Project Conditions;*
- (5) *Interim Year Without Project Conditions;*
- (6) *Interim Year With Project Conditions;*
- (7) *General Plan (2040) Without Project Conditions; and*
- (8) *General Plan (2040) With Project Conditions.*

Legend:

- # = Study Intersection
- = Study Roadway Segment

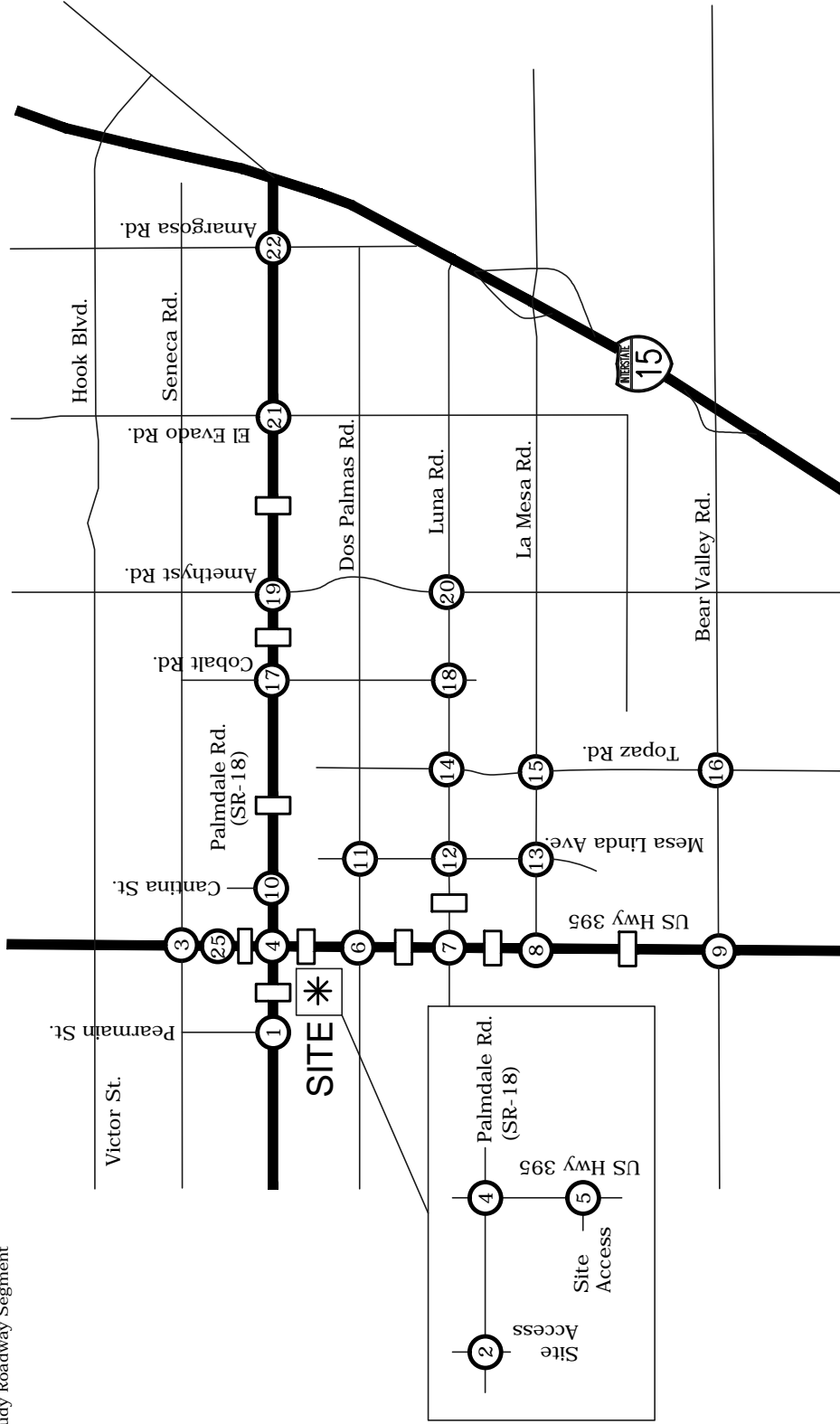


Exhibit 2: Project Location and Study Area

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



Traffic operations are evaluated for the following time periods:

- Weekday AM Peak Hour occurring within 7:00 AM to 9:00 AM; and
- Weekday PM Peak Hour occurring within 4:00 PM to 6:00 PM.

2.3 ANALYSIS METHODOLOGY

2.3.1 Intersection Analysis

Level of Service (LOS) is commonly used to describe the quality of flow on roadways and at intersections using a range of LOS from LOS A (free flow with little congestion) to LOS F (severely congested conditions). The definitions for LOS for interruption of traffic flow differ depending on the type of traffic control (traffic signal, unsignalized intersection with side street stops, unsignalized intersection with all-way stops). The Highway Capacity Manual (HCM) 2010 (Transportation Research Board, 2010) methodology expresses the LOS of an intersection in terms of delay time for the intersection approaches. The HCM methodology utilizes different procedures for different types of intersection control.

Caltrans require signalized intersection operations be analyzed utilizing the HCM methodology. The City of Victorville requested that signalized intersection operations be analyzed utilizing Webster software, which utilizes the HCM 2000 methodology. Intersection LOS for signalized intersections is based on the intersections average control delay for all movements at the intersection during the peak hour. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

For the purposes of this analysis, signalized intersections have been analyzed utilizing both the Webster software (HCM 2000 methodology) and Synchro software (HCM 2010 methodology) for existing conditions and utilizing Synchro and the HCM 2010 methodology for all other analysis scenarios. Review of the output from the differing software programs for existing conditions indicated that for critical intersections such as US-395/Palmdale Road (SR-18) the Synchro output/HCM 2010 methodology produced a more conservative result. Additionally, all currently signalized study intersections, with the exception of the Amethyst Road/Luna Road intersection, are on the State Highway network, which requires HCM 2010 methodology.

Unsignalized study intersections have been analyzed using Synchro software and the HCM 2010 methodology for unsignalized intersections.

Table 1 describes the general characteristics of traffic flow and accompanying delay ranges at signalized intersections.

Table 1
HCM – LOS & Delay Ranges – Signalized Intersections

LEVEL OF SERVICE	DESCRIPTION	DELAY (in seconds)
A	Very favorable progression; most vehicles arrive during green signal and do not stop. Short cycle lengths.	0 – 10.00
B	Good progression, short cycle lengths. More vehicles stop than for LOS A.	10.01 – 20.00
C	Fair progression; longer cycle lengths. Individual cycle failures may begin to appear. The number of vehicles stopping is significant, though many vehicles still pass through without stopping.	20.01 – 35.00
D	Progression less favorable, longer cycle length and high flow/capacity ratio. The proportion of vehicles that pass through without stopping diminishes. Individual cycle failures are obvious.	35.01 – 55.00
E	Severe congestion with some long standing queues on critical approaches. Poor progression, long cycle lengths and high flow/capacity ratio. Individual cycle failures are frequent.	55.01 – 80.00
F	Very poor progression, long cycle lengths and many individual cycle failures. Arrival flow rates exceed capacity of intersection.	> 80.01

Source: Transportation Research Board, *Highway Capacity Manual*, HCM2010 Edition (Washington D.C., 2010).
Note: LOS and Delay Ranges for HCM 2000 are identical to HCM 2010

Collected peak hour traffic volumes have been adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. It is a common practice in LOS analysis to conservatively use a peak 15-minute flow rate applied to the entire hour to derive flow rates in vehicles per hour that are used in the LOS analysis. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume. $PHF = [Hourly\ Volume] / [4 * Peak\ 15\ Minute\ Volume]$. The use of a 15-minute PHF produces a more detailed and conservative analysis compared to analyzing vehicles per hour. Existing PHFs, obtained from the existing traffic counts have been used for existing and project opening year analysis scenarios in this study. Per SANBAG CMP guidelines, a PHF of 0.95 has been utilized for interim year and long range analysis scenarios.

Recommended saturation flow rates for existing, near-term and future scenario from the SANBAG CMP have been utilized in this analysis.

Unsignalized intersection operations are also analyzed utilizing the HCM 2010 methodology. Intersection operation for unsignalized intersections is based on the weighted average control delay expressed in seconds per vehicle.

At a two-way or side-street stop-controlled intersection, LOS is calculated for each stop-controlled minor street movement, for the left-turn movement(s) from the major street, and for the intersection as a whole. For approaches consisting of a single lane, the delay is calculated as the average of all movements in that lane. For all-way stop-controlled intersection, LOS is computed for the intersection as a whole.

Table 2 describes the general characteristics of traffic flow and accompanying delay ranges at unsignalized intersections.

Table 2
HCM – LOS & Delay Ranges – Unsignalized Intersections

LEVEL OF SERVICE	DESCRIPTION	DELAY (in seconds)
A	Little or no delays.	0 – 10.00
B	Short traffic delays.	10.01 – 15.00
C	Average traffic delays.	15.01 – 25.00
D	Long traffic delays. Multiple vehicles in queue.	25.01 – 35.00
E	Very long delays. Demand approaching capacity of intersection	35.01 – 50.00
F	Very constrained flow with extreme delays and intersection capacity exceeded.	> 50.01

Source: Transportation Research Board, *Highway Capacity Manual*, HCM2010 Edition (Washington D.C., 2010).

Study intersection under the jurisdiction of Caltrans have been analyzed per the *Caltrans Guide for the Preparation of Traffic Impact Studies*, which also requires intersections be analyzed utilizing the HCM 2010 methodology.

This analysis utilizes the Synchro 9 analysis software, to satisfy Caltrans and CMP requirements, for all study intersections. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis specified in Chapter 16 of the HCM. The level of service and capacity analysis performed within Synchro takes the optimization and coordination of signalized intersections within a network into consideration.

2.3.2 Roadway Segment Capacity Analysis

Roadway segment operations have been evaluated using the City of Victorville roadway segment capacity thresholds contained in *the City of Victorville General Plan Circulation Element*. The daily roadway segment capacity for each type of roadway is shown in **Table 3**. Roadway capacities tend to be “rule of thumb” estimated for planning purposes and are affected by factors such as intersection spacing, configuration and control, access control, roadway grade, design geometrics, sight distance and vehicle mix. Typically, when ADT-based roadway segment analysis indicates a deficiency, a review of peak hour operation of the intersections on either end of the segment is undertaken. The more detailed peak hour intersection operation analysis takes into account the factors that affect roadway capacity; unless the peak hour intersection analysis indicates the need for additional through lanes, roadway segment widening is not recommended on the basis of ADT analysis alone. **Table 3** summarizes the maximum two-way volumes (LOS E volumes) for various roadway classifications in the City of Victorville. These volumes are used as the denominator when calculating the volume-to-capacity ratio of roadway segments.

**Table 3
City of Victorville Roadway Segment Thresholds**

ROADWAY CLASSIFICATION	NUMBER OF LANES	TWO-WAY TRAFFIC VOLUME (ADT) at LOS E (V/C = 1.00)
Local	2	10,000
Collector	2	12,500
Residential Arterial	4	25,000
Arterial	2	18,750*
	4	37,500
Major Arterial	2	18,750
	4	37,500
Super Arterial	2	18,750*
	4	37,500*
	6	56,300
	8	75,000

Source: Draft Program Environmental Impact Report, City of Victorville General Plan 2030 Table 4.1 (August 14, 2008)
*: Values interpolated based on available information in Table 4.1

2.3.3 Traffic Signal Warrant Analysis Methodology

Traffic signal warrants refer to a list of established criteria utilized by Caltrans and other public agencies to quantitatively justify or determine the potential need for installation of a traffic signal at an unsignalized location. This analysis uses the signal warrant criteria in the latest edition of the Federal Highway Administration’s (FHWA) Manual on Uniform Traffic Control Devices (MUTCD) as amended by the California MUTCD (CA MUTCD) Revision 2 (April 2017), for all unsignalized study intersections.

The CA MUTCD contains nine different signal warrants for existing conditions based on several different factors such as vehicular volumes, pedestrian volumes, accident frequency, location of schools and location of railroad tracks. This TIA utilizes the peak hour volume based warrant (Warrant 3) as the appropriate traffic signal warrant analysis for all analysis. Warrant 3 is appropriate for this analysis because it provides specialized criteria for intersections with rural characteristics.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal *may be* warranted. Satisfying a signal warrant does not require that a traffic signal be installed at a particular location, rather other traffic factors and conditions should be evaluated to determine if signalization is justified. Additionally, signal warrants do not necessarily correlate with level of service; an intersection may satisfy a warrant and still be operating at or better than LOS D, or be operating at a deficient LOS (E or F) and not meet signal warrants.

2.4 PERFORMANCE CRITERIA

2.4.1 City of Victorville

The City of Victorville has established level of service “D” or better as acceptable LOS for all intersections along the designated street and highway system in the City’s General Plan Circulation Element. The City of Victorville has established LOS C as acceptable LOS for roadway segments under the City’s jurisdiction per the City’s General Plan EIR.

2.4.2 San Bernardino County

The SANBAG CMP has designated LOS E as the target for acceptable LOS for all designated CMP intersections and roadway segments.

2.4.3 Caltrans

Caltrans endeavors to maintain a target LOS at the transition between LOS “C” and LOS “D” on State Highway facilities, although Caltrans acknowledges that this may not always be feasible. If an existing State Highway facility is operating at less than this target LOS, the existing LOS should be maintained. In general, the region-wide goal for acceptable LOS on all freeways, roadway segments and intersections is LOS “D.” Consistent with the City of Victorville LOS threshold of LOS “D”, LOS “D” will be used as the target LOS for state highway intersections and roadway segments in this analysis.

2.5 THRESHOLDS OF SIGNIFICANCE

According to California Environmental Quality Act (CEQA) guidelines, a project is considered to cause a potentially significant impact to a transportation system if it:

- Conflicts with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel.
- Conflicts with an applicable congestion management program (CMP), including, but not limited to level of service standards, travel demand measures, or other standards established by the County Congestion Management Agency for roadways or highways.
- Conflicts with adopted policies or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decreases the performance or safety of such facilities.

2.5.1 City of Victorville

City of Victorville intersection deficiencies would occur under the following conditions:

- If the project contributes measurable traffic to an intersection or roadway segment operating at LOS D or better or a volume-to-capacity ratio of 0.95 or lower for without project conditions, and the addition of project trips causes intersection LOS to degrade to LOS E or worse, or volume-to-capacity ratio to increase it greater than 0.95.
- If a project contributes measurable traffic to an intersection or roadway segment operating at a deficient LOS (LOS E or F) for without project conditions.

2.5.2 Caltrans

State Highway intersection deficiencies would occur if:

- The Project causes the LOS of a State Highway intersection to degrade from LOS D or better to LOS E or F.

3.0 Existing Conditions

3.1 EXISTING CIRCULATION NETWORK/STUDY AREA CONDITIONS

The characteristics of the roadway system in the study area are described in **Table 4** below.

**Table 4
Roadway Characteristics Within Study Area**

Roadway	Classification ¹	Jurisdiction	Direction	Existing Travel Lanes	Median Type ²	Speed Limit (mph)	On-Street Parking
Palmdale Road	Super Arterial	Victorville/ Caltrans	East-West	4	TWLTL/PM	35-55	No
US-395	Super Arterial	Victorville/ Caltrans	North-South	2-4 ³	TWLTL/PM	55	No
Amethyst Road	Super Arterial	Victorville	North-South	2-4 ⁴	TWLTL/PM	45-50	No
Bear Valley Road	Super Arterial	Victorville	East-West	4	TWLTL	55	No
El Evado Road	Super Arterial ⁵ Major Arterial ⁵	Victorville	North-South	2-4 ⁵	TWLTL/PM	45-50	Yes
La Mesa Road	Major Arterial ⁶ Residential Arterial ⁶	Victorville	East-West	4	TWLTL/PM	45	No
Topaz Road	Arterial	Victorville	North-South	2-4 ⁷	TWLTL/PM	40-50	No
Amargosa Road	Arterial	Victorville	North-South	4	TWLTL	45	No
Cantina Street	Arterial	Victorville	North-South	3	TWLTL	40	No
Mesa Linda Ave	Arterial Collector	Victorville	North-South	2-4 ⁸	TWLTL/PM/ UD	35-40	Yes
Dos Palmas	Collector	Victorville	East-West	2	PM	40	Yes
Luna Road	Collector	Victorville	East-West	2	PM	40	Yes
Seneca Road	Collector	Victorville	East-West	2	PM	40	Yes
Cobalt Road	Collector	Victorville	North-South	2	TWLTL/PM/ UD	40	Yes

1: Source: City of Victorville Circulation Element

2: RLM = Raised Landscaped Median, TWLTL = Two-Way Left-Turn Lane, PM = Painted Median, UD = Undivided

3: Two lanes north of Begonia Rd, Two lanes between Luna Rd and Bear Valley.

4: Two lanes south of Palmdale, four lanes south of Dos Palmas Rd.

5: Super Arterial (Four lanes) north of Palmdale Rd, Major Arterial (two lanes) south of Palmdale Rd.

6: Major Arterial east of US-395, Residential Arterial west of US-395, Major Arterial east of Amethyst Rd.

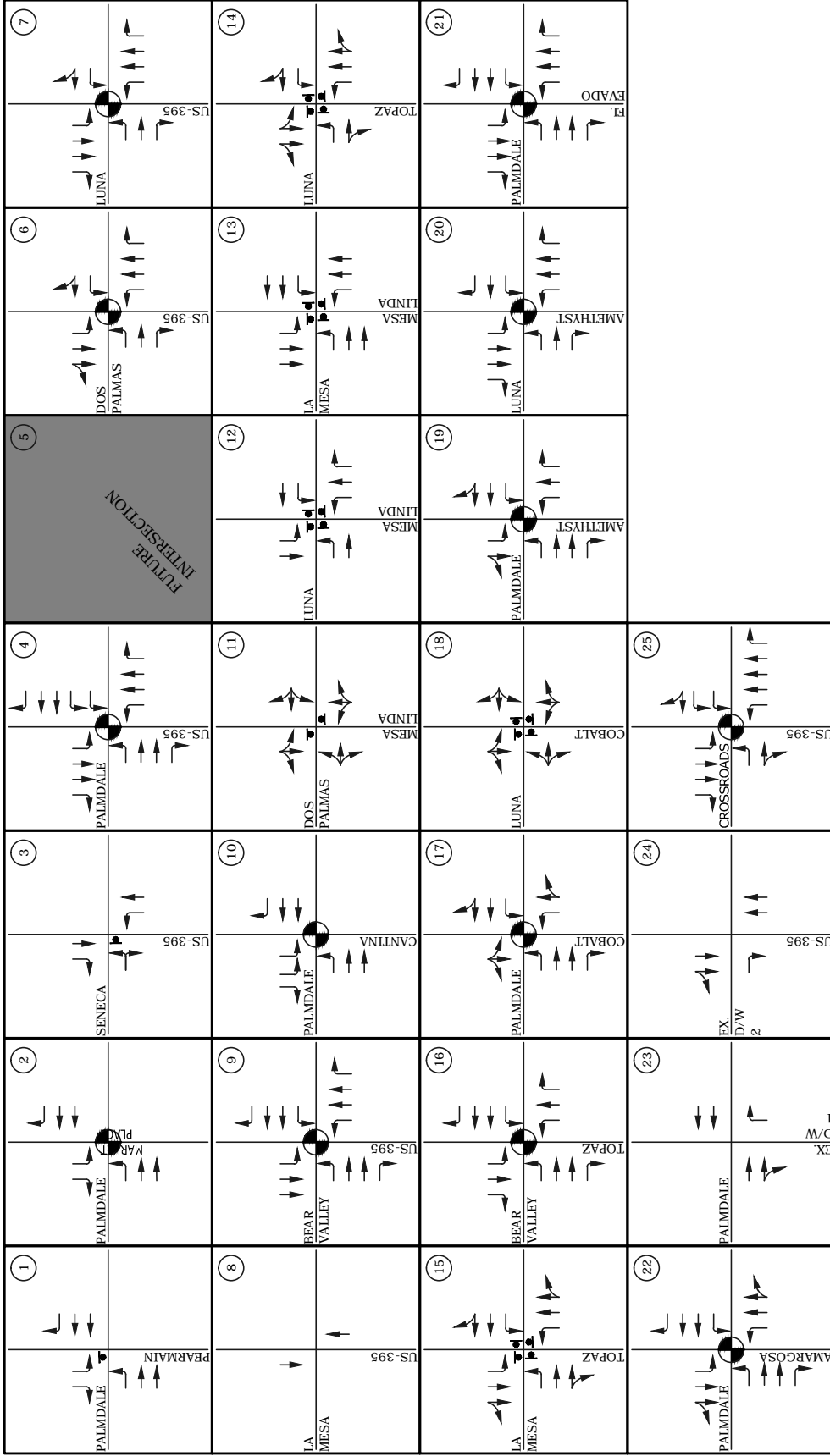
7: Two lanes north of Luna Rd, four Lanes south of Luna Rd, two lanes south of Red Rock Rd.

8: Two lanes north of Luna Rd, Three lanes south of Luna Rd, Four Lanes south of La Mesa

Exhibit 3A shows existing conditions study intersection geometry; **Exhibit 3B** shows existing roadway cross sections in the study area.

3.2 CITY OF VICTORVILLE GENERAL PLAN CIRCULATION ELEMENT

The proposed project site is located within the City of Victorville. **Appendix B** contains the current Victorville General Plan Circulation Element future transportation network and roadway cross sections.



Legend:

- = Traffic Signal
- = Stop Sign
- = Defacto Right Turn

Exhibit 3A: Existing Intersection Lane Geometry and Controls

BPE-16-004 SWC US395/Palmdale (SR-18) TIA





TJW ENGINEERING, INC.



Not to Scale

Legend:

-  = Study Intersection
- 4** = Number of Lanes
- D** = Divided
- U** = Undivided
-  = Study Roadway Segment

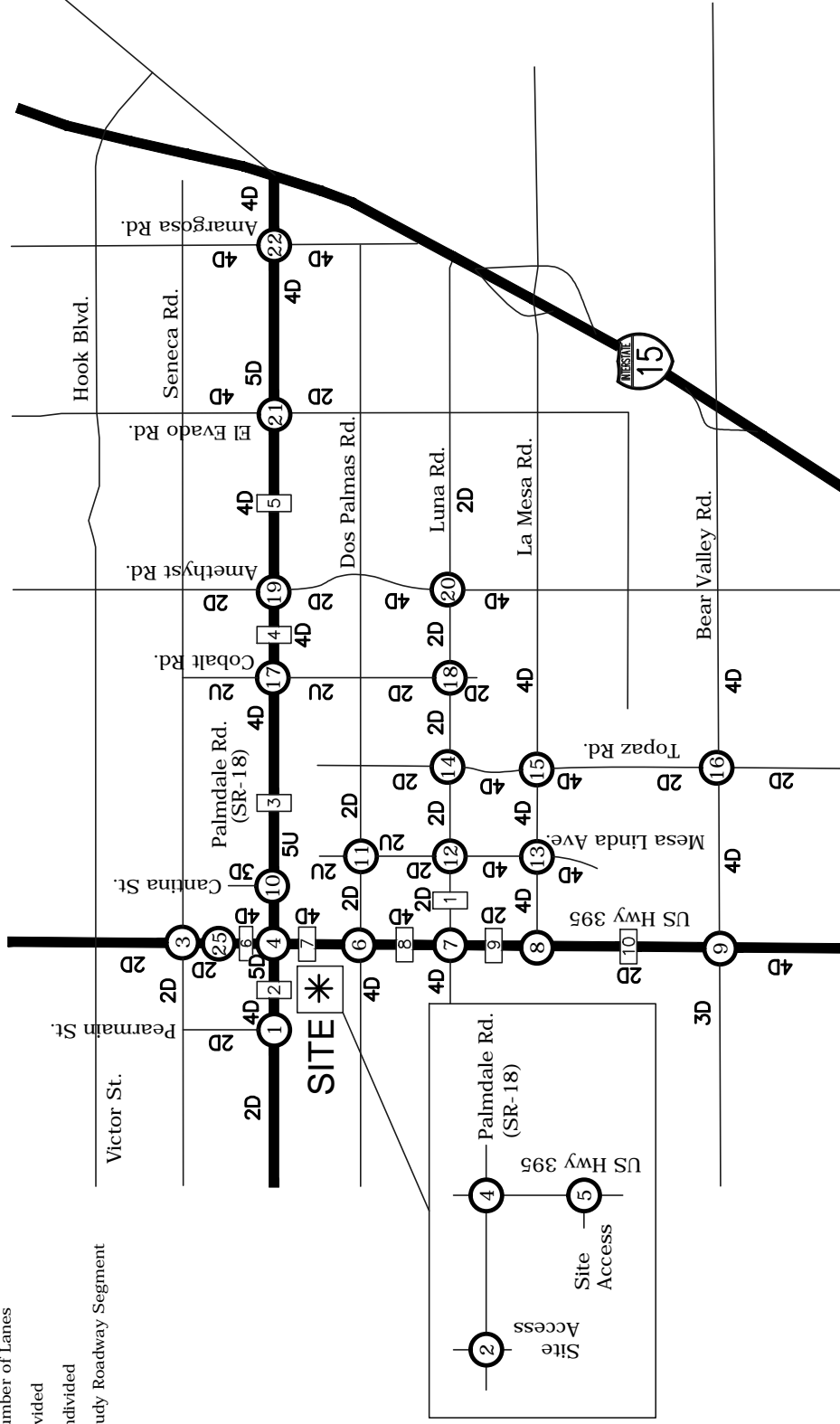


Exhibit 3B: Existing Roadway Segment Geometry

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



3.3 EXISTING BICYCLE AND PEDESTRIAN FACILITIES

There are no existing bicycle facilities in the study area. According to the *City of Victorville Non-Motorized Plan*, bicycle facilities are planned on the following roadways within the study area:

Class II On-Street Bicycle Lanes

- Palmdale Road (SR-18) from Baldy Mesa Road to Amargosa Road
- Dos Palmas Road from Baldy Mesa Road to Amargosa Road
- Bear Valley Road from Mesa View Road to the Oro Grande Wash
- Cantina Street
- Mesa Linda Street from northern City limits to La Mesa Road
- El Evado Road from SCLA to La Mesa
- Amargosa Road south of Dos Palmas
- US Highway 395

Class III Bicycle Routes

- Palmdale Road east of Amargosa Road
- Luna Road from Mesa View Road to Amargosa Road
- La Mesa Road from Mesa View Road to Amargosa Road
- Topaz Road from Luna Street to Mesa
- Cobalt Road
- Amethyst Road from Hopland to Bear Valley
- El Evado Road south of La Mesa
- Amargosa Road from Hopland to Dos Palmas

Appendix B contains the *City of Victorville Non-Motorized Plan* transportation map.

Sidewalks and curb ramps at intersections are present where development has occurred within the study area, and absent where development has yet to occur. Sidewalks are not present along the proposed project's frontage on Palmdale Road (SR-18) or US-395. The proposed project will construct sidewalks along its frontage on both roadways.

3.4 EXISTING PUBLIC TRANSIT SERVICES

The City of Victorville is served by the Victor Valley Transit Authority (VVTA) which provides bus service throughout the Victor Valley region. **Figure 2** shows the VVTA routes in the vicinity of the project site.

Figure 2– VVTA Transit Routes



There are three transit routes directly serving the project site, VVTA Routes 31, 33 and 54. Transit routes and schedules are provided in **Appendix B**.

VVTA Route 31 travels between Adelanto and Victorville, with stops at Stater Bros, Silverado High School and Costco. Route 31 runs throughout the day and evening on weekdays with headways of 30-60 minutes. Route 31 runs throughout the day on weekends with headways of 60 minutes. In the vicinity of the proposed project there is a stop at the US-395/Palmdale Road (SR-18) intersection.

VVTA Route 33 travels from the Adelanto Stater Brothers (across the street from the proposed project site on Palmdale Road) to Adelanto City Hall. Route 33 runs throughout the day and evening on weekdays and Saturdays with headways of 60 minutes. Route 33 runs throughout the day on Sundays with headways of 120 minutes. In the vicinity of the proposed project there is a stop on Palmdale Road (SR-18) across the street from the proposed project site.

VVTA Route 54 travels between the Molina Medical Center and the Victor Valley Mall. Route 54 runs throughout the day and evening on weekdays and Saturdays with headways of 60 minutes. Route 54 runs throughout the day on Sundays with headways of 120 minutes. In the vicinity of the proposed project there is a stop at the US-395/Palmdale Road (SR-18) intersection.

3.5 EXISTING TRAFFIC VOLUMES

To determine the existing operation of the study intersections and roadway segments, AM and PM peak period traffic counts were collected on Wednesday January 18, 2017. Detailed traffic count data is provided in **Appendix C**.

Exhibit 4 shows existing AM and PM peak hour volumes at the study intersections.

3.6 EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE ANALYSIS

Existing conditions AM and PM peak hour intersection analysis is shown in **Table 5**. Calculations are based on the existing geometrics at the study area intersections as shown in **Exhibit 3**. Webster (HCM 2000) and Synchro (HCM 2010) analysis sheets are provided in **Appendix D**.

**Table 5
Intersection Analysis – Existing Conditions**

Int. No.	Intersection	Control Type	AM Peak Hour		PM Peak Hour	
			Delay (V/C)	LOS	Delay (V/C)	LOS
HCM 2000 Analysis (Webster)						
2	Stater Bros Drwy/Palmdale Rd (SR-18)	Signal	12 (0.42)	B	16 (0.55)	B
4	US-395/Palmdale Rd (SR-18)	Signal	46 (0.85)	D	36 (0.78)	D
6	US-395/Dos Palmas Rd	Signal	29 (0.68)	C	22 (0.56)	C
7	US-395/Luna Rd	Signal	20 (0.54)	B	22 (0.52)	C
9	US-395/Bear Valley Rd	Signal	33 (0.68)	C	37 (0.69)	D
10	Cantina St/Palmdale Rd (SR-18)	Signal	7 (0.30)	A	9 (0.36)	A
16	Topaz Rd/Bear Valley Rd	Signal	16 (0.27)	B	13 (0.28)	B
17	Cobalt Rd/Palmdale Rd (SR-18)	Signal	29 (0.88)	C	17 (0.48)	B
19	Amethyst Rd/Palmdale Rd (SR-18)	Signal	25 (0.64)	C	29 (0.74)	C
20	Amethyst Rd/Luna Rd	Signal	28 (0.66)	C	22 (0.36)	C
21	El Evado Rd/Palmdale Rd (SR-18)	Signal	31 (0.66)	C	37 (0.64)	D
22	Amargosa Rd/Palmdale Rd (SR-18)	Signal	29 (0.69)	C	32 (0.72)	C
HCM 2010 Analysis (Synchro)						
1	Pearmain St/Palmdale Rd (SR-18)	TWSC	104.2	F	75.3	F
2	Stater Bros Drwy/Palmdale Rd (SR-18)	Signal	6.4	A	10.7	B
3	US-395/Seneca Rd	TWSC	46.9	E	49.6	E
4	US-395/Palmdale Rd (SR-18)	Signal	53.3	D	40.0	D
6	US-395/Dos Palmas Rd	Signal	33.1	C	20.9	C
7	US-395/Luna Rd	Signal	29.0	C	19.9	B
9	US-395/Bear Valley Rd	Signal	29.0	C	25.7	C
10	Cantina St/Palmdale Rd (SR-18)	Signal	14.2	B	12.6	B
11	Mesa Linda Rd/Dos Palmas Rd	TWSC	17.9	C	11.8	B
12	Mesa Linda Rd /Luna Rd	AWSC	15.5	C	9.5	A
13	Mesa Linda Rd /La Mesa Rd	AWSC	13.7	B	9.4	A
14	Topaz Rd/Luna Rd	AWSC	23.1	C	9.7	A
15	Topaz Rd/La Mesa Rd	AWSC	21.3	C	10.4	B
16	Topaz Rd/Bear Valley Rd	Signal	18.6	B	21.9	C
17	Cobalt Rd/Palmdale Rd (SR-18)	Signal	29.2	C	30.6	C
18	Cobalt Rd/Luna Rd	AWSC	19.5	C	9.4	A
19	Amethyst Rd/Palmdale Rd (SR-18)	Signal	31.2	C	37.6	D
20	Amethyst Rd/Luna Rd	Signal	21.9	C	18.7	B
21	El Evado Rd/Palmdale Rd (SR-18)	Signal	41.1	D	38.3	D
22	Amargosa Rd/Palmdale Rd (SR-18)	Signal	37.1	D	41.9	D
25	US-395/Crossroads	Signal	14.0	B	20.0	B

Note: Delay shown in seconds per vehicle. TWSC = One- or Two-Way Stop-Control. AWSC = All-Way Stop-Control
Deficient intersection operation shown in **bold**.

Per the 2010 Highway Capacity Manual, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 5**, the signalized study intersections are currently operating at an acceptable LOS (LOS D or better) during the AM and PM peak hours. Based on HCM 2010 analysis utilizing Synchro software, the study intersections are operating at an acceptable LOS (LOS D or better) with the exception of the following two unsignalized intersections where the minor street approaches are operating at LOS E or F:

- #1: Pearmain Road/Palmdale Road (SR-18); and
- #3: Seneca Road/US-395.

3.7 EXISTING CONDITIONS ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

Table 6 summarizes existing conditions roadway segment analysis based on the LOS E capacities provided in the City of Victorville General Plan Circulation Element, previously summarized in **Table 3**.

**Table 6
Roadway Segment Analysis – Existing Conditions**

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	Existing		
			ADT	V/C	LOS
RS1: Luna between US-395 & Mesa Linda	2 – C	12,500	4,999	0.400	A
RS2: Palmdale between Pearmain & US-395	4 – SA	37,500	24,446	0.652	B
RS3: Palmdale between US-395 & Cobalt	4 – SA	37,500	22,045	0.588	A
RS4: Palmdale between Cobalt & Amethyst	4 – SA	37,500	22,967	0.612	B
RS5: Palmdale between Amethyst & El Evado	4 – SA	37,500	22,660	0.604	B
RS6: US-395 between Seneca & Palmdale	4 – SA	37,500	30,207	0.806	D
RS7: US-395 between Palmdale & Dos Palmas	4 – SA	37,500	33,838	0.902	E
RS8: US-395 between Dos Palmas & Luna	4 – SA	37,500	28,964	0.772	C
RS9: US-395 between Luna & La Mesa	2 – SA	18,750	27,295	1.456	F
RS10: US-395 between La Mesa & Bear Valley	2 – SA	18,750	24,763	1.321	F

Note: C = collector, SA = super arterial

As shown in **Table 6**, the study roadway segments are currently operating at an acceptable LOS (LOS D or better) for existing conditions with the exception of RS9: US-395 between Luna Road and La Mesa Road and RS10: US-395 between La Mesa Road and Bear Valley Road, which are operating at LOS F.

3.8 EXISTING CONDITIONS PEAK HOUR SIGNAL WARRANT ANALYSIS

Peak Hour traffic signal warrants for existing conditions have been prepared based on existing peak hour intersection volumes at the unsignalized study intersections. **Table 7** summarizes the results of the signal warrant analysis. Detailed warrant analysis sheets are contained in **Appendix E**.

Table 7
Peak Hour Signal Warrant Analysis – Existing Conditions

Int. No.	Intersection	Peak Hour Signal Warrants Met?	
		AM Peak Hour	PM Peak Hour
1	Pearmain St/Palmdale Rd (SR-18)	Yes	Yes
3	US-395/Seneca Road	Yes	Yes
11	Mesa Linda Ave/Dos Palmas Rd	No	No
12	Mesa Linda Ave/Luna Road	No*	No*
13	Mesa Linda Ave/La Mesa Road	No*	No*
14	Topaz Rd/Luna Road	No	No
15	Topaz Rd/La Mesa Road	Yes	No
18	Cobalt Rd/Luna Rd	No	No

Note: * = peak hour signal warrants not met based on the traffic data collected for this TIA; however, the City has performed a detailed signal warrant analysis at this location which concluded signalization is warranted and the connection of La Mesa Road to US-395 is currently under construction (<https://www.victorvilleca.gov/Home/Components/News/News/94/16>).

While this analysis includes peak hour signal warrant analysis for informational purposes, it is possible that some of the study intersection may satisfy other traffic signal warrants such as the eight-hour vehicular volume warrant, four-hour vehicular volume warrants, pedestrian volume warrant, school crossing warrant, coordinated signal system warrant, crash experience warrant, roadway network warrant or intersection near a grade crossing warrant.

4.0 Proposed Project

4.1 Project Description

The proposed project is located at the southwest corner of the US-395/Palmdale Road (SR-18) intersection and would consist of the following land uses:

- 3,000 square foot automated car wash
- 8,800 square feet of fast food with drive-through land uses (4 fast food restaurants in total)
- 4,500 square feet of high turnover sit down (fast casual) restaurants
- 75,000 square feet of retail uses
- Gas Station (16 vehicle fueling positions) with convenience store (5,000 square feet)

The proposed project would have two access points on Palmdale Road (SR-18) and two access points on US-395. Site access is described in more detail below.

Palmdale Road (SR-18)

- 1) Full access at existing traffic signal serving the existing shopping center on the NWC corner of the US-395/SR-18 intersection. The project applicant will be responsible for constructing the 4th (south) leg of the intersection and any necessary modifications to signal timing and intersection infrastructure.
- 2) Right-in/Right-out only access at the existing driveway serving Burger King.

US-395

- 1) Right-in/Right-out only access at the existing driveway serving Burger King
- 2) Proposed Signalized access on US-395 at the southern edge of the property. The project applicant will be responsible for constructing the intersection and traffic signal, including synchronization with the US-395/Palmdale Road (SR-18) intersection as necessary.

The project site is currently vacant. The proposed project is projected to be built and generating trips in 2019. **Exhibit 1** previously showed the proposed site plan.

4.2 Project Trip Generation

Trip generation represents the amount of traffic, both inbound and outbound, produced by a development. Determining trip generation for a proposed project is based on projecting the amount of traffic that the specific land uses being proposed will produce. Industry standard *Institute of Transportation Engineers (ITE)* 10th Edition trip generation rates were used to determine trip generation of the proposed project.

Pass-by Trip Adjustment

ITE trip generation rates allow for a pass-by trip adjustment for certain land uses such as restaurants and gas stations. A pass-by trip adjustment is applicable to land uses located along busy arterial roadways attracting vehicle trips already on the roadway; particularly when the roadway is experiencing peak operating conditions. For example, a motorist traveling along US-395 or Palmdale Road (SR-18) between work and home may stop at the proposed project site. A pass-by adjustment under this example would

reduce/eliminate both the inbound trip and the outbound trip from the surrounding roadway circulation system since the vehicle was already traveling on the roadway.

The *ITE Trip Generation Handbook, 3rd Edition* typically lists AM and a PM peak hour pass-by rate for certain land uses but does not provide guidance regarding daily pass-by rates. TJW worked with City staff to determine appropriate pass-by rates for the proposed project land uses during the scoping agreement process.

Table 8 shows the ITE 10th Edition trip generation rates used to calculate projected trip generation of the proposed project, except where noted.

Table 8
ITE Trip Generation Rates

Land Use (ITE Code)		AM In	AM Out	AM Total	PM In	PM Out	PM Total	Daily
Shopping Center (820)	TSF	0.58	0.36	0.94	1.83	1.98	3.81	37.75
Fast Food With Drive Through (934)	TSF	20.50	19.69	40.19	16.99	15.68	32.67	470.95
HTSDR (932)	TSF	5.47	4.47	9.94	6.06	3.71	9.77	112.18
Automated Car Wash ¹	Site	29.00	29.00	58	67.00	67.00	134	944
Gas Station w Conv (945)	VFP	6.24	6.23	12.47	7.13	6.86	13.99	205.36

Source: ITE Trip Generation Manual (10th Edition, 2017) except:

1 = *Matt's Express Car Wash Traffic Impact Analysis (Kunzman Associates, Inc. April 22, 2014)*

Table 9 summarizes the projected trip generation of the proposed project based on the trip generation rates shown in **Table 8**, and available pass-by rates in the *ITE Trip Generation Handbook (3rd Edition, 2014)* modified based on discussion with City of Victorville staff.

**Table 9
Trip Generation of Proposed Project**

Land Use		AM In	AM Out	AM Total	PM In	PM Out	PM Total	Daily Trips	
Proposed:	8.8 TSF	180	173	353	149	138	287	4,144	
Fast Food With Drive-Thru									
		Less 35% AM, 35% PM, 35% Daily Pass-by	-63	-61	-124	-52	-48	-100	-1,450
		(A) Subtotal Net Fast Food Trip Generation	117	112	229	97	90	187	2,694
Proposed:	4.5 TSF	25	20	45	27	17	44	505	
High Turnover Sit-Down Rest									
		Less 25% PM Pass-by			-7	-4	-11	-11	
		(B) Subtotal Net HTSDR Trip Generation	25	20	45	20	13	33	494
Proposed:	75.0 TSF	45	27	72	137	148	285	2,831	
Retail									
		Less 25% PM Pass-by			-34	-37	-71	-71	
		(C) Subtotal Net Retail Trip Generation	45	27	72	103	111	214	2,760
Proposed:	1 Site	29	29	58	67	67	134	944	
Automated Car Wash									
		Less 25% AM, 25% PM, 25% Daily Pass-by	-7	-7	-14	-17	-34	-236	
		(D) Subtotal Net Retail Trip Generation	22	22	44	50	50	100	708
Proposed:	16 VFP	100	99	199	114	110	224	3,286	
Gas Station w/ Conv Market									
		Less 50% AM, 45% PM, 45% Daily Pass-By	-50	-50	-100	-51	-50	-101	-1,479
		(E) Subtotal Gas Station Trip Generation	50	49	99	63	60	123	1,807
Total Net New Project Trip Generation (A)+(B)+(C)+(D)+(E)		259	230	489	333	324	657	8,463	
Total Project Gross Trips		379	348	727	494	480	974	11,710	
Total Project Net Trips		259	230	489	333	324	657	8,463	

Note: TSF = thousand square feet, VFP = vehicle fueling position

As shown in **Table 9**, the proposed project is projected to generate 11,710 daily trips, 727 AM peak hour trips and 974 PM peak hour trips at the project driveways. After accounting for pass-by trips, the proposed project is projected to generate 8,463 daily trips, 489 AM peak hour trips and 657 PM peak hour trips.



4.3 Project Trip Distribution

The projected trip distribution for the proposed project is based on the results of the SANBAG Select Zone Model run. **Exhibit 5** shows the projected trip distribution of net new proposed project trips based on the SANBAG select zone run and the proposed study intersection locations. Pass-by trips have been distributed based on the methodology contain in ITE’s Trip Generation Manual, 10th Edition, Chapter 5.

4.4 Modal Split

The traffic reducing potential of public transit, walking and bicycling have not been considered in this analysis since transit service is limited in the area.

Legend:

-  = Project Site
-  = Study Intersection
- XX% = Percent Trip Distribution

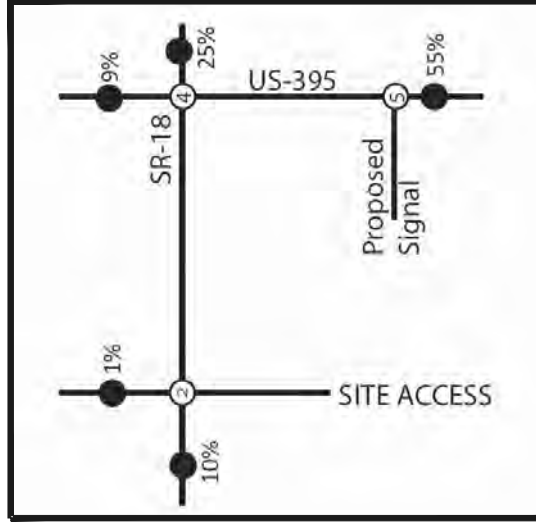
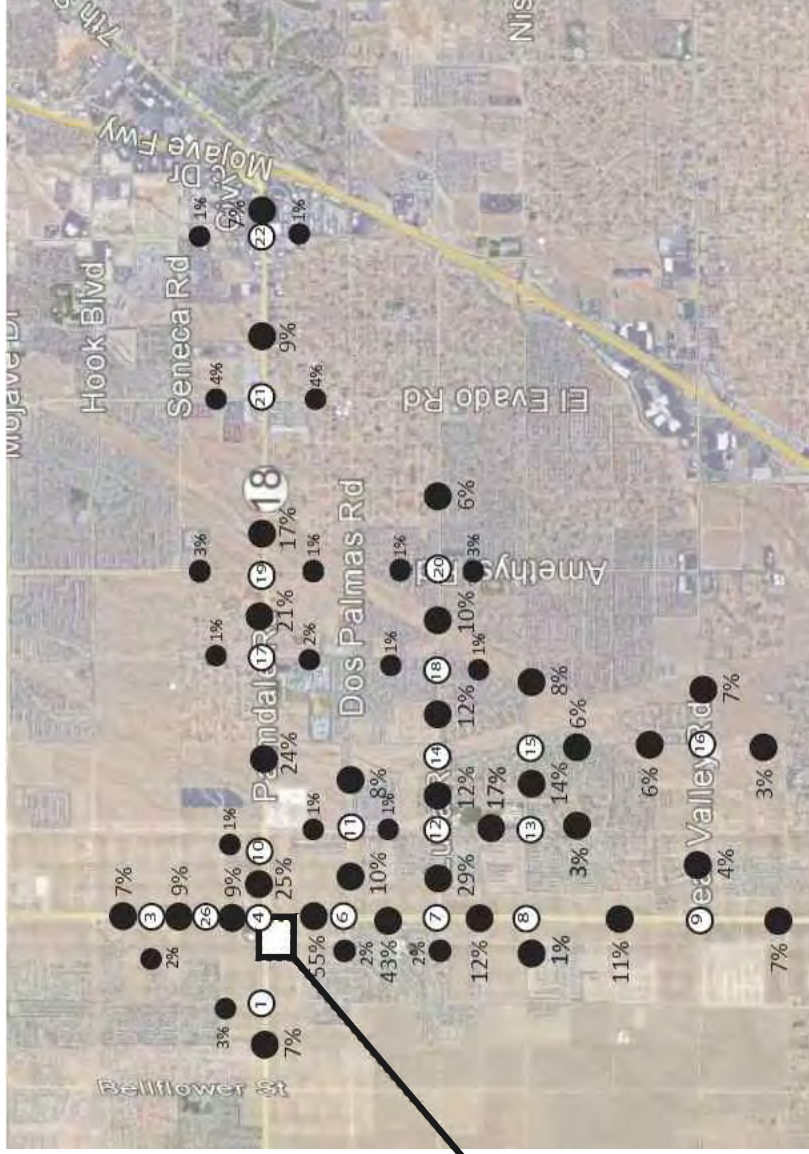


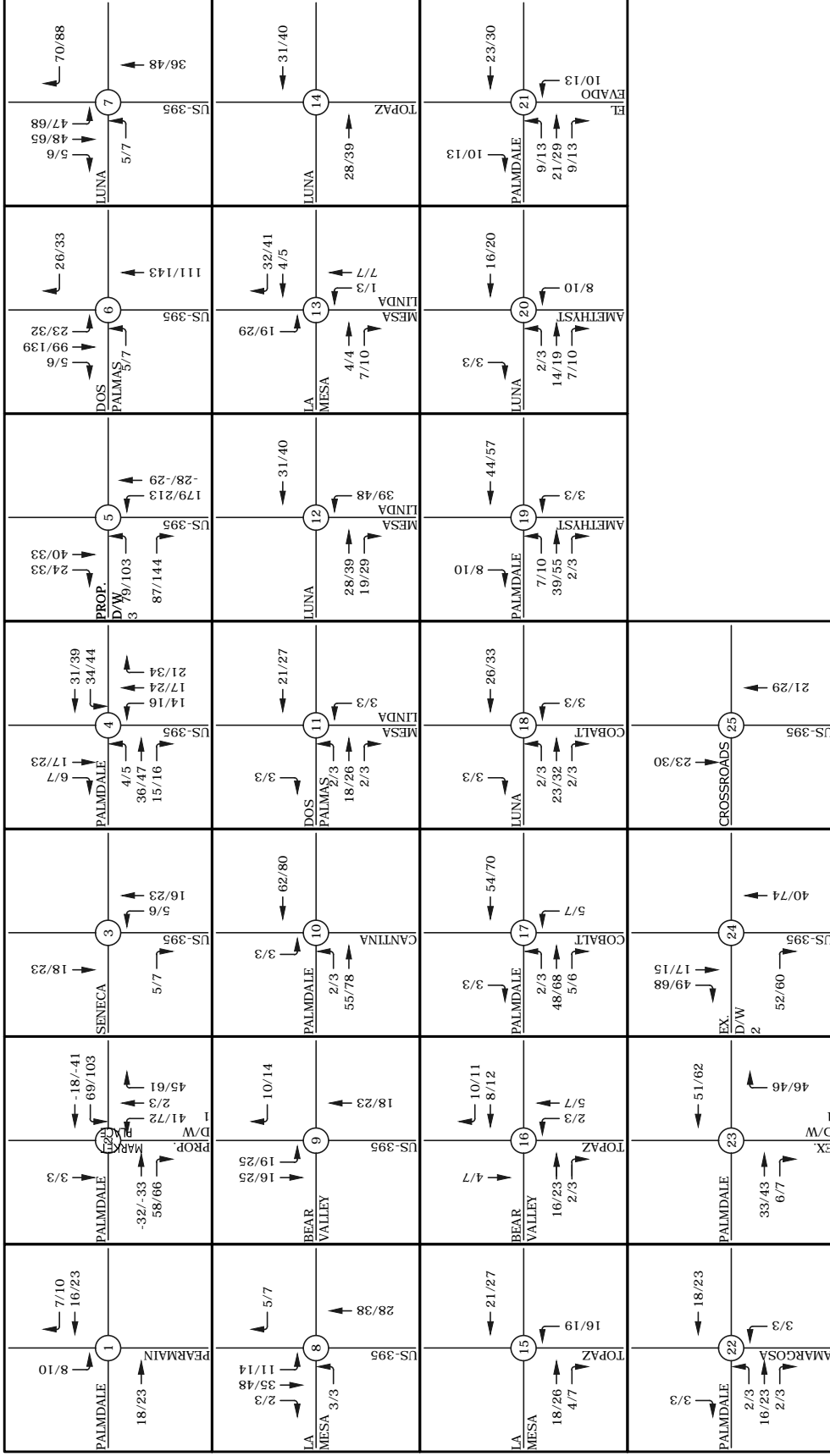
Exhibit 5: Trip Distribution of Proposed Project Trips

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



4.5 Project Trip Assignment

Exhibit 6 shows the projected AM/PM peak hour trip assignment of proposed project trips, including net trips and pass-by trips.



Legend:

XX/XX = AM/PM Peak Hour Volumes



Exhibit 6: Proposed AM/PM Peak Hour Trip Assignment of Proposed Project

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5.0 Existing Plus Project Conditions

Existing plus project conditions analysis is intended to identify the project-related impacts of the entire proposed project on the existing circulation system by comparing existing conditions and existing plus project conditions.

5.1 ROADWAY IMPROVEMENTS

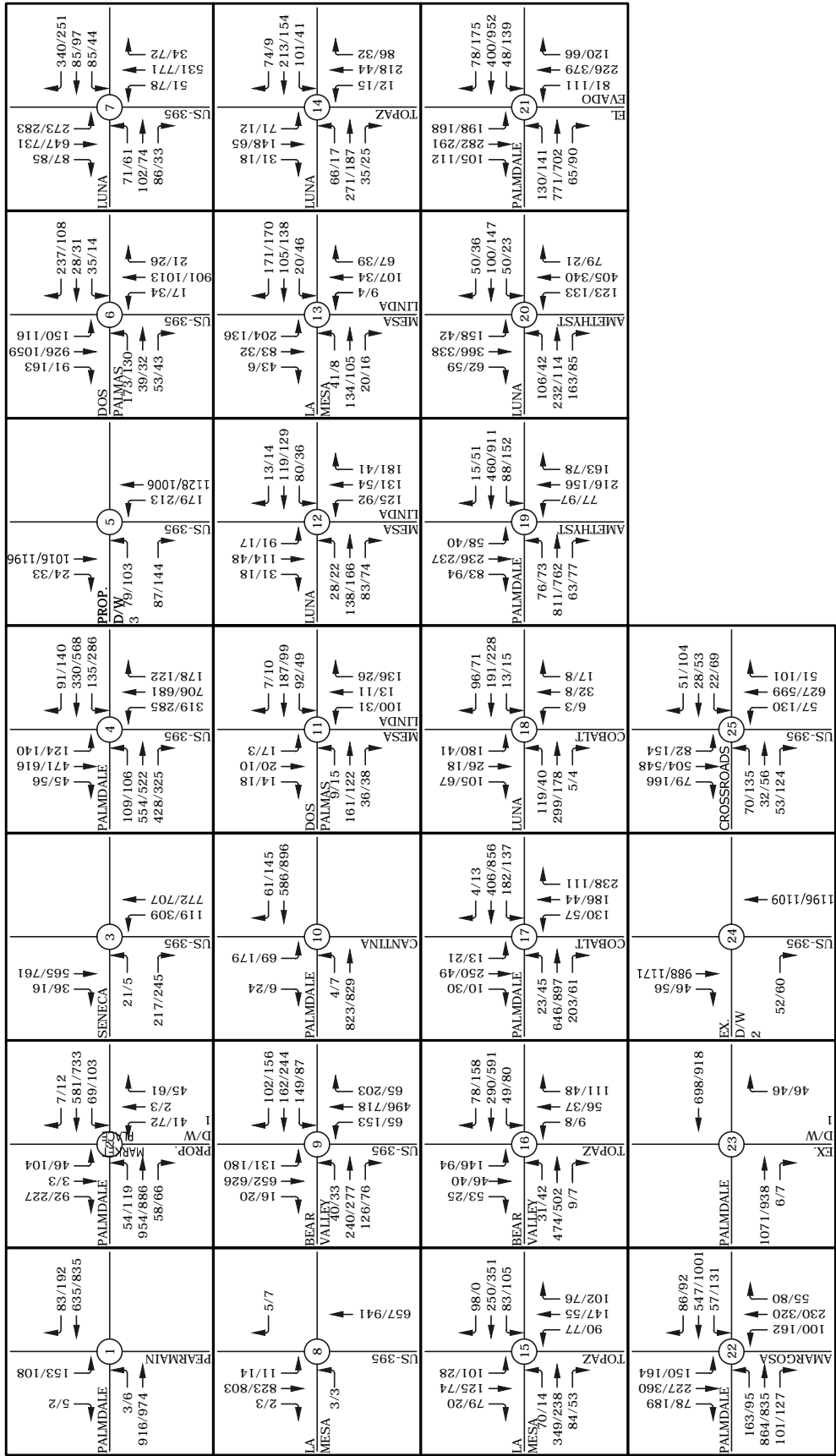
The lane configurations and traffic controls assumed to be in place for the existing plus project scenario are consistent with those previously shown in **Exhibit 3**, with the exception of project driveways and other facilities assumed to be constructed by the proposed project to provide site access.

5.2 EXISTING PLUS PROJECT TRAFFIC VOLUMES

Existing plus project traffic volumes consist of the addition of project-generated trips to existing traffic volumes. **Exhibit 7** shows *existing plus project* AM and PM peak hour volumes at the study intersections.

5.3 EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Existing plus project AM and PM peak hour intersection analysis is shown in **Table 10**. Calculations are based on the existing geometrics at the study area intersections as shown in **Exhibit 3**. Synchro (HCM 2010) analysis sheets are provided in **Appendix D**.



Legend:

XX/XX = AM/PM Peak Hour Volumes



Exhibit 7: Existing Plus Project Traffic Volumes

BPE-16-004 SWC US395/Palmdale (SR-18) TIA

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Not to Scale

Table 10
Intersection Analysis – Existing Plus Project Intersection Analysis

Int. No.	Intersection	Existing		Existing Plus Project	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS
HCM 2010 Analysis (Synchro)					
1	Pearmain St/Palmdale Rd (SR-18)	104.2 – F	75.3 – F	131.1 – F	99.2 – F
2	Stater Bros Drwy/Palmdale Rd (SR-18)	6.4 – A	10.7 – B	10.0 – A ¹	18.7 – B ¹
3	US-395/Seneca Rd	46.9 – E	49.6 – E	56.8 – F	59.8 – F
4	US-395/Palmdale Rd (SR-18)	53.3 – D	40.0 – D	56.7 – E	44.0 – D
5	US-395/Proposed Signalized Access	Analyzed With Project Only		13.8 – B ¹	26.9 – C ¹
6	US-395/Dos Palmas Rd	33.1 – C	20.9 – C	44.2 – D	28.4 – C
7	US-395/Luna Rd	29.0 – C	19.9 – B	44.5 – D	28.3 – C
9	US-395/Bear Valley Rd	29.0 – C	25.7 – C	32.3 – C	28.0 – C
10	Cantina St/Palmdale Rd (SR-18)	14.2 – B	12.6 – B	14.3 – B	13.1 – B
11	Mesa Linda Rd/Dos Palmas Rd	17.9 – C	11.8 – B	27.5 – D	12.8 – B
12	Mesa Linda Rd /Luna Rd	15.5 – B	9.5 – A	29.6 – C	10.9 – B
13	Mesa Linda Rd /La Mesa Rd	13.7 – B	9.4 – A	15.5 – C	10.1 – B
14	Topaz Rd/Luna Rd	23.1 – C	9.7 – A	29.2 – D	10.5 – B
15	Topaz Rd/La Mesa Rd	21.3 – C	10.4 – B	23.6 – C	10.9 – B
16	Topaz Rd/Bear Valley Rd	18.6 – B	21.9 – C	18.7 – B	22.0 – C
17	Cobalt Rd/Palmdale Rd (SR-18)	29.2 – C	30.6 – C	30.5 – C	34.2 – C
18	Cobalt Rd/Luna Rd	19.5 – C	9.4 – A	23.0 – C	10.0 – A
19	Amethyst Rd/Palmdale Rd (SR-18)	31.2 – C	37.6 – D	35.1 – D	43.2 – D
20	Amethyst Rd/Luna Rd	21.9 – C	18.7 – B	22.7 – C	20.6 – C
21	El Evado Rd/Palmdale Rd (SR-18)	41.1 – D	38.3 – D	45.8 – D	41.1 – D
22	Amargosa Rd/Palmdale Rd (SR-18)	37.1 – D	41.9 – D	38.2 – D	43.4 – D
23	Right in/out Drwy/Palmdale Rd	Analyzed for With Project Conditions Only		13.9 – B	12.8 – B
24	Right in/out Drwy 1/US-395			13.4 – B	15.2 – C
25	US-395/Crossroads	14.0 – B	20.0 – B	14.0 – B	20.2 – C

Note: Delay shown in seconds per vehicle. Deficient intersection operation shown in **bold**.

Per the 2010 Highway Capacity Manual, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

1 = Assumes project applicant constructs needed improvements at intersection to provide site access

As shown in **Table 10**, the intersections are projected to continue to operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours for *existing plus project* condition with the exception of the following three intersections:

- #1: Pearmain Road/Palmdale Road (SR-18);
- #3: US-395/Seneca Road; and
- #4: US-395/Palmdale Road (SR-18).

Recommended improvements to improve deficiently operating study intersections to an acceptable LOS (LOS D or better) are provided in *Section 5.6 Existing Plus Project Recommended Improvements*.

5.4 EXISTING PLUS PROJECT ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

Table 11 summarizes *existing plus project* conditions roadway segment analysis based on the LOS E capacities provided in the City of Victorville General Plan Circulation Element, previously summarized in **Table 3**.

Table 11
Roadway Segment Analysis – Existing Plus Project

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	Existing Plus Project		
			ADT	V/C	LOS
RS1: Luna between US-395 & Mesa Linda	2 – C	12,500	7,453	0.596	A
RS2: Palmdale between Pearmain & US-395	4 – SA	37,500	25,715	0.686	B
RS3: Palmdale between US-395 & Cobalt	4 – SA	37,500	24,161	0.644	B
RS4: Palmdale between Cobalt & Amethyst	4 – SA	37,500	24,744	0.660	B
RS5: Palmdale between Amethyst & El Evado	4 – SA	37,500	24,099	0.643	B
RS6: US-395 between Seneca & Palmdale	4 – SA	37,500	30,969	0.826	D
RS7: US-395 between Palmdale & Dos Palmas	4 – SA	37,500	38,493	1.026	F
RS8: US-395 between Dos Palmas & Luna	4 – SA	37,500	32,603	0.869	D
RS9: US-395 between Luna & La Mesa	2 – SA	18,750	28,311	1.510	F
RS10: US-395 between La Mesa & Bear Valley	2 – SA	18,750	25,355	1.352	F

Note: C = collector, SA = super arterial

As shown in **Table 11**, the study roadway segments are projected to operate at an acceptable LOS (LOS D or better) for *existing plus project* conditions with the exception of the following roadway segments:

- RS7: US-395 between Palmdale and Dos Palmas
- RS9: US-395 between Luna Road and La Mesa Road
- RS10: US-395 between La Mesa Road and Bear Valley Road

Recommended improvements to improve deficiently operating study roadway segments to an acceptable LOS (LOS D or better) are provided in *Section 5.6 Existing Plus Project Recommended Improvements*.

5.5 EXISTING PLUS PROJECT PEAK HOUR SIGNAL WARRANT ANALYSIS

Peak hour traffic signal warrants for existing plus project conditions have been prepared based on *existing plus project* peak hour intersection volumes at the unsignalized study intersections. **Table 12** summarizes the results of the peak hour signal warrant analysis. Detailed warrant analysis sheets are contained in **Appendix E**.

Table 12
Peak Hour Signal Warrant Analysis – Existing Plus Project

Int. No.	Intersection	Peak Hour Signal Warrants Met?	
		AM Peak Hour	PM Peak Hour
1	Pearmain St/Palmdale Rd (SR-18)	Satisfied for Existing	Satisfied for Existing
3	US-395/Seneca Road	Satisfied for Existing	Satisfied for Existing
5	US-395/Proposed Signalized Access	Satisfied	Satisfied
11	Mesa Linda Ave/Dos Palmas Rd	No	No
12	Mesa Linda Ave/Luna Road	No*	No*
13	Mesa Linda Ave/La Mesa Road	No*	No*
14	Topaz Rd/Luna Road	No	No
15	Topaz Rd/La Mesa Road	Satisfied for Existing	No
18	Cobalt Rd/Luna Rd	No	No

Note: * = peak hour signal warrants not met based on the traffic data collected for this TIA; however, the City has performed a detailed signal warrant analysis at this location which concluded signalization is warranted and has plans to signalize the intersection in the near future.

While this analysis includes peak hour signal warrant analysis for informational purposes, it is possible that some of the study intersection may satisfy other traffic signal warrants such as the eight-hour vehicular volume warrant, four-hour vehicular volume warrants, pedestrian volume warrant, school crossing warrant, coordinated signal system warrant, crash experience warrant, roadway network warrant or intersection near a grade crossing warrant.

5.6 EXISTING PLUS PROJECT RECOMMENDED IMPROVEMENTS

The following improvements are recommended for *existing plus project* conditions.

Table 13
Recommended Improvements – Existing Plus Project

Deficient Facility (Jurisdiction)	Improvement	Estimated Construction Cost	Fair Share
#1: Pearmain St/Palmdale Rd (SR-18) Caltrans	Signalize Intersection	\$500,000	1.43%
#2: Stater Bros Drwy/Palmdale Rd (SR-18) Caltrans	Construction of south leg of intersection, signal timing modification	Project applicant responsibility (100%)	
#3: US-395/Seneca Road Caltrans	Signalize Intersection	\$500,000	0.97%
#4: US-395/Palmdale Road (SR-18) Caltrans	Install eastbound right-turn overlap phase. Restrict U-turn movements from northbound US-395 to southbound US-395	\$15,000	10.92%
#5: US-395/Proposed Signalized Access Caltrans	Construction and signalization of intersection	Project applicant responsibility (100%)	
RS7: US-395 between Palmdale & Dos Palmas Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	17.04%
RS9: US-395 between Luna and La Mesa Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	3.32%
RS10: US-395 between La Mesa and Bear Valley Caltrans	Add northbound and southbound travel lane (1.0 miles of widening)	\$1,600,000	2.15%

Table 14 summarizes the LOS of the study intersections assuming implementation of the recommended improvements.

Table 14
Intersection Analysis – Existing Plus Project With Recommended Improvements

Int. No.	Intersection	Existing		Existing Plus Project With Recommended Improvements	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS
HCM 2010 Analysis (Synchro)					
#1	Pearmain St/Palmdale Rd	104.2 – F	75.3 – F	6.7 – A	6.3 – A
#3	US-395/Seneca Rd	46.9 – E	49.6 – E	14.2 – B	39.7 – D
#5	US-395/Palmdale Rd (SR-18)	53.3 – D	40.0 – D	33.4 – C	36.8 – D

Note: Delay shown in seconds per vehicle. TWSC = One- or Two-Way Stop-Control

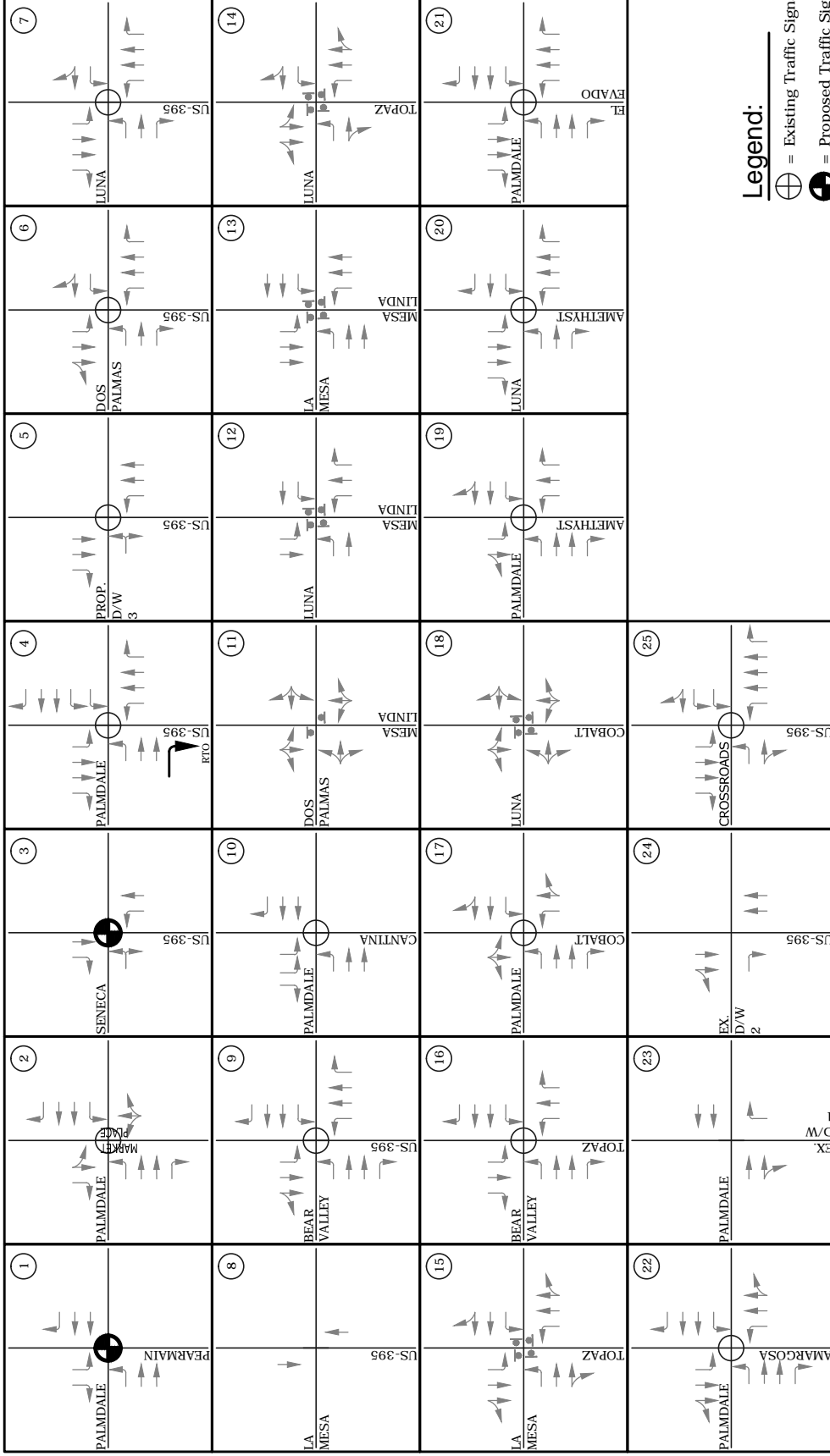
Table 15 summarizes the LOS of the study roadway segments assuming implementation of the recommended improvements.

Table 15
Roadway Segment Analysis – Existing Plus Project With Recommended Improvements

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	Existing Plus Project With Recommended Improvements		
			ADT	V/C	LOS
RS7: US-395 between Palmdale & Dos Palmas	6 – SA	56,300	38,493	0.684	B
RS9: US-395 between Luna & La Mesa	4 – SA	37,500	28,311	0.755	C
RS10: US-395 between La Mesa & Bear Valley	4 – SA	37,500	25,355	0.676	B

Note: SA = super arterial

Exhibit 8A shows existing plus project intersection geometry assuming implementation of the recommended improvements. **Exhibit 8B** shows existing plus project roadway segment geometry after implementation of the recommended improvements.



Legend:

- = Existing Traffic Signal
- = Proposed Traffic Signal
- = Stop Sign
- = Right Turn Overlap

Exhibit 8A: Existing Plus Project Intersection Geometry With Recommended Improvements

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Legend:

- = Study Intersection
- 4** = Number of Lanes
- D** = Divided
- U** = Undivided
- = Study Roadway Segment

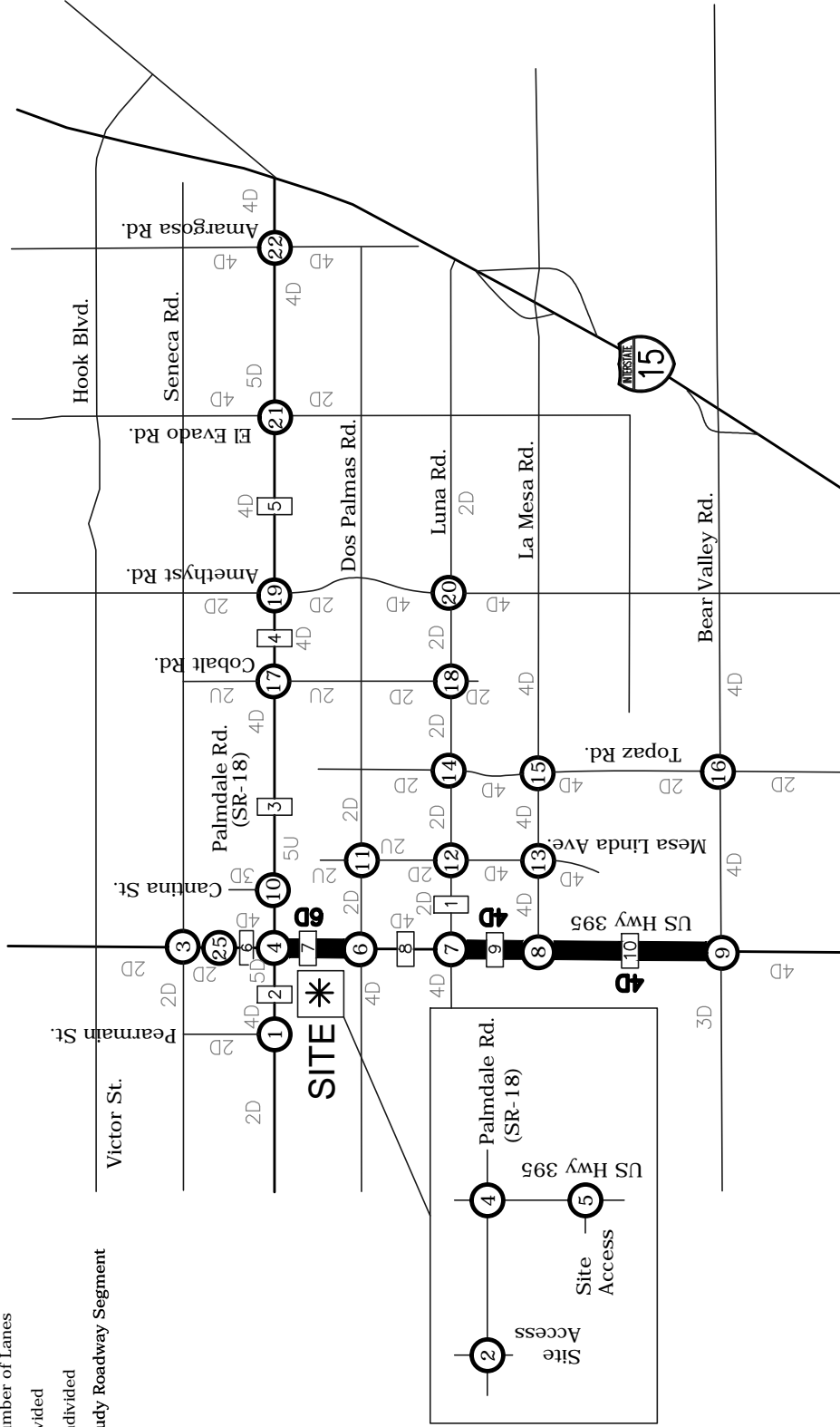


Exhibit 8B Existing Plus Project Roadway Segment Geometry With Recommended Improvements

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



6.0 Opening Year Without Project Conditions

Opening year without project conditions consists of existing traffic volumes increased to account for traffic growth in the study area and construction of projects in various states of approval that may be completed by the time the proposed project is constructed.

6.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *opening year without project conditions* scenario are consistent with those previously shown in **Exhibit 3** with the exception of the planned creation and signalization of the US-395/La Mesa Road intersection, which is currently under construction. SANBAG is currently in the right-of-way/design phase of a widening project on US-395, which will widen US-395 from 2 to 4 lanes from Palmdale Road (SR-18) to approximately 5.5 miles to the north, construction is projected to begin in 2019. The City of Victorville has plans to signalize the Mesa Linda Road/Luna Road and Mesa Linda Road/La Mesa Road intersection. These improvements have not been assumed in the analysis.

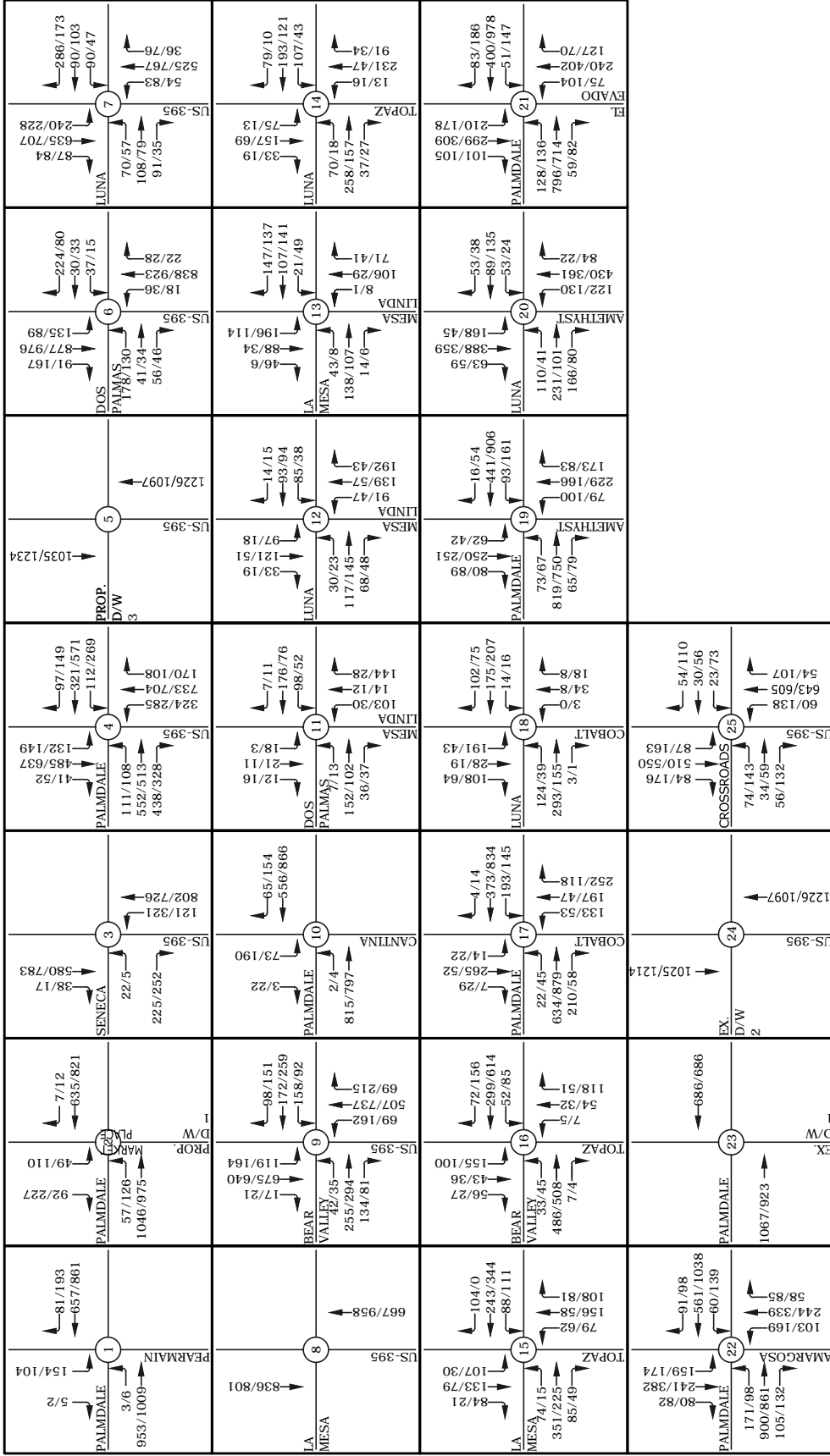
6.2 OPENING YEAR WITHOUT PROJECT TRAFFIC VOLUMES

Opening year without project volumes include background traffic and traffic projected to be generated by cumulative developments in the vicinity of the proposed project which are in various stages of planning, entitlement and construction. Since the proposed project is projected to be built and generating trips in 2019, existing traffic volumes were increased by a rate of three percent per year, for two years, to derive *opening year without project* traffic volumes. The three percent growth rate was developed based on discussions with City staff and accounts for immediate-term cumulative projects that may be constructed.

Exhibit 9 shows *opening year without project* AM and PM peak hour volumes at the study intersections.

6.3 OPENING YEAR WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Opening year without project conditions AM and PM peak hour intersection analysis is shown in **Table 16**. Synchro (HCM 2010) analysis sheets are provided in **Appendix D**.



Legend:

XX/XX = AM/PM Peak Hour Volumes



Exhibit 9: Opening Year Without Project Traffic Volumes

BPE-16-004 SWC US395/Palmdale (SR-18) TIA

Table 16
Intersection Analysis – Opening Year Without Project Intersection Analysis

Int. No.	Intersection	Control Type	AM Peak Hour		PM Peak Hour	
			Delay (V/C)	LOS	Delay (V/C)	LOS
HCM 2010 Analysis (Synchro)						
1	Pearmain St/Palmdale Rd (SR-18)	TWSC	160.0	F	109.9	F
2	Stater Bros Drwy/Palmdale Rd (SR-18)	Signal	6.6	A	12.0	B
3	US-395/Seneca Rd	TWSC	72.9	F	75.3	F
4	US-395/Palmdale Rd (SR-18)	Signal	56.8	E	43.9	D
6	US-395/Dos Palmas Rd	Signal	38.1	C	22.8	C
7	US-395/Luna Rd	Signal	33.7	C	21.7	C
8	US-395/La Mesa Rd	Signal	0.5	A	0.5	A
9	US-395/Bear Valley Rd	Signal	31.9	C	27.8	C
10	Cantina St/Palmdale Rd (SR-18)	Signal	14.3	B	12.6	B
11	Mesa Linda Rd/Dos Palmas Rd	TWSC	27.8	D	12.9	B
12	Mesa Linda Rd /Luna Rd	AWSC	17.2	C	9.7	A
13	Mesa Linda Rd /La Mesa Rd	AWSC	14.7	B	9.6	A
14	Topaz Rd/Luna Rd	AWSC	28.0	D	9.9	A
15	Topaz Rd/La Mesa Rd	AWSC	24.9	C	10.8	B
16	Topaz Rd/Bear Valley Rd	Signal	18.9	B	22.2	C
17	Cobalt Rd/Palmdale Rd (SR-18)	Signal	33.1	C	33.9	C
18	Cobalt Rd/Luna Rd	AWSC	23.3	C	9.7	A
19	Amethyst Rd/Palmdale Rd (SR-18)	Signal	36.7	D	42.8	D
20	Amethyst Rd/Luna Rd	Signal	22.8	C	19.7	B
21	El Evado Rd/Palmdale Rd (SR-18)	Signal	46.9	D	41.1	D
22	Amargosa Rd/Palmdale Rd (SR-18)	Signal	42.6	D	47.3	D
25	Crossroads/US-395	Signal	14.3	B	21.1	C

Note: Delay shown in seconds per vehicle. TWSC = One- or Two-Way Stop-Control. AWSC = All-Way Stop-Control.

Deficient intersection operation shown in **bold**.

Per the 2010 Highway Capacity Manual, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 16**, based on HCM 2010 analysis utilizing Synchro software, the study intersections are projected to operate at an acceptable LOS (LOS D or better) with the exception of the following three intersections:

- #1: Pearmain Road/Palmdale Road (SR-18)
- #3: Seneca Road/US-395;
- #5: US-395/Palmdale Road (SR-18)

6.4 OPENING YEAR WITHOUT PROJECT ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

Table 17 summarizes *opening year without project* conditions roadway segment analysis based on the LOS E capacities provided in the City of Victorville General Plan Circulation Element, previously summarized in **Table 3**.

Table 17
Roadway Segment Analysis – Opening Year Without Project

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	Opening Year Without Project		
			ADT	V/C	LOS
RS1: Luna between US-395 & Mesa Linda	2 – C	12,500	5,300	0.424	A
RS2: Palmdale between Pearmain & US-395	4 – SA	37,500	25,930	0.691	B
RS3: Palmdale between US-395 & Cobalt	4 – SA	37,500	23,390	0.624	B
RS4: Palmdale between Cobalt & Amethyst	4 – SA	37,500	24,370	0.650	B
RS5: Palmdale between Amethyst & El Evado	4 – SA	37,500	24,040	0.641	B
RS6: US-395 between Seneca & Palmdale	4 – SA	37,500	32,050	0.855	D
RS7: US-395 between Palmdale & Dos Palmas	4 – SA	37,500	35,900	0.957	E
RS8: US-395 between Dos Palmas & Luna	4 – SA	37,500	30,730	0.819	D
RS9: US-395 between Luna & La Mesa	2 – SA	18,750	28,960	1.545	F
RS10: US-395 between La Mesa & Bear Valley	2 – SA	18,750	26,270	1.401	F

Note: C = collector, SA = super arterial

As shown in **Table 17**, the study roadway segments are projected to operate at an acceptable LOS (LOS D or better) for *opening year without project conditions* with the exception of the following segments;

- RS7: US-395 between Palmdale Road (SR-18) and Dos Palmas Road;
- RS9: US-395 between Luna Road and La Mesa Road
- RS10: US-395 between La Mesa Road and Bear Valley Road

6.5 OPENING YEAR WITHOUT PROJECT PEAK HOUR SIGNAL WARRANT ANALYSIS

Peak hour traffic signal warrants for opening year without project conditions have been prepared based on *opening year without project* peak hour intersection volumes at the unsignalized study intersections. **Table 18** summarizes the results of the peak hour signal warrant analysis. Detailed warrant analysis sheets are contained in **Appendix E**.

Table 18
Peak Hour Signal Warrant Analysis – Opening Year Without Project

Int. No.	Intersection	Peak Hour Signal Warrants Met?	
		AM Peak Hour	PM Peak Hour
1	Pearmain St/Palmdale Rd (SR-18)	Satisfied for Existing	Satisfied for Existing
3	US-395/Seneca Road	Satisfied for Existing	Satisfied for Existing
11	Mesa Linda Ave/Dos Palmas Rd	No	No
12	Mesa Linda Ave/Luna Road	No*	No*
13	Mesa Linda Ave/La Mesa Road	No*	No*
14	Topaz Rd/Luna Road	No	No
15	Topaz Rd/La Mesa Road	Satisfied for Existing	No
18	Cobalt Rd/Luna Rd	Yes	No

Note: * = peak hour signal warrants not met based on the traffic data collected for this TIA; however, the City has performed a detailed signal warrant analysis at this location which concluded signalization is warranted and has plans to signalize the intersection in the near future.

7.0 Opening Year With Project Conditions

Opening year with project conditions analysis is intended to identify the project-related impacts of construction of the proposed project on the near-term circulation system by comparing opening year without project and opening year with project conditions.

7.1 ROADWAY IMPROVEMENTS

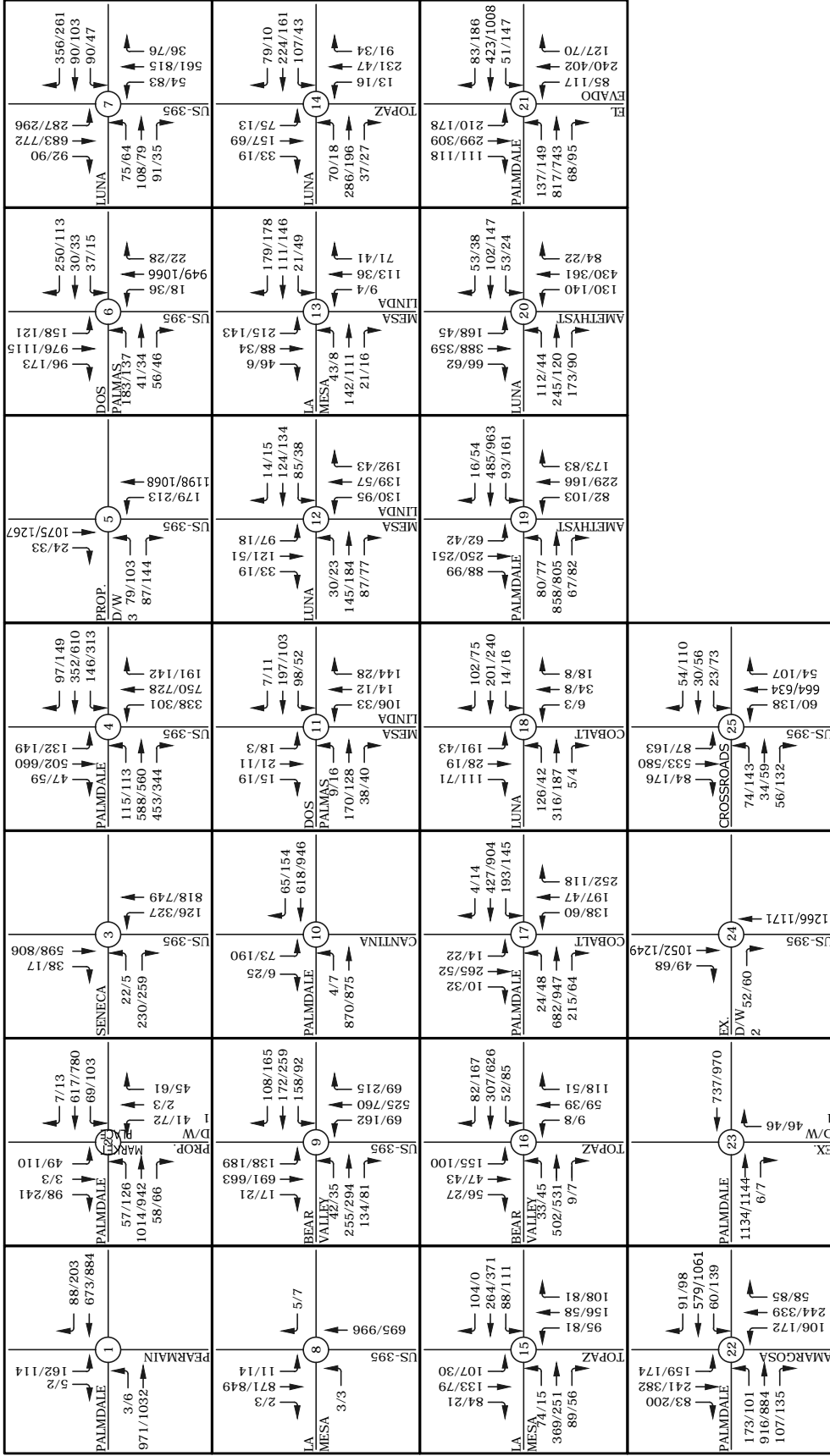
The lane configurations and traffic controls assumed to be in place for the *opening year with project conditions* scenario are consistent with those previously shown in **Exhibit 3** with the exception of the planned creation and signalization of the US-395/La Mesa Road intersection, and project driveways on US-395. SANBAG is currently in the right-of-way/design phase of a widening project on US-395, which will widen US-395 from 2 to 4 lanes from Palmdale Road (SR-18) to approximately 5.5 miles to the north, construction is projected to begin in 2019. The City of Victorville has plans to signalize the Mesa Linda Road/Luna Road and Mesa Linda Road/La Mesa Road intersection. These improvements have not been assumed in the analysis.

7.2 OPENING YEAR WITH PROJECT TRAFFIC VOLUMES

Opening year with project traffic volumes consist of the addition of project-generated trips to opening year without project traffic volumes. **Exhibit 10** shows *opening year with project* AM and PM peak hour volumes at the study intersections.

7.3 OPENING YEAR WITH PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Opening year with project AM and PM peak hour intersection analysis is shown in **Table 19**. Synchro (HCM 2010) analysis sheets are provided in **Appendix D**.



Legend:

XX/XX = AM/PM Peak Hour Volumes



Exhibit 10: Opening Year With Project Traffic Volumes

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



Table 19
Intersection Analysis – Opening Year With Project Intersection Analysis

Int. No.	Intersection	Opening Year Without Project		Opening Year With Project	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS
HCM 2010 Analysis (Synchro)					
1	Pearmain St/Palmdale Rd (SR-18)	160.0 – F	109.9 – F	201.2 – F	145.4 – F
2	Stater Bros Drwy/Palmdale Rd (SR-18)	6.6 – A	12.0 – B	10.2 – B	19.5 – B
3	US-395/Seneca Rd	72.9 – F	75.3 – F	87.3 – F	93.3 – F
4	US-395/Palmdale Rd (SR-18)	56.8 – E	43.9 – D	59.2 – E	48.3 – D
5	US-395/Proposed Signalized Access	Analyzed for With Project		13.8 – B	27.5 – C
6	US-395/Dos Palmas Rd	38.1 – C	22.8 – C	54.2 – D	32.1 – C
7	US-395/Luna Rd	33.7 – C	21.7 – C	50.9 – D	32.1 – C
8	US-395/La Mesa Rd	0.5 – A	0.5 – A	1.7 – A	2.9 – A
9	US-395/Bear Valley Rd	31.9 – C	27.8 – C	35.5 – D	30.5 – C
10	Cantina St/Palmdale Rd (SR-18)	14.3 – B	12.6 – B	14.4 – B	13.5 – B
11	Mesa Linda Rd/Dos Palmas Rd	27.8 – D	12.9 – B	35.0 – E	13.3 – B
12	Mesa Linda Rd /Luna Rd	17.2 – C	9.7 – A	22.3 – C	11.2 – B
13	Mesa Linda Rd /La Mesa Rd	14.7 – B	9.6 – A	16.7 – C	10.3 – B
14	Topaz Rd/Luna Rd	28.0 – D	9.9 – A	38.8 – E	11.8 – B
15	Topaz Rd/La Mesa Rd	24.9 – C	10.8 – B	28.5 – D	11.3 – B
16	Topaz Rd/Bear Valley Rd	18.9 – B	22.2 – C	19.1 – B	22.5 – C
17	Cobalt Rd/Palmdale Rd (SR-18)	33.1 – C	33.9 – C	34.7 – C	39.5 – D
18	Cobalt Rd/Luna Rd	23.3 – C	9.7 – A	28.8 – D	10.3 – B
19	Amethyst Rd/Palmdale Rd (SR-18)	36.7 – D	42.8 – D	42.1 – D	52.2 – D
20	Amethyst Rd/Luna Rd	22.8 – C	19.7 – B	23.6 – C	22.1 – C
21	El Evado Rd/Palmdale Rd (SR-18)	46.9 – D	41.1 – D	52.3 – D	44.2 – D
22	Amargosa Rd/Palmdale Rd (SR-18)	42.6 – D	47.3 – D	44.6 – D	49.8 – D
23	Right in/out Drwy/Palmdale Rd	Analyzed for With Project		14.4 – B	14.4 – B
24	Right in/out Drwy 1/US-395			13.9 – B	15.9 – C
25	US-395/Crossroads	14.3 – B	21.1 – C	14.3 – B	21.3 – C

Note: Delay shown in seconds per vehicle. Deficient intersection operation shown in **bold**.

Per the 2010 Highway Capacity Manual, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 19**, the intersections are projected to continue to operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours for *opening year with project* condition with the exception of the following five intersections:

- #1: Pearmain Road/Palmdale Road (SR-18);
- #3: US-395/Seneca Road;
- #4: US-395/Palmdale Road (SR-18);
- #11: Mesa Linda Road/Dos Palmas Road; and

- #14: Topaz Road/Luna Road

Recommended improvements to improve deficiently operating study intersections to an acceptable LOS (LOS D or better) are provided in *Section 7.6 Opening Year With Project Recommended Improvements*.

7.4 OPENING YEAR WITH PROJECT ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

Table 20 summarizes *opening year with project* conditions roadway segment analysis based on the LOS E capacities provided in the City of Victorville General Plan Circulation Element, previously summarized in **Table 3**.

Table 20
Roadway Segment Analysis – Opening Year With Project

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	Opening Year With Project		
			ADT	V/C	LOS
RS1: Luna between US-395 & Mesa Linda	2 – C	12,500	7,754	0.620	B
RS2: Palmdale between Pearmain & US-395	4 – SA	37,500	27,199	0.725	C
RS3: Palmdale between US-395 & Cobalt	4 – SA	37,500	25,506	0.680	B
RS4: Palmdale between Cobalt & Amethyst	4 – SA	37,500	26,147	0.697	B
RS5: Palmdale between Amethyst & El Evado	4 – SA	37,500	25,479	0.679	B
RS6: US-395 between Seneca & Palmdale	4 – SA	37,500	32,812	0.875	D
RS7: US-395 between Palmdale & Dos Palmas	4 – SA	37,500	40,555	1.081	F
RS8: US-395 between Dos Palmas & Luna	4 – SA	37,500	34,369	0.917	E
RS9: US-395 between Luna & La Mesa	2 – SA	18,750	29,976	1.599	F
RS10: US-395 between La Mesa & Bear Valley	2 – SA	18,750	26,862	1.433	F

Note: C = collector, SA = super arterial

As shown in **Table 20**, the study roadway segments are projected to operate at an acceptable LOS (LOS D or better) for *opening year with project* conditions with the exception of the following roadway segments:

- RS7: US-395 between Palmdale Road (SR-18) and Dos Palmas Road
- RS8: US-395 between Dos Palmas Road and Luna Road
- RS9: US-395 between Luna Road and La Mesa Road
- RS10: US-395 between La Mesa Road and Bear Valley Road

Recommended improvements to improve deficiently operating study roadway segments to an acceptable LOS (LOS D or better) are provided in *Section 7.6 Opening Year With Project Recommended Improvements*.

7.5 OPENING YEAR WITH PROJECT PEAK HOUR SIGNAL WARRANT ANALYSIS

Peak hour traffic signal warrants for opening year with project conditions have been prepared based on *opening year with project* peak hour intersection volumes at the unsignalized study intersections. **Table 21** summarizes the results of the peak hour signal warrant analysis. Detailed warrant analysis sheets are contained in **Appendix E**.

Table 21
Peak Hour Signal Warrant Analysis – Opening Year With Project

Int. No.	Intersection	Peak Hour Signal Warrants Met?	
		AM Peak Hour	PM Peak Hour
1	Pearmain St/Palmdale Rd (SR-18)	Satisfied for Existing	Satisfied for Existing
3	US-395/Seneca Road	Satisfied for Existing	Satisfied for Existing
5	US-395/Proposed Signalized Access	Satisfied	Satisfied
11	Mesa Linda Ave/Dos Palmas Rd	No	No
12	Mesa Linda Ave/Luna Road	No*	No*
13	Mesa Linda Ave/La Mesa Road	Yes	No*
14	Topaz Rd/Luna Road	No	No
15	Topaz Rd/La Mesa Road	Satisfied for Existing	Yes
18	Cobalt Rd/Luna Rd	Satisfied for Opening Year Without Project	No

Note: * = peak hour signal warrants not met based on the traffic data collected for this TIA; however, the City has performed a detailed signal warrant analysis at this location which concluded signalization is warranted and has plans to signalize the intersection in the near future.

7.6 OPENING YEAR WITH PROJECT RECOMMENDED IMPROVEMENTS

The following improvements are recommended for *opening year with project* conditions.

Table 22
Recommended Improvements – Opening Year With Project

Deficient Facility (Jurisdiction)	Improvement	Estimated Construction Cost	Fair Share
#1: Pearmain St/Palmdale Rd (SR-18) Caltrans	Signalize Intersection	\$500,000	1.43%
#3: US-395/Seneca Road Caltrans	Signalize Intersection	\$500,000	0.97%
#11: Mesa Linda Road/Dos Palmas Road City of Victorville	Install stop signs on the eastbound and westbound Dos Palmas Road approaches	\$3,000	10.92%
#14: Topaz Road/Luna Road City of Victorville	Add eastbound through lane	\$150,000	42.99%
#4: US-395/Palmdale Road (SR-18) Caltrans	Install eastbound right-turn overlap phase. Restrict U-turn movements from northbound US-395 to southbound US-395	\$15,000	8.28%
RS7: US-395 between Palmdale & Dos Palmas Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	17.04%
RS8: US-395 between Dos Palmas and Luna Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	11.52%
RS9: US-395 between Luna and La Mesa Caltrans	Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	3.32%
RS10: US-395 between La Mesa and Bear Valley Caltrans	Add northbound and southbound travel lane (1.0 miles of widening)	\$1,600,000	2.15%

Table 23 summarizes the LOS of the study intersections assuming implementation of the recommended improvements.

Table 23
Intersection Analysis – Opening Year With Project With Recommended Improvements

Int. No.	Intersection	Opening Year Without Project		Opening Year With Project With Recommended Improvements	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS
HCM 2010 Analysis (Synchro)					
1	Pearmain St/Palmdale Rd (SR-18)	104.2 – F	75.3 – F	7.2 – A	6.3 – A
3	US-395/Seneca Rd	46.9 – E	49.6 – E	15.8 – B	50.1 – D
4	US-395/Palmdale Rd (SR-18)	53.3 – D	40.0 – D	35.8 – D	41.2 – D
11	Mesa Linda Road/Dos Palmas Road	27.8 – D	12.9 – B	14.0 – B	9.0 – A
14	Topaz Road/Luna Road	28.0 – D	9.9 – A	24.9 – C	10.0 – A

Note: Delay shown in seconds per vehicle.

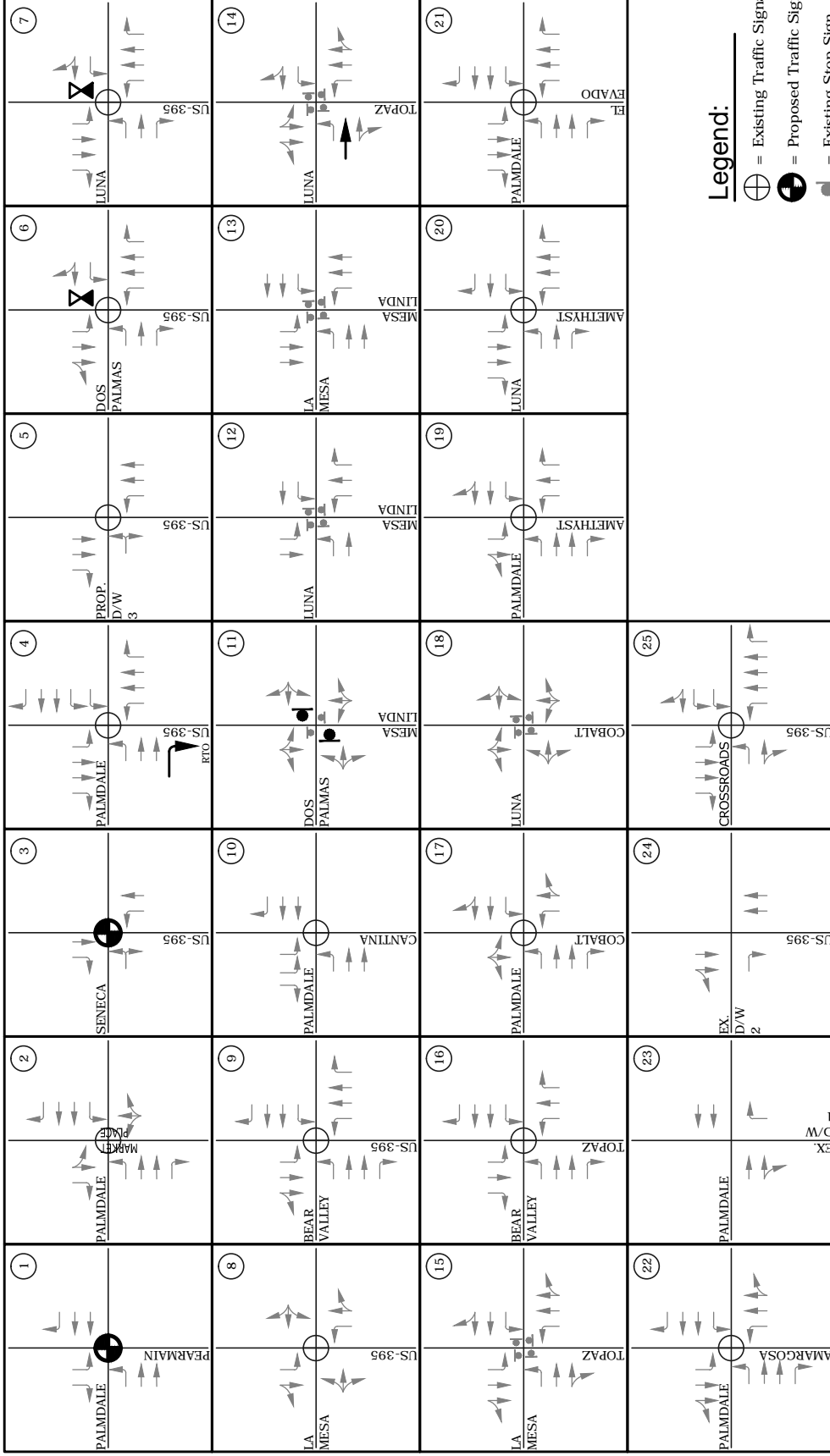
Table 24 summarizes the LOS of the study roadway segments assuming implementation of the recommended improvements.

Table 24
Roadway Segment Analysis – Opening Year With Project With Recommended Improvements

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	Opening Year With Project With Recommended Improvements		
			ADT	V/C	LOS
RS7: US-395 between Palmdale & Dos Palmas	6 – SA	56,300	40,555	0.720	C
RS8: US-395 between Dos Palmas & Luna	6 – SA	56,300	34,369	0.610	B
RS9: US-395 between Luna & La Mesa	4 – SA	37,500	29,976	0.799	C
RS10: US-395 between La Mesa & Bear Valley	4 – SA	37,500	26,862	0.716	C

Note: SA = super arterial

Exhibit 11A shows opening year plus project intersection geometry assuming implementation of the recommended improvements. **Exhibit 11B** shows opening year plus project roadway segment geometry assuming implementation of the recommended improvements.



Legend:

- = Existing Traffic Signal
- = Proposed Traffic Signal
- = Existing Stop Sign
- = Proposed Stop Sign
- = Right Turn Overlap
- = Re-time Intersection

Exhibit 11A: OY Plus Project Intersection Geometry With Recommended Improvements

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



TJW ENGINEERING, INC.

Not to Scale

Legend:

- = Study Intersection
- 4** = Number of Lanes
- D** = Divided
- U** = Undivided
- = Study Roadway Segment

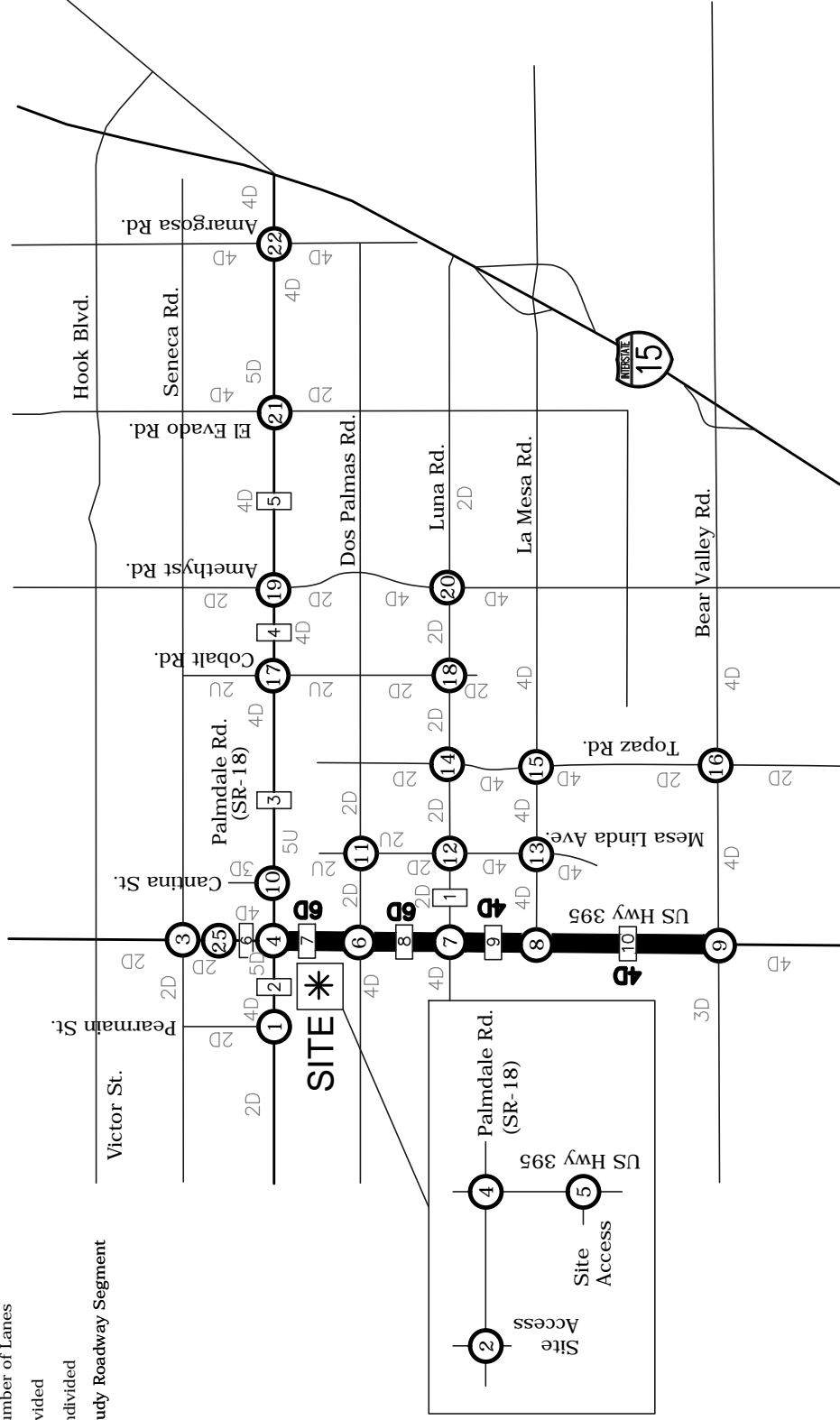


Exhibit 11B: OY Plus Project Roadway Segment Geometry With Recommended Improvements

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



8.0 Interim Year Without Project Conditions

Interim year without project conditions consists of existing traffic volumes increased to account for traffic growth in the study area and construction of projects in various states of approval that may be completed by the time the proposed project is constructed.

8.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *interim year without project conditions* scenario are consistent with those previously shown in **Exhibit 3** with the exception of the following improvements:

- Creation of the east and west legs and signalization of the US-395/La Mesa Road intersection;
- Creation of the west leg of the US-395/Seneca Road intersection;
- Creation of the south leg and signalization of the Pearmain Street/Palmdale Road (SR-18) intersection;
- Creation of the south leg of the Cantina Street/Palmdale Road (SR-18) intersection.

SANBAG is currently in the right-of-way/design phase of a widening project on US-395, which will widen US-395 from 2 to 4 lanes from Palmdale Road (SR-18) to approximately 5.5 miles to the north, construction is projected to begin in 2019. The City of Victorville has plans to signalize the Mesa Linda Road/Luna Road and Mesa Linda Road/La Mesa Road intersection. These improvements have not been assumed in the analysis.

8.2 INTERIM YEAR WITHOUT PROJECT TRAFFIC VOLUMES

Interim year without project volumes have been derived by interpolating post-processed General Plan Buildout (2040) traffic volumes at the study intersections and roadway segments, based on model data provided by SANBAG. Since the proposed project is projected to be built and generating trips in 2019, the interim year corresponds to roughly year 2029/2030. Interim year without project volumes were derived utilizing the following equation:

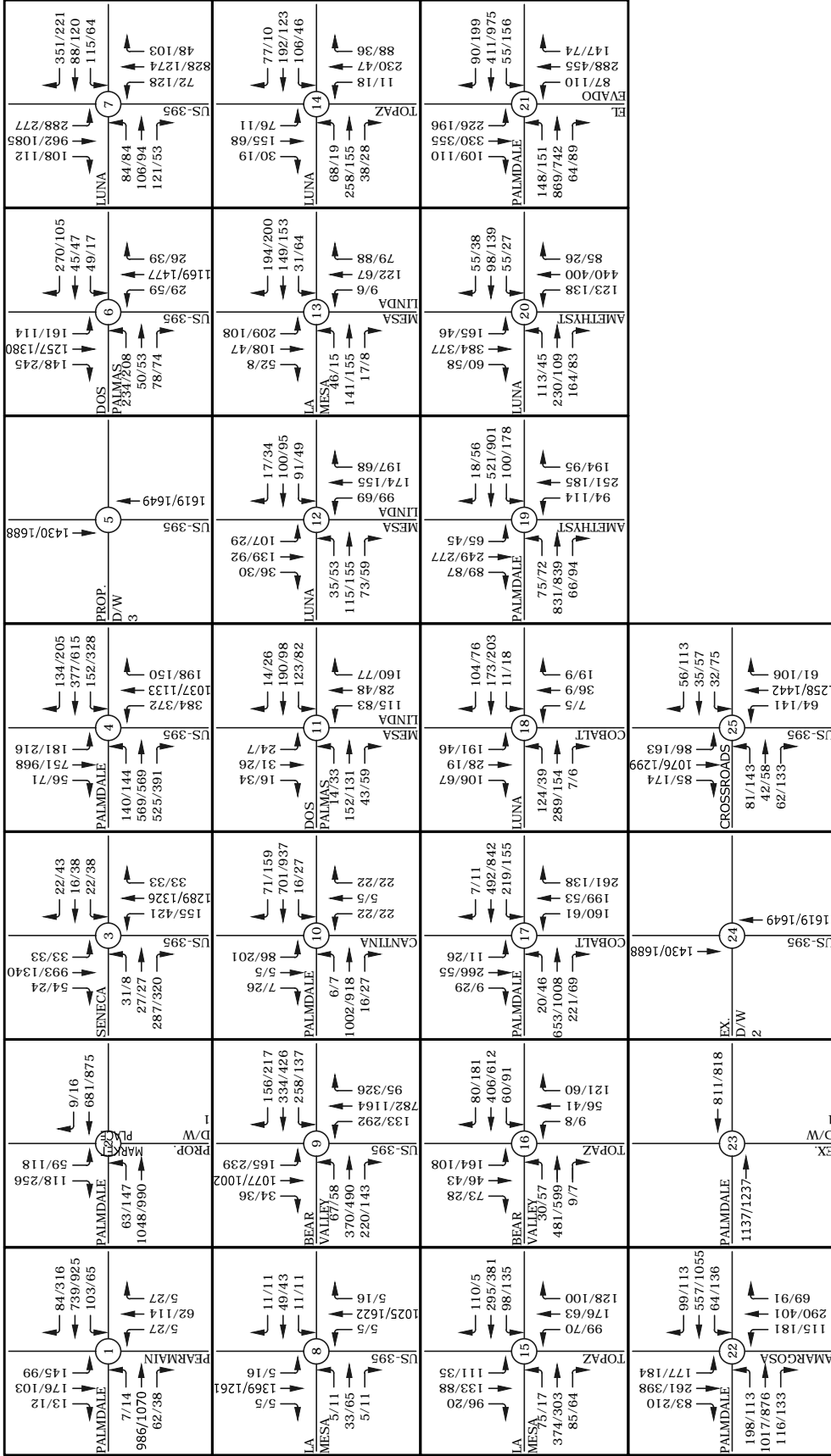
$$\text{Interim Year Volume} = \text{Existing Volumes} + (\text{General Plan No Project Volume} - \text{Existing Volumes}) * (13/24)$$

Interim year traffic volumes are interpolated from the General Plan buildout volumes which were derived from the SANBAG model, which represents a reasonable method for capturing the effects of cumulative volumes that may be constructed in the medium term, since it is based on SANBAG model volumes which include land use assumptions for potential developments throughout the Victor Valley.

Exhibit 12 shows *interim year without project* AM and PM peak hour volumes at the study intersections.

8.3 INTERIM YEAR WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Interim year without project conditions AM and PM peak hour intersection analysis is shown in **Table 25**. Synchro (HCM 2010) analysis sheets are provided in **Appendix D**.



Legend:

XX/XX = AM/PM Peak Hour Volumes



Exhibit 12: Interim Year Without Project Traffic Volumes

BPE-16-004 SWC US395/Palmdale (SR-18) TIA

Table 25
Intersection Analysis – Interim Year Without Project Intersection Analysis

Int. No.	Intersection	Control Type	AM Peak Hour		PM Peak Hour	
			Delay (V/C)	LOS	Delay (V/C)	LOS
HCM 2010 Analysis (Synchro)						
1	Pearmain St/Palmdale Rd (SR-18)	Signal	26.5	C	25.1	C
2	Stater Bros Drwy/Palmdale Rd (SR-18)	Signal	28.3	C	29.5	C
3	US-395/Seneca Rd	TWSC	>999.9	F	>999.9	F
4	US-395/Palmdale Rd (SR-18)	Signal	71.6	E	68.7	E
6	US-395/Dos Palmas Rd	Signal	60.2	E	52.3	D
7	US-395/Luna Rd	Signal	26.0	C	32.8	C
8	US-395/La Mesa Rd	Signal	3.8	A	5.4	A
9	US-395/Bear Valley Rd	Signal	51.2	D	50.1	D
10	Cantina St/Palmdale Rd (SR-18)	Signal	30.5	C	30.3	C
11	Mesa Linda Rd/Dos Palmas Rd	TWSC	29.7	D	18.4	C
12	Mesa Linda Rd /Luna Rd	AWSC	14.2	C	11.8	B
13	Mesa Linda Rd /La Mesa Rd	AWSC	13.3	B	11.7	B
14	Topaz Rd/Luna Rd	AWSC	21.8	C	9.8	A
15	Topaz Rd/La Mesa Rd	AWSC	21.2	C	14.1	B
16	Topaz Rd/Bear Valley Rd	Signal	38.3	D	38.6	D
17	Cobalt Rd/Palmdale Rd (SR-18)	Signal	32.9	C	30.2	C
18	Cobalt Rd/Luna Rd	AWSC	18.6	C	9.7	A
19	Amethyst Rd/Palmdale Rd (SR-18)	Signal	39.6	D	40.1	D
20	Amethyst Rd/Luna Rd	Signal	33.1	C	26.9	C
21	El Evado Rd/Palmdale Rd (SR-18)	Signal	37.0	D	41.5	D
22	Amargosa Rd/Palmdale Rd (SR-18)	Signal	40.6	D	45.7	D
25	Crossroads/US-395	Signal	15.7	B	33.6	C

Note: Delay shown in seconds per vehicle. TWSC = One- or Two-Way Stop-Control. AWSC = All-Way Stop-Control.

Deficient intersection operation shown in **bold**.

Per the 2010 Highway Capacity Manual, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 25**, based on HCM 2010 analysis utilizing Synchro software, the study intersections are projected to operate at an acceptable LOS (LOS D or better) for *interim year without project*, with the exception of the following three intersections:

- #3: Seneca Road/US-395;
- #4: US-395/Palmdale Road (SR-18);
- #5: US-395/Dos Palmas Road.

8.4 INTERIM YEAR WITHOUT PROJECT ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

Table 26 summarizes *interim year without project* conditions roadway segment analysis based on the LOS E capacities provided in the City of Victorville General Plan Circulation Element, previously summarized in **Table 3**.

**Table 26
Roadway Segment Analysis – Interim Year Without Project**

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	Interim Year Without Project		
			ADT	V/C	LOS
RS1: Luna between US-395 & Mesa Linda	2 – C	12,500	5,200	0.416	A
RS2: Palmdale between Pearmain & US-395	4 – SA	37,500	25,800	0.688	B
RS3: Palmdale between US-395 & Cobalt	4 – SA	37,500	25,600	0.683	B
RS4: Palmdale between Cobalt & Amethyst	4 – SA	37,500	26,800	0.715	C
RS5: Palmdale between Amethyst & El Evado	4 – SA	37,500	26,200	0.699	B
RS6: US-395 between Seneca & Palmdale	4 – SA	37,500	42,900	1.144	F
RS7: US-395 between Palmdale & Dos Palmas	4 – SA	37,500	45,200	1.205	F
RS8: US-395 between Dos Palmas & Luna	4 – SA	37,500	42,900	1.144	F
RS9: US-395 between Luna & La Mesa	2 – SA	18,750	42,100	2.245	F
RS10: US-395 between La Mesa & Bear Valley	2 – SA	18,750	38,200	2.037	F

Note: C = collector, SA = super arterial

As shown in **Table 26**, the study roadway segments are projected to operate at an acceptable LOS (LOS D or better) for *interim year without project conditions* with the exception of the following segments;

- RS6: US-395 between Seneca Road and Palmdale Road (SR-18);
- RS7: US-395 between Palmdale Road (SR-18) and Dos Palmas Road;
- RS8: US-395 between Dos Palmas Road and Luna Road;
- RS9: US-395 between Luna Road and La Mesa Road
- RS10: US-395 between La Mesa Road and Bear Valley Road

8.5 INTERIM YEAR WITHOUT PROJECT PEAK HOUR SIGNAL WARRANT ANALYSIS

Peak Hour traffic signal warrants for interim year without project conditions have been prepared based on *interim year without project* peak hour intersection volumes at the unsignalized study intersections. **Table 27** summarizes the results of the signal warrant analysis. Detailed warrant analysis sheets are contained in **Appendix E**.

Table 27
Peak Hour Signal Warrant Analysis – Interim Year Without Project

Int. No.	Intersection	Peak Hour Signal Warrants Met?	
		AM Peak Hour	PM Peak Hour
3	US-395/Seneca Road	Satisfied for Existing	Satisfied for Existing
11	Mesa Linda Ave/Dos Palmas Rd	No	No
12	Mesa Linda Ave/Luna Road	No*	No*
13	Mesa Linda Ave/La Mesa Road	Yes	No*
14	Topaz Rd/Luna Road	No	No
15	Topaz Rd/La Mesa Road	Satisfied for Existing	Yes
18	Cobalt Rd/Luna Rd	Satisfied for Opening Year Without Project	No

Note: * = peak hour signal warrants not met based on the traffic data collected for this TIA; however, the City has performed a detailed signal warrant analysis at this location which concluded signalization is warranted and has plans to signalize the intersection in the near future.

9.0 Interim Year With Project Conditions

Interim year with project conditions analysis is intended to identify the project-related impacts of the proposed project on the intermediate-term circulation system by comparing opening year without project and opening year with project conditions.

9.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *interim year with* scenario are consistent with those previously shown in **Exhibit 3** with the exception of the following improvements:

- Construction of the east and west legs and signalization of the US-395/La Mesa Road intersection;
- Construction of the west leg of the US-395/Seneca Road intersection;
- Construction of the south leg and signalization of the Pearmain Street/Palmdale Road (SR-18) intersection;
- Construction of the south leg of the Cantina Street/Palmdale Road (SR-18) intersection.
- Project driveways on US-395.

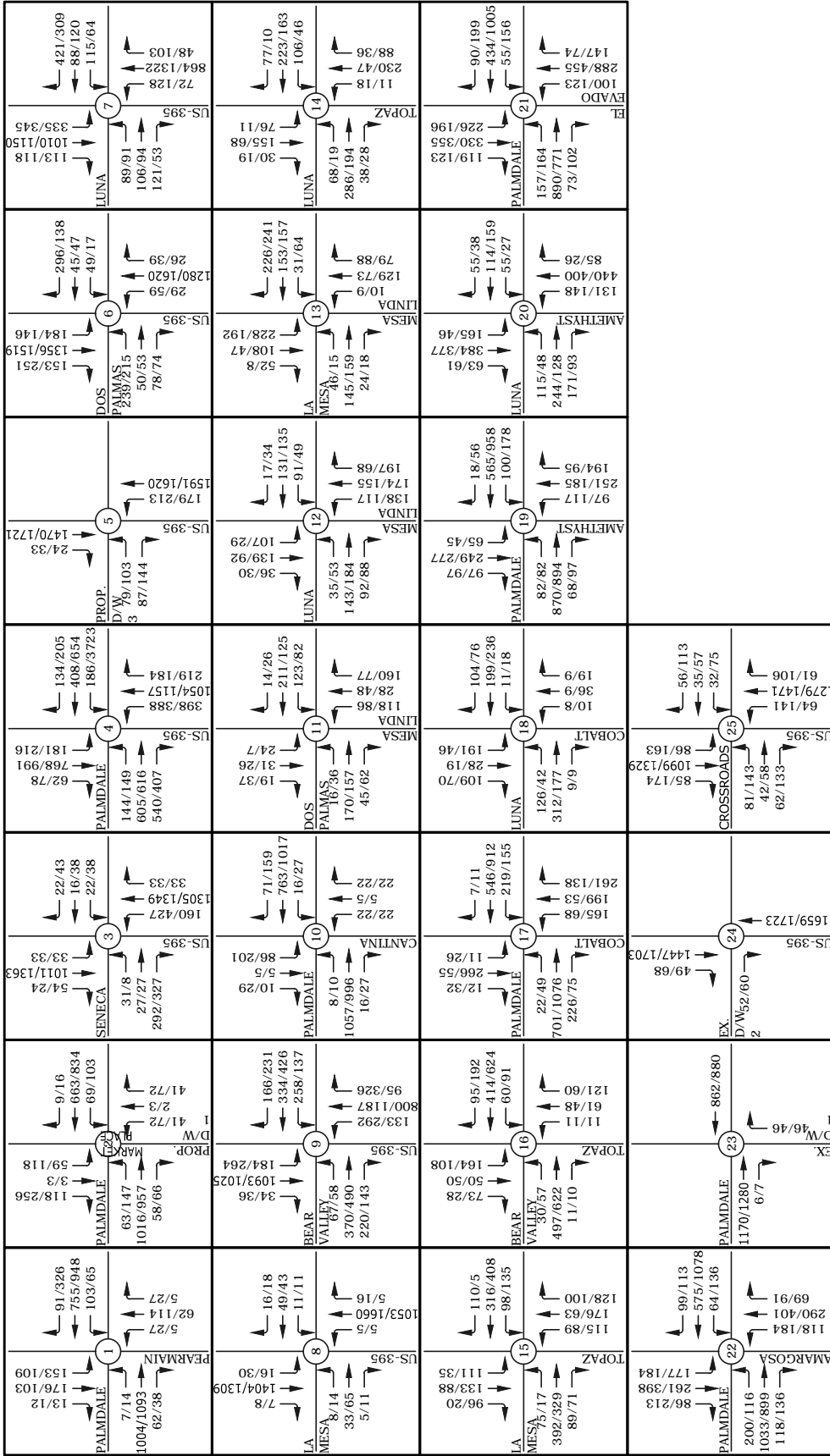
SANBAG is currently in the right-of-way/design phase of a widening project on US-395, which will widen US-395 from 2 to 4 lanes from Palmdale Road (SR-18) to approximately 5.5 miles to the north, construction is projected to begin in 2019. The City of Victorville has plans to signalize the Mesa Linda Road/Luna Road and Mesa Linda Road/La Mesa Road intersection. These improvements have not been assumed in the analysis.

9.2 INTERIM YEAR WITH PROJECT TRAFFIC VOLUMES

Interim year with project traffic volumes consist of the addition of project-generated trips to interim year without project traffic volumes. **Exhibit 13** shows *interim year with project* AM and PM peak hour volumes at the study intersections.

9.3 INTERIM YEAR WITH PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

Interim year with project AM and PM peak hour intersection analysis is shown in **Table 28**. Synchro (HCM 2010) analysis sheets are provided in **Appendix D**.



Legend:

XX/XX = AM/PM Peak Hour Volumes

Exhibit 13: Interim Year With Project Traffic Volumes

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



TJW ENGINEERING, INC.



Not to Scale

Table 28
Intersection Analysis – Interim Year With Project Intersection Analysis

Int. No.	Intersection	Interim Year Without Project		Interim Year With Project	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS
HCM 2010 Analysis (Synchro)					
1	Pearmain St/Palmdale Rd (SR-18)	26.5 – C	25.1 – C	27.0 – C	25.7 – C
2	Stater Bros Drwy/Palmdale Rd (SR-	28.3 – C	29.5 – C	25.7 – C	37.4 – D
3	US-395/Seneca Rd	>999.9 – F	>999.9 – F	>999.9 – F	>999.9 – F
4	US-395/Palmdale Rd (SR-18)	71.6 – E	68.7 – E	70.1 – E	75.3 – E
5	US-395/Proposed Signalized	Analyzed for With Project		6.0 – A	16.0 – B
6	US-395/Dos Palmas Rd	60.2 – E	52.3 – D	76.9 – E	74.4 – E
7	US-395/Luna Rd	26.0 – C	32.8 – C	29.9 – C	50.4 – D
8	US-395/La Mesa Rd	3.8 – A	5.4 – A	3.9 – A	5.5 – A
9	US-395/Bear Valley Rd	51.2 – D	50.1 – D	51.5 – D	54.2 – D
10	Cantina St/Palmdale Rd (SR-18)	30.5 – C	30.3 – C	29.5 – C	28.9 – C
11	Mesa Linda Rd/Dos Palmas Rd	29.7 – D	18.4 – C	36.7 – E	21.3 – C
12	Mesa Linda Rd /Luna Rd	14.2 – C	11.8 – B	16.7 – C	14.4 – B
13	Mesa Linda Rd /La Mesa Rd	13.3 – B	11.7 – B	14.6 – B	13.0 – B
14	Topaz Rd/Luna Rd	21.8 – C	9.8 – A	26.4 – D	10.6 – B
15	Topaz Rd/La Mesa Rd	21.2 – C	14.1 – B	23.1 – C	15.2 – C
16	Topaz Rd/Bear Valley Rd	38.3 – D	38.6 – D	39.3 – D	38.5 – D
17	Cobalt Rd/Palmdale Rd (SR-18)	32.9 – C	30.2 – C	33.5 – C	30.6 – C
18	Cobalt Rd/Luna Rd	18.6 – C	9.7 – A	21.4 – C	10.4 – B
19	Amethyst Rd/Palmdale Rd (SR-18)	39.6 – D	40.1 – D	40.0 – D	40.6 – D
20	Amethyst Rd/Luna Rd	33.1 – C	26.9 – C	34.4 – C	28.0 – C
21	El Evado Rd/Palmdale Rd (SR-18)	37.0 – D	41.5 – D	37.3 – D	43.8 – D
22	Amargosa Rd/Palmdale Rd (SR-18)	40.6 – D	45.7 – D	40.5 – D	46.1 – D
23	Right in/out Drwy/Palmdale Rd	Analyzed for With Project		14.4 – B	15.3 – C
24	Right in/out Drwy 1/US-395			17.2 – C	21.3 – C
25	US-395/Crossroads	15.7 – B	33.6 – C	15.8 – B	34.5 – C

Note: Delay shown in seconds per vehicle. Deficient intersection operation shown in **bold**.

Per the 2010 Highway Capacity Manual, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 28**, the intersections are projected to continue to operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours for *interim year with project* condition with the exception of the following four intersections:

- #3: US-395/Seneca Road;
- #4: US-395/Palmdale Road (SR-18);
- #5: US-395/Dos Palmas Road; and
- #11: Mesa Linda Road/Dos Palma Road

Recommended improvements to improve deficiently operating study intersections to an acceptable LOS (LOS D or better) are provided in *Section 9.6 Interim Year With Project Recommended Improvements*.

9.4 INTERIM YEAR WITH PROJECT ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

Table 29 summarizes *interim year with project* conditions roadway segment analysis based on the LOS E capacities provided in the City of Victorville General Plan Circulation Element, previously summarized in **Table 3**.

Table 29
Roadway Segment Analysis – Interim Year With Project

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	Interim Year With Project		
			ADT	V/C	LOS
RS1: Luna between US-395 & Mesa Linda	2 – C	12,500	7,654	0.612	B
RS2: Palmdale between Pearmain & US-395	4 – SA	37,500	27,069	0.722	C
RS3: Palmdale between US-395 & Cobalt	4 – SA	37,500	27,716	0.739	C
RS4: Palmdale between Cobalt & Amethyst	4 – SA	37,500	28,577	0.762	C
RS5: Palmdale between Amethyst & El Evado	4 – SA	37,500	27,639	0.737	C
RS6: US-395 between Seneca & Palmdale	4 – SA	37,500	43,662	1.164	F
RS7: US-395 between Palmdale & Dos Palmas	4 – SA	37,500	49,855	1.329	F
RS8: US-395 between Dos Palmas & Luna	4 – SA	37,500	46,539	1.241	F
RS9: US-395 between Luna & La Mesa	2 – SA	18,750	43,116	2.300	F
RS10: US-395 between La Mesa & Bear Valley	2 – SA	18,750	38,792	2.069	F

Note: C = collector, SA = super arterial

As shown in **Table 29**, the study roadway segments are projected to operate at an acceptable LOS (LOS D or better) for *interim year with project* conditions with the exception of the following roadway segments:

- RS6: US-395 between Seneca Road and Palmdale Road (SR-18);
- RS7: US-395 between Palmdale Road (SR-18) and Dos Palmas Road;
- RS8: US-395 between Dos Palmas Road and Luna Road;
- RS9: US-395 between Luna Road and La Mesa Road
- RS10: US-395 between La Mesa Road and Bear Valley Road

Recommended improvements to improve deficiently operating study roadway segments to an acceptable LOS (LOS D or better) are provided in *Section 9.6 Interim Year With Project Recommended Improvements*.

9.5 INTERIM YEAR WITH PROJECT PEAK HOUR SIGNAL WARRANT ANALYSIS

Peak hour traffic signal warrants for interim year with project conditions have been prepared based on *interim year with project* peak hour intersection volumes at the unsignalized study intersections. **Table 30** summarizes the results of the peak hour signal warrant analysis. Detailed warrant analysis sheets are contained in **Appendix E**.

Table 30
Peak Hour Signal Warrant Analysis – Interim Year With Project

Int. No.	Intersection	Peak Hour Signal Warrants Met?	
		AM Peak Hour	PM Peak Hour
3	US-395/Seneca Road	Satisfied for Existing	Satisfied for Existing
5	US-395/Proposed Signalized Access	Satisfied	Satisfied
11	Mesa Linda Ave/Dos Palmas Rd	No	No
12	Mesa Linda Ave/Luna Road	No*	No*
13	Mesa Linda Ave/La Mesa Road	Satisfied for Interim Year Without Project	No*
14	Topaz Rd/Luna Road	No	No
15	Topaz Rd/La Mesa Road	Satisfied for Existing	Satisfied for Interim Year Without Project
18	Cobalt Rd/Luna Rd	Satisfied for Opening Year Without Project	No

Note: * = peak hour signal warrants not met based on the traffic data collected for this TIA; however, the City has performed a detailed signal warrant analysis at this location which concluded signalization is warranted and has plans to signalize the intersection in the near future.

9.6 INTERIM YEAR WITH PROJECT RECOMMENDED IMPROVEMENTS

The following improvements are recommended for *interim year with project* conditions.

Table 31
Recommended Improvements – Interim Year With Project

Deficient Facility (Jurisdiction)	Improvement	Estimated Construction Cost	Fair Share
#3: US-395/Seneca Road Caltrans	1) Signalize Intersection 2) Add northbound through lane 3) Add southbound through lane	\$500,000 * *	0.97%
#4: US-395/Palmdale Road (SR-18) Caltrans	1) Install eastbound right-turn overlap phase. Restrict U-turn movements from northbound US-395 to southbound US-395 2) Add a northbound left-turn lane	\$15,000 \$250,000	8.28%
#6: US-395/Dos Palmas Road Caltrans	1) Add westbound right-turn lane 2) Add southbound right-turn lane 3) Install westbound right-turn overlap phase. Restrict U-turn movements from southbound US-395 to northbound US-395	\$150,000 \$150,000 \$15,000	11.89%
#11: Mesa Linda Road/Dos Palmas Road City of Victorville	1) Install stop signs on the eastbound and westbound Dos Palmas Road approaches	\$3,000	10.92%
RS6: US-395 between Seneca & Palmdale Caltrans	1) Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	2.92%
RS7: US-395 between Palmdale & Dos Palmas Caltrans	1) Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	17.04%
RS8: US-395 between Dos Palmas and Luna Caltrans	1) Add northbound and southbound travel lane (0.50 miles of widening)	\$800,000	11.52%
RS9: US-395 between Luna and La Mesa Caltrans	1) Add two northbound and two southbound travel lanes (0.50 miles of widening)	\$1,600,000	3.32%
RS10: US-395 between La Mesa and Bear Valley Caltrans	1) Add two northbound and two southbound travel lanes (1.0 miles of widening)	\$3,200,000	2.15%

* = Cost included in the estimated cost of roadway segment widening

Table 32 summarizes the LOS of the study intersections assuming implementation of the recommended improvements.

Table 32
Intersection Analysis – Interim Year With Project With Recommended Improvements

Int. No	Intersection	Interim Year Without Project		Interim Year With Project With Recommended Improvements	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS
3	US-395/Seneca Rd	>999.9 – F	>999.9 – F	19.8 – B	49.9 – D
4	US-395/Palmdale Rd (SR-18)	71.6 – E	68.7 – E	32.7 – D	47.8 – D
6	US-395/Dos Palmas Rd	60.2 – E	52.3 – D	51.4 – D	47.2 – D
11	Mesa Linda Rd/Dos Palmas Rd	29.7 – D	18.4 – C	13.8 – B	10.7 – B

Note: Delay shown in seconds per vehicle.

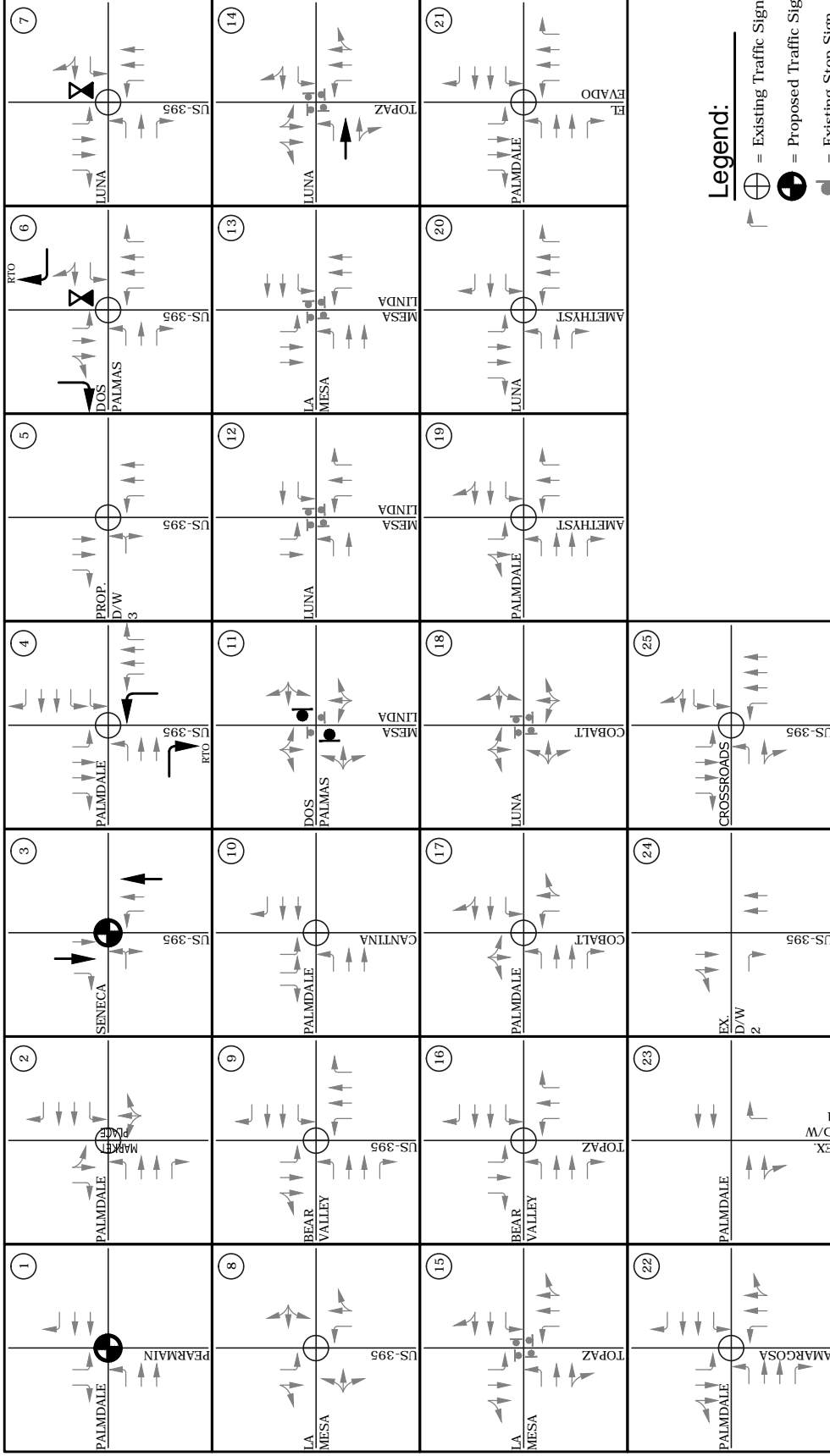
Table 33 summarizes the LOS of the study roadway segments assuming implementation of the recommended improvements.

Table 33
Roadway Segment Analysis – Interim Year With Project With Recommended Improvements

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	Interim Year With Project With Recommended Improvements		
			ADT	V/C	LOS
RS6: US-395 between Seneca & Palmdale	6 – SA	56,300	43,662	0.776	C
RS7: US-395 between Palmdale & Dos Palmas	6 – SA	56,300	49,855	0.886	D
RS8: US-395 between Dos Palmas & Luna	6 – SA	56,300	46,539	0.827	D
RS9: US-395 between Luna & La Mesa	6 – SA	56,300	43,116	0.766	C
RS10: US-395 between La Mesa & Bear Valley	6 – SA	56,300	38,792	0.689	B

Note: SA = super arterial

Exhibit 14A shows interim year with project intersection geometry assuming implementation of the recommended improvements. **Exhibit 14B** shows interim year with project roadway segment geometry assuming implementation of the recommended improvements.



Legend:

- = Existing Traffic Signal
- = Proposed Traffic Signal
- = Existing Stop Sign
- = Proposed Stop Sign
- = Right Turn Overlap
- = Re-time Intersection

Exhibit 14A: IY Plus Project Intersection Geometry With Recommended Improvements

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



TJW ENGINEERING, INC.



Not to Scale

Legend:

- #** = Study Intersection
- 4** = Number of Lanes
- D** = Divided
- U** = Undivided
- #** = Study Roadway Segment

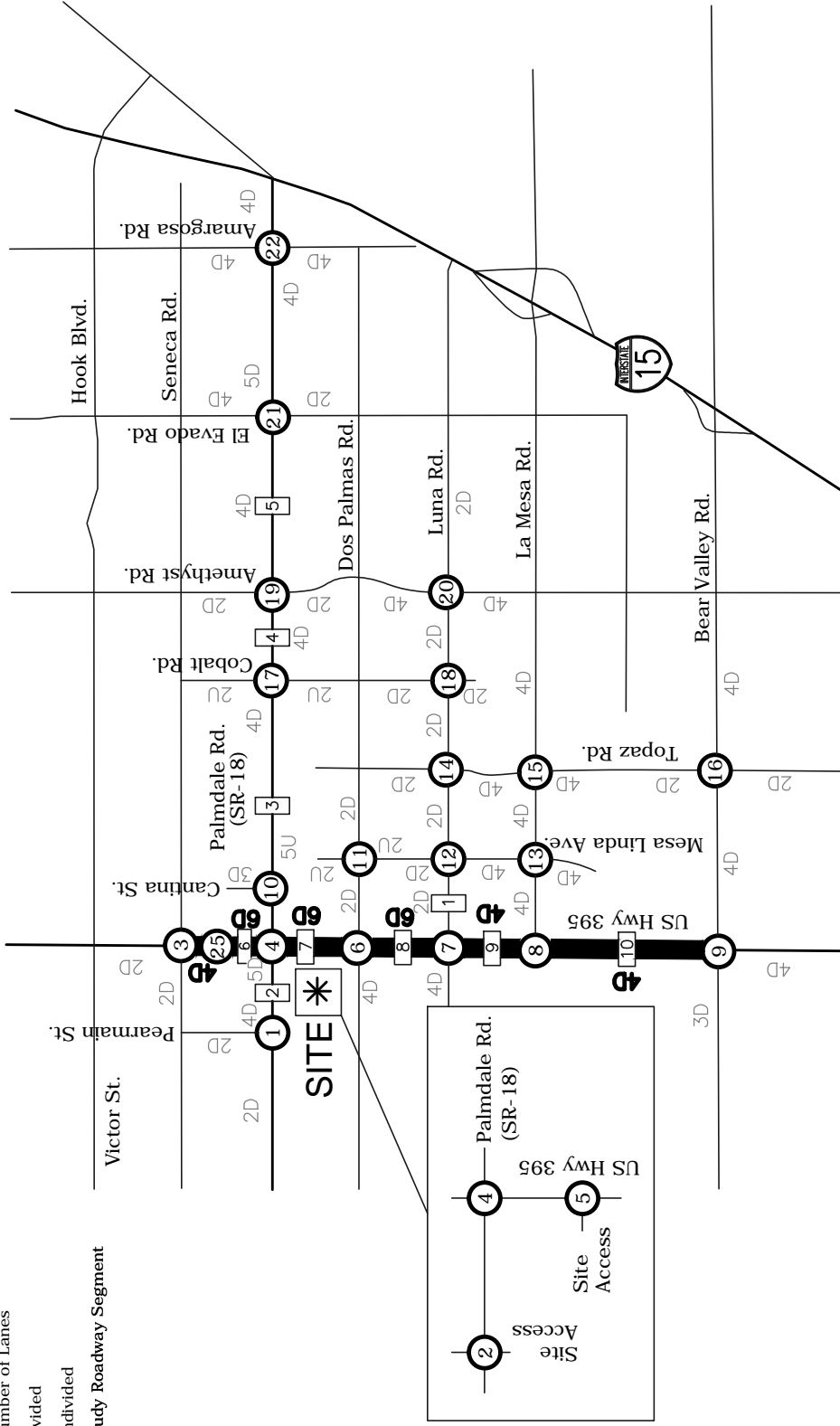


Exhibit 14B: IY Plus Project Roadway Segment Geometry With Recommended Improvements

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



10.0 General Plan Without Project Conditions

General plan without project conditions consists of existing traffic volumes increased to account for traffic growth in the study area and construction of projects in various states of approval that may be completed by the time the proposed project is constructed.

13.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *general plan without project conditions* scenario are consistent with those previously shown in **Exhibit 3** with the exception of the following improvements:

- Construction of the east and west legs and signalization of the US-395/La Mesa Road intersection;
- Construction of the west leg of the US-395/Seneca Road intersection;
- Construction of the south leg and signalization of the Pearmain Street/Palmdale Road (SR-18) intersection;
- Construction of the south leg of the Cantina Street/Palmdale Road (SR-18) intersection.

SANBAG is currently in the right-of-way/design phase of a widening project on US-395, which will widen US-395 from 2 to 4 lanes from Palmdale Road (SR-18) to approximately 5.5 miles to the north, construction is projected to begin in 2019. The City of Victorville has plans to signalize the Mesa Linda Road/Luna Road and Mesa Linda Road/La Mesa Road intersection. These improvements have not been assumed in the analysis.

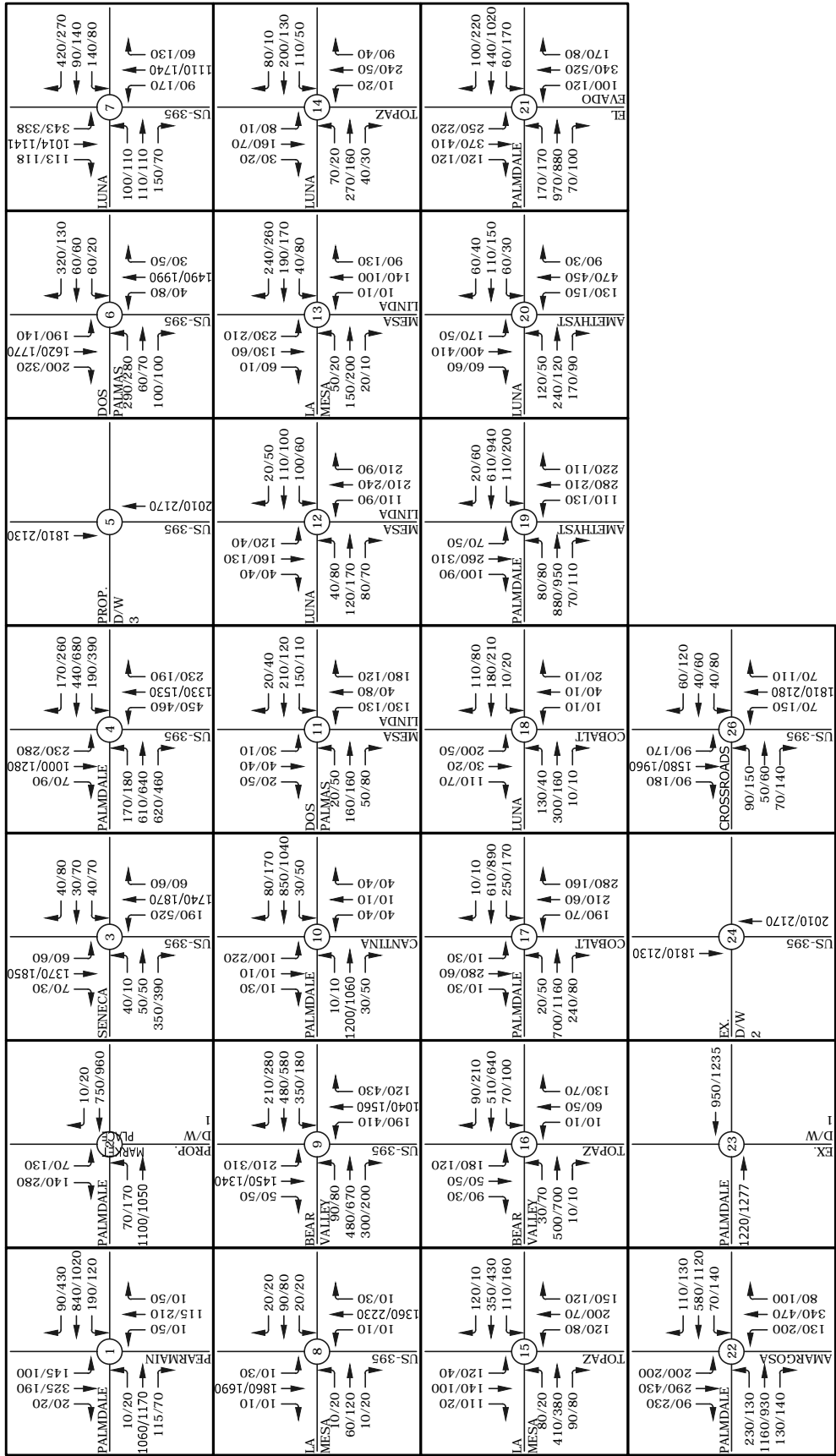
10.2 GENERAL PLAN WITHOUT PROJECT TRAFFIC VOLUMES

General Plan without project volumes have been derived by post-processed General Plan Buildout (2040) traffic volumes at the study intersections and roadway segments, based on model data provided by SANBAG, using a factoring method. SANBAG model data and model post-processing worksheets are contained in **Appendix F**.

Exhibit 15 shows *general plan without project* AM and PM peak hour volumes at the study intersections.

10.3 GENERAL PLAN WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

General plan without project conditions AM and PM peak hour intersection analysis is shown in **Table 34**. Synchro (HCM 2010) analysis sheets are provided in **Appendix D**.



Legend:

XX/XX = AM/PM Peak Hour Volumes



Exhibit 15: General Plan Without Project Traffic Volumes

BPE-16-004 SWC US395/Palmdale (SR-18) TIA

Table 34
Intersection Analysis – General Plan Without Project Intersection Analysis

Int. No.	Intersection	Control Type	AM Peak Hour		PM Peak Hour	
			Delay (V/C)	LOS	Delay (V/C)	LOS
HCM 2010 Analysis (Synchro)						
1	Pearmain St/Palmdale Rd (SR-18)	Signal	39.1	D	31.8	C
2	Stater Bros Drwy/Palmdale Rd (SR-18)	Signal	34.0	C	34.3	C
3	US-395/Seneca Rd	TWSC	>999.9	F	>999.9	F
4	US-395/Palmdale Rd (SR-18)	Signal	98.6	F	68.7	E
6	US-395/Dos Palmas Rd	Signal	107.1	F	124.2	F
7	US-395/Luna Rd	Signal	60.7	E	85.8	F
8	US-395/La Mesa Rd	Signal	5.4	A	7.6	A
9	US-395/Bear Valley Rd	Signal	81.1	F	108.8	F
10	Cantina St/Palmdale Rd (SR-18)	Signal	35.7	D	37.3	D
11	Mesa Linda Rd/Dos Palmas Rd	TWSC	77.4	F	75.5	F
12	Mesa Linda Rd /Luna Rd	AWSC	16.6	C	16.1	C
13	Mesa Linda Rd /La Mesa Rd	AWSC	16.1	C	15.5	C
14	Topaz Rd/Luna Rd	AWSC	24.3	C	10.0	A
15	Topaz Rd/La Mesa Rd	AWSC	29.8	D	17.7	C
16	Topaz Rd/Bear Valley Rd	Signal	37.1	D	40.9	D
17	Cobalt Rd/Palmdale Rd (SR-18)	Signal	36.5	D	31.5	C
18	Cobalt Rd/Luna Rd	AWSC	21.3	C	10.1	B
19	Amethyst Rd/Palmdale Rd (SR-18)	Signal	38.5	D	47.8	D
20	Amethyst Rd/Luna Rd	Signal	35.6	D	38.6	C
21	El Evado Rd/Palmdale Rd (SR-18)	Signal	41.2	D	44.6	D
22	Amargosa Rd/Palmdale Rd (SR-18)	Signal	44.3	D	51.2	D
25	Crossroads/US-395	Signal	21.5	C	66.7	E

Note: Delay shown in seconds per vehicle. TWSC = One- or Two-Way Stop-Control. AWSC = All-Way Stop-Control.

Deficient intersection operation shown in **bold**.

Per the 2010 Highway Capacity Manual, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 34**, based on HCM 2010 analysis utilizing Synchro software, the study intersections are projected to operate at an acceptable LOS (LOS D or better) for *general plan without project*, with the exception of the following six intersections:

- #3: US-395/Seneca Road;
- #4: US-395/Palmdale Road (SR-18);
- #6: US-395/Dos Palmas Road;
- #7: US-395/Luna Road;
- #9: US-395/Bear Valley Road;
- #11: Mesa Linda Road/Dos Palmas Road; and
- #25: US-395/Crossroads.

10.4 GENERAL PLAN WITHOUT PROJECT ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

Table 35 summarizes *general plan without project* conditions roadway segment analysis based on the LOS E capacities provided in the City of Victorville General Plan Circulation Element, previously summarized in **Table 3**.

Table 35
Roadway Segment Analysis – General Plan Without Project

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	General Plan Without Project		
			ADT	V/C	LOS
RS1: Luna between US-395 & Mesa Linda	2 – C	12,500	5,500	0.440	A
RS2: Palmdale between Pearmain & US-395	4 – SA	37,500	27,100	0.723	C
RS3: Palmdale between US-395 & Cobalt	4 – SA	37,500	29,200	0.779	C
RS4: Palmdale between Cobalt & Amethyst	4 – SA	37,500	30,700	0.819	D
RS5: Palmdale between Amethyst & El Evado	4 – SA	37,500	29,700	0.792	C
RS6: US-395 between Seneca & Palmdale	4 – SA	37,500	55,500	1.480	F
RS7: US-395 between Palmdale & Dos Palmas	4 – SA	37,500	56,500	1.507	F
RS8: US-395 between Dos Palmas & Luna	4 – SA	37,500	56,900	1.517	F
RS9: US-395 between Luna & La Mesa	2 – SA	18,750	56,900	3.035	F
RS10: US-395 between La Mesa & Bear Valley	2 – SA	18,750	51,700	2.757	F

Note: C = collector, SA = super arterial

As shown in **Table 35**, the study roadway segments are projected to operate at an acceptable LOS (LOS D or better) for *general plan without project conditions* with the exception of the following segments;

- RS6: US-395 between Seneca Road and Palmdale Road (SR-18);
- RS7: US-395 between Palmdale Road (SR-18) and Dos Palmas Road;
- RS8: US-395 between Dos Palmas Road and Luna Road;
- RS9: US-395 between Luna Road and La Mesa Road
- RS10: US-395 between La Mesa Road and Bear Valley Road

10.5 GENERAL PLAN WITHOUT PROJECT PEAK HOUR SIGNAL WARRANT ANALYSIS

Peak hour traffic signal warrants for interim year without project conditions have been prepared based on *general plan without project* peak hour intersection volumes at the unsignalized study intersections. **Table 36** summarizes the results of the peak hour signal warrant analysis. Detailed warrant analysis sheets are contained in **Appendix E**.

Table 36
Peak Hour Signal Warrant Analysis – General Plan Without Project

Int. No.	Intersection	Peak Hour Signal Warrants Met?	
		AM Peak Hour	PM Peak Hour
3	US-395/Seneca Road	Satisfied for Existing	Satisfied for Existing
11	Mesa Linda Ave/Dos Palmas Rd	No	No
12	Mesa Linda Ave/Luna Road	No*	No*
13	Mesa Linda Ave/La Mesa Road	Satisfied for Interim Year Without Project	Yes
14	Topaz Rd/Luna Road	No	No
15	Topaz Rd/La Mesa Road	Satisfied for Existing	Satisfied for Interim Year Without Project
18	Cobalt Rd/Luna Rd	Satisfied for Opening Year Without Project	No

Note: * = peak hour signal warrants not met based on the traffic data collected for this TIA; however, the City has performed a detailed signal warrant analysis at this location which concluded signalization is warranted and has plans to signalize the intersection in the near future.

11.0 General Plan With Project Conditions

General plan with project conditions analysis is intended to identify the project-related impacts of the proposed project on the intermediate-term circulation system by comparing general plan without project and general plan with project conditions.

11.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for the *general plan with project* scenario are consistent with those previously shown in **Exhibit 3** with the exception of the following improvements:

- Construction of the east and west legs and signalization of the US-395/La Mesa Road intersection;
- Construction of the west leg of the US-395/Seneca Road intersection;
- Construction of the south leg and signalization of the Pearmain Street/Palmdale Road (SR-18) intersection;
- Construction of the south leg of the Cantina Street/Palmdale Road (SR-18) intersection.
- Project driveways on US-395.

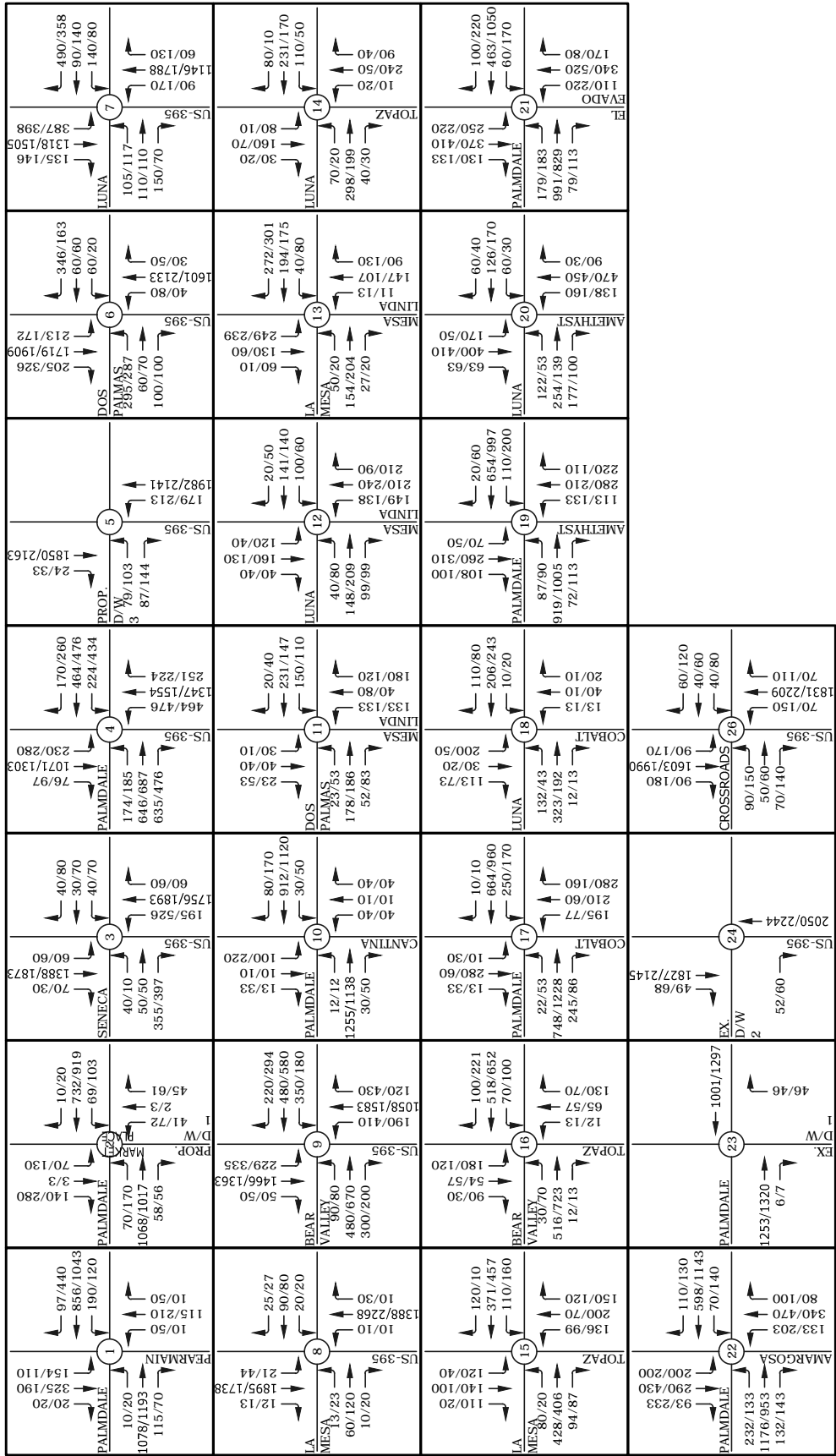
SANBAG is currently in the right-of-way/design phase of a widening project on US-395, which will widen US-395 from 2 to 4 lanes from Palmdale Road (SR-18) to approximately 5.5 miles to the north, construction is projected to begin in 2019. The City of Victorville has plans to signalize the Mesa Linda Road/Luna Road and Mesa Linda Road/La Mesa Road intersection. These improvements have not been assumed in the analysis.

11.2 GENERAL PLAN WITH PROJECT TRAFFIC VOLUMES

General Plan with project traffic volumes consist of the addition of project-generated trips to interim year without project traffic volumes. **Exhibit 16** shows *general plan with project* AM and PM peak hour volumes at the study intersections.

11.3 GENERAL PLAN WITH PROJECT INTERSECTION LEVEL OF SERVICE ANALYSIS

General Plan with project AM and PM peak hour intersection analysis is shown in **Table 37**. Synchro (HCM 2010) analysis sheets are provided in **Appendix D**.



Legend:

XX/XX = AM/PM Peak Hour Volumes

Exhibit 16: General Plan With Project Traffic Volumes

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



TJW ENGINEERING, INC.



Not to Scale

Table 37
Intersection Analysis – General Plan With Project Intersection Analysis

Int. No.	Intersection	General Plan Without Project		General Plan With Project	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS
HCM 2010 Analysis (Synchro)					
1	Pearmain St/Palmdale Rd (SR-18)	39.1 – D	31.8 – C	30.9 – C	27.9 – C
2	Stater Bros Drwy/Palmdale Rd (SR-	34.0 – C	34.3 – C	34.5 – C	34.5 – C
3	US-395/Seneca Rd	>999.9 – F	>999.9 – F	>999.9 – F	>999.9 – F
4	US-395/Palmdale Rd (SR-18)	98.6 – F	68.7 – E	116.4 – F	136.9 – F
5	US-395/Proposed Signalized	Analyzed for With Project		21.1 – C	40.3 – D
6	US-395/Dos Palmas Rd	107.1 – F	124.2 – F	100.4 – F	182.8 – F
7	US-395/Luna Rd	60.7 – E	85.8 – F	84.4 – F	130.2 – F
8	US-395/La Mesa Rd	5.4 – A	7.6 – A	5.5 – A	9.5 – A
9	US-395/Bear Valley Rd	81.1 – F	108.8 – F	96.2 – F	114.0 – F
10	Cantina St/Palmdale Rd (SR-18)	35.7 – D	37.3 – D	29.0 – C	36.2 – D
11	Mesa Linda Rd/Dos Palmas Rd	77.4 – F	75.5 – F	108.2 – F	116.5 – F
12	Mesa Linda Rd /Luna Rd	16.6 – C	16.1 – C	19.7 – C	20.3 – C
13	Mesa Linda Rd /La Mesa Rd	16.1 – C	15.5 – C	18.3 – C	18.5 – C
14	Topaz Rd/Luna Rd	24.3 – C	10.0 – A	30.7 – D	10.9 – A
15	Topaz Rd/La Mesa Rd	29.8 – D	17.7 – C	33.6 – D	19.5 – C
16	Topaz Rd/Bear Valley Rd	37.1 – D	40.9 – D	38.6 – D	40.4 – D
17	Cobalt Rd/Palmdale Rd (SR-18)	36.5 – D	31.5 – C	36.8 – D	31.7 – C
18	Cobalt Rd/Luna Rd	21.3 – C	10.1 – B	25.4 – D	10.8 – B
19	Amethyst Rd/Palmdale Rd (SR-18)	38.5 – D	47.8 – D	38.6 – D	49.2 – D
20	Amethyst Rd/Luna Rd	35.6 – D	38.6 – C	39.4 – D	30.3 – C
21	El Evado Rd/Palmdale Rd (SR-18)	41.2 – D	44.6 – D	41.2 – D	46.0 – D
22	Amargosa Rd/Palmdale Rd (SR-18)	44.3 - D	51.2 – D	43.8 - D	51.8 – D
23	Right in/out Drwy/Palmdale Rd	Analyzed for With Project		15.1 – C	15.8 – C
24	Right in/out Drwy 1/US-395			22.8 – C	31.5 – D
25	US-395/Crossroads	21.5 – C	66.7 – E	21.9 – C	69.6 – E

Note: Delay shown in seconds per vehicle. Deficient intersection operation shown in **bold**.

Per the 2010 Highway Capacity Manual, overall average delay and LOS are shown for signalized and all-way stop-controlled intersections. For intersections with one-or-two-way stop-control, the delay and LOS for the worst individual movement is shown.

As shown in **Table 37**, the intersections are projected to continue to operate at an acceptable LOS (LOS D or better) during the AM and PM peak hours for *general plan with project* condition with the exception of the following seven intersections:

- #3: US-395/Seneca Road;
- #4: US-395/Palmdale Road (SR-18);
- #6: US-395/Dos Palmas Road;
- #7: US-395/Luna Road;
- #9: US-395/Bear Valley Road;

- #11: Mesa Linda Road/Dos Palma Road; and
- #25: US-395/Crossroads.

Recommended improvements to improve deficiently operating study intersections to an acceptable LOS (LOS D or better) are provided in *Section 11.6 General Plan With Project Recommended Improvements*.

11.4 GENERAL PLAN WITH PROJECT ROADWAY SEGMENT LEVEL OF SERVICE ANALYSIS

Table 38 summarizes *general plan with project* conditions roadway segment analysis based on the LOS E capacities provided in the City of Victorville General Plan Circulation Element, previously summarized in **Table 3**.

Table 38
Roadway Segment Analysis – General Plan Year With Project

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	General Plan With Project		
			ADT	V/C	LOS
RS1: Luna between US-395 & Mesa Linda	2 – C	12,500	7,954	0.636	B
RS2: Palmdale between Pearmain & US-395	4 – SA	37,500	28,369	0.757	C
RS3: Palmdale between US-395 & Cobalt	4 – SA	37,500	31,316	0.835	D
RS4: Palmdale between Cobalt & Amethyst	4 – SA	37,500	32,477	0.866	D
RS5: Palmdale between Amethyst & El Evado	4 – SA	37,500	31,139	0.830	D
RS6: US-395 between Seneca & Palmdale	4 – SA	37,500	56,262	1.500	F
RS7: US-395 between Palmdale & Dos Palmas	4 – SA	37,500	61,155	1.631	F
RS8: US-395 between Dos Palmas & Luna	4 – SA	37,500	60,539	1.614	F
RS9: US-395 between Luna & La Mesa	2 – SA	18,750	57,916	3.089	F
RS10: US-395 between La Mesa & Bear Valley	2 – SA	18,750	52,292	2.789	F

Note: C = collector, SA = super arterial

As shown in **Table 38**, the study roadway segments are projected to operate at an acceptable LOS (LOS D or better) for *general plan with project* conditions with the exception of the following roadway segments:

- RS6: US-395 between Seneca Road and Palmdale Road (SR-18);
- RS7: US-395 between Palmdale Road (SR-18) and Dos Palmas Road;
- RS8: US-395 between Dos Palmas Road and Luna Road;
- RS9: US-395 between Luna Road and La Mesa Road
- RS10: US-395 between La Mesa Road and Bear Valley Road

Recommended improvements to improve deficiently operating study roadway segments to an acceptable LOS (LOS D or better) are provided in *Section 11.6 General Plan With Project Recommended Improvements*.

11.5 GENERAL PLAN WITH PROJECT PEAK HOUR SIGNAL WARRANT ANALYSIS

Peak hour traffic signal warrants for general plan with project conditions have been prepared based on *general plan with project* peak hour intersection volumes at the unsignalized study intersections. **Table 39** summarizes the results of the signal warrant analysis. Detailed warrant analysis sheets are contained in **Appendix E**.

Table 39
Peak Hour Signal Warrant Analysis – General Plan With Project

Int. No.	Intersection	Peak Hour Signal Warrants Met?	
		AM Peak Hour	PM Peak Hour
3	US-395/Seneca Road	Satisfied for Existing	Satisfied for Existing
5	US-395/Proposed Signalized Access	Satisfied	Satisfied
11	Mesa Linda Ave/Dos Palmas Rd	Satisfied	No
12	Mesa Linda Ave/Luna Road	No*	No*
13	Mesa Linda Ave/La Mesa Road	Satisfied for Interim Year Without Project	Satisfied for General Plan Without Project
14	Topaz Rd/Luna Road	No	No
15	Topaz Rd/La Mesa Road	Satisfied for Existing	Satisfied for Interim Year Without Project
18	Cobalt Rd/Luna Rd	Satisfied for Opening Year Without Project	No

Note: * = peak hour signal warrants not met based on the traffic data collected for this TIA; however, the City has performed a detailed signal warrant analysis at this location which concluded signalization is warranted and has plans to signalize the intersection in the near future.

11.6 GENERAL PLAN WITH PROJECT RECOMMENDED IMPROVEMENTS

The following improvements are recommended for *general plan with project* conditions.

Table 40
Recommended Improvements – General Plan With Project

Deficient Facility (Jurisdiction)	Improvement	Estimated Construction Cost	Fair Share
#3: US-395/Seneca Road Caltrans	Signalize Intersection	\$500,000	0.97%
	Add two northbound through lanes	*	
	Add two southbound through lanes Add a northbound left-turn lane	* \$200,000	1.86%
#4: US-395/Palmdale Road (SR-18) Caltrans	Install eastbound right-turn overlap phase.	\$15,000	
	Restrict U-turn movements from northbound US-395 to southbound US-395		
	Add a northbound left-turn lane	\$200,000	8.28%
	Add a northbound through lane	*	
	Add a southbound through lane	*	
	Add an eastbound left-turn lane Add a southbound left-turn lane	\$200,000 \$200,000	
#6: US-395/Dos Palmas Road Caltrans	Add westbound right-turn lane	\$150,000	
	Add southbound right-turn lane	\$150,000	
	Add northbound through lane	*	
	Add southbound through lane	*	11.89%
	Install westbound right-turn overlap phase. Restrict U-turn movements from southbound US-395 to northbound US-395	\$15,000	
#7: US-395/Luna Road Caltrans	Add a northbound through lane	*	
	Add a southbound through lane	*	10.37%
	Add a westbound right-turn lane	\$125,000	
#9: US-395/Bear Valley Road Caltrans	Add a northbound through lane	*	
	Add a southbound through lane	*	
	Add a westbound left-turn lane	\$200,000	2.33%
	Add a northbound left-turn lane	\$200,000	
	Add a southbound left-turn lane	\$200,000	
#25: US-395/Crossroads (Caltrans)	Add a southbound through lane	*	1.77%
#11: Mesa Linda Road/Dos Palmas Road City of Victorville	Install stop signs on the eastbound and westbound Dos Palmas Road approaches	\$3,000	10.92%
RS6: US-395 between Seneca & Palmdale Caltrans	Add two northbound and two southbound travel lanes (0.50 miles of widening)	\$1,600,000	2.92%
RS7: US-395 between Palmdale & Dos Palmas Caltrans	Add two northbound and two southbound travel lanes (0.50 miles of widening)	\$1,600,000	17.04%
RS8: US-395 between Dos Palmas and Luna Caltrans	Add two northbound and two southbound travel lanes (0.50 miles of widening)	\$1,600,000	11.52%
RS9: US-395 between Luna and La Mesa Caltrans	Add three northbound and three southbound travel lanes (0.50 miles of widening)	\$2,400,000	3.32%
RS10: US-395 between La Mesa and Bear Valley Caltrans	Add three northbound and three southbound travel lanes (1.0 miles of widening)	\$4,800,000	2.15%

* = Cost included in the estimated cost of roadway segment widening

Table 41 summarizes the LOS of the study intersections assuming implementation of the recommended improvements.

Table 41
Intersection Analysis – General Plan With Project With Recommended Improvements

Int. No.	Intersection	General Plan Without Project		General Plan With Project With Recommended Improvements	
		AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
		Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS	Delay (V/C) - LOS
3	US-395/Seneca Rd	>999.9 – F	>999.9 – F	19.0 – B	43.9 – D
25	US-395/Crossroads	21.5 – C	66.7 – E	18.2 – B	45.5 – D
4	US-395/Palmdale Rd (SR-18)	98.6 – F	68.7 – E	52.2 – D	42.6 – D
6	US-395/Dos Palmas Rd	107.1 – F	124.2 – F	33.6 – C	34.3 – C
7	US-395/Luna Rd	60.7 – E	85.8 – F	50.8 – D	44.3 – D
9	US-395/Bear Valley Rd	81.1 – F	108.8 – F	41.6 – D	43.1 – D
11	Mesa Linda Rd/Dos Palmas Rd	77.4 – F	75.5 – F	18.4 – C	15.7 – C

Note: Delay shown in seconds per vehicle.

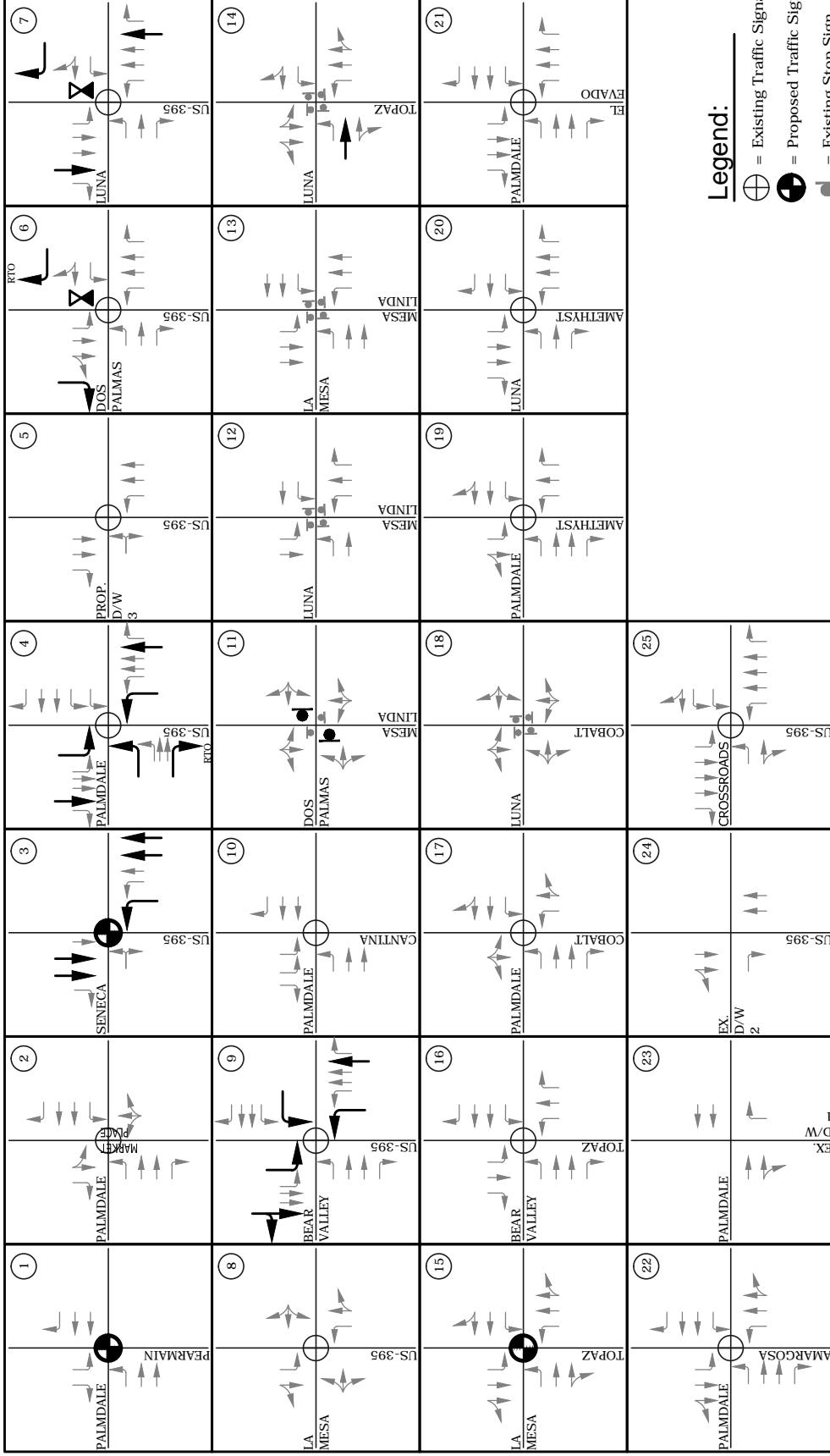
Table 42 summarizes the LOS of the study roadway segments assuming implementation of the recommended improvements.

Table 42
Roadway Segment Analysis – General Plan With Project With Recommended Improvements

Roadway Segment	Number of Lanes/ Classification	LOS E Capacity	General Plan Year With Project With Recommended Improvements		
			ADT	V/C	LOS
RS6: US-395 between Seneca & Palmdale	8 – SA	75,000	56,262	0.750	C
RS7: US-395 between Palmdale & Dos Palmas	8 – SA	75,000	61,155	0.815	D
RS8: US-395 between Dos Palmas & Luna	8 – SA	75,000	60,539	0.807	D
RS9: US-395 between Luna & La Mesa	8 – SA	75,000	57,916	0.772	C
RS10: US-395 between La Mesa & Bear Valley	8 – SA	75,000	52,292	0.697	B

Note: SA = super arterial

Exhibit 17A shows general plan with project intersection geometry assuming implementation of the recommended improvements. **Exhibit 17B** shows general plan with project roadway segment geometry assuming implementation of the recommended improvements.



Legend:

- = Existing Traffic Signal
- = Proposed Traffic Signal
- = Existing Stop Sign
- = Proposed Stop Sign
- = Right Turn Overlap
- = Re-time Intersection

Exhibit 17A: GP Plus Project Intersection Geometry With Recommended Improvements

BPE-16-004 SWC US395/Palmdale (SR-18) TIA





TJW ENGINEERING, INC.



Not to Scale

Legend:

-  = Study Intersection
- 4** = Number of Lanes
- D** = Divided
- U** = Undivided
-  = Study Roadway Segment

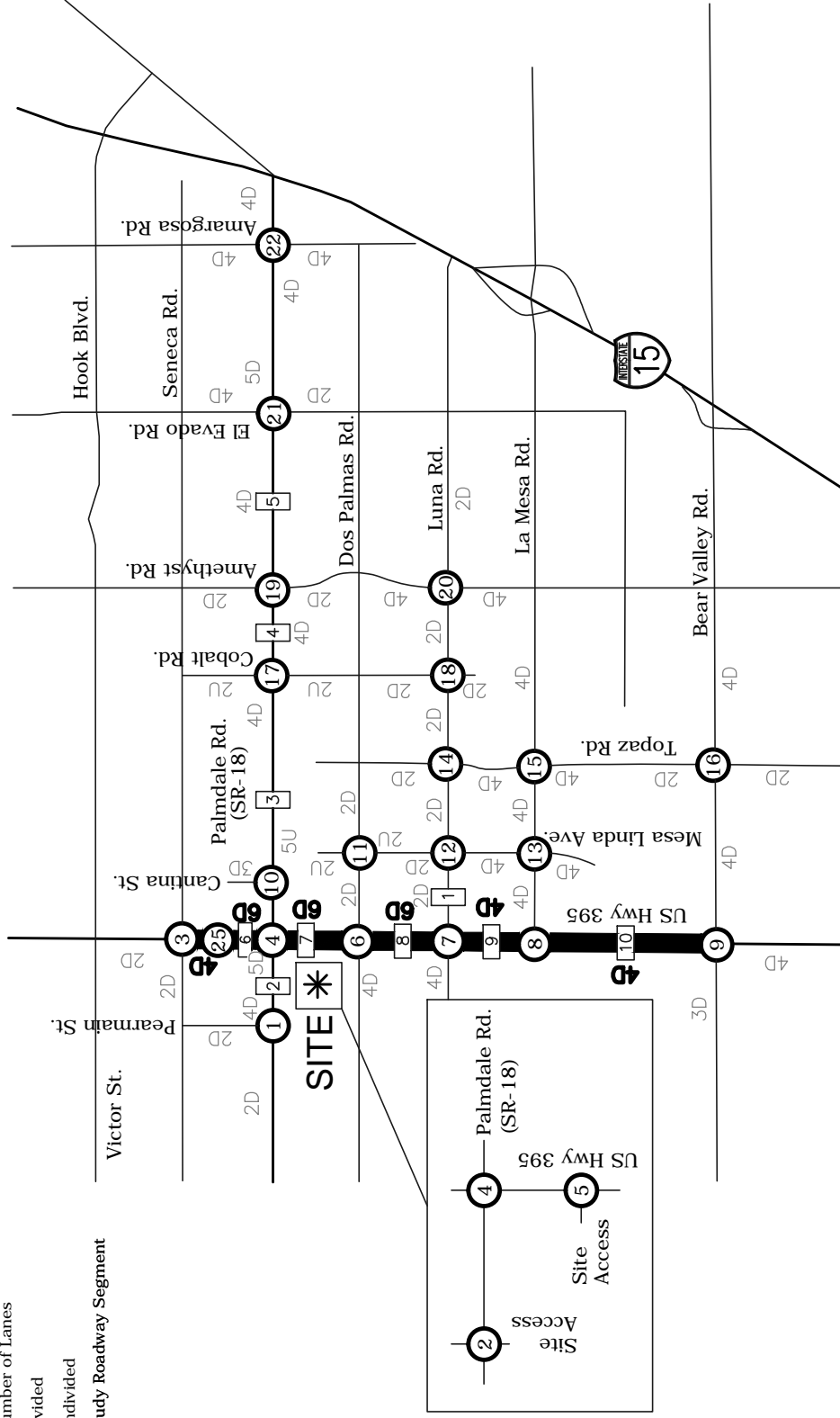


Exhibit 17B: GP Plus Project Roadway Segment Geometry With Recommended Improvements

BPE-16-004 SWC US395/Palmdale (SR-18) TIA



12.0 Fair Share Calculations

Calculation of the proposed project's fair share contribution to recommended improvements is shown in **Table 43**. For most improvements, the fair share has been calculated as the proposed project's contribution to overall intersection volumes. For traffic signal installation and traffic signal re-timing improvements, which primarily benefit minor street traffic, the fair share has been calculated as the proposed project's contribution to minor street approach volumes.

Table 43
Fair Share Calculations

Fair Share Calculation for Improvements (Excluding Traffic Signal Installation and Signal Re-Timing Improvements)

Intersection	Existing AM&PM Peak Hour Volume (A)	Year 2040 With Project AM&PM Peak Hour Volume (B)	Project Contribution (C)	Project Fair Share % (D) = (C)/(B)-(A)
#1: Pearmain St/Palmdale Rd (SR-18)	3797	6495	115	4.26%
#3: US-395/Seneca Rd	3670	9203	103	1.86%
#4: US-395/Palmdale Rd (SR-18)	6965	12400	450	8.28%
#6: US-395/Dos Palmas Rd	4811	10099	629	11.89%
#7: US-395/Luna Rd	4479	9233	493	10.37%
#9: US-395/Bear Valley Rd	4869	11208	148	2.33%
#11: Mesa Linda Rd/Dos Palmas Rd	1110	2154	114	10.92%
#14: Topaz Rd/Luna Rd	1807	2128	138	42.99%
#25: US-395/Crossroads	3792	9623	103	1.77%

Roadway Segment	Existing ADT (A)	Year 2040 With Project ADT (B)	Project ADT (C)	Project Fair Share % (D) = (C)/(B)-(A)
RS6: US-395 between Seneca & Palmdale	30207	56262	762	2.92%
RS7: US-395 between Palmdale & Dos Palmas	33838	61155	4655	17.04%
RS8: US-395 between Dos Palmas & Luna	28964	60539	3639	11.52%
RS9: US-395 between Luna & La Mesa	27295	57916	1016	3.32%
RS10: US-395 between La Mesa & Bear Valley	24763	52292	592	2.15%

Fair Share Calculation for Traffic Signal Installation and Signal Re-Timing Improvements

Intersection	Year 2040 With Project AM&PM Minor Street Approach Volume (A)	Project Contribution (B)	Project Fair Share % (C) = (B) / (A)
#1: Pearmain St/Palmdale Rd (SR-18)	1263	18	1.43%
#3: US-395/Seneca Rd	1232	12	0.97%
#6: US-395/Dos Palmas Rd	1621	71	4.38%
#7: US-395/Luna Rd	1960	170	8.67%

13.0 Local Circulation and Site Access

13.1 ON-SITE ROADWAY IMPROVEMENTS

Wherever required, roadways adjacent to the proposed project site and site access points will be constructed in compliance with recommended roadway classifications and respective cross-sections in the City of Victorville General Plan Circulation Element.

13.2 SAFETY AND OPERATIONAL CONSIDERATIONS

- Sight distance at each project access point should be reviewed with respect to standard Caltrans and City sight distance standards at the time of final grading, landscaping and street improvement plans.
- Participate in the phased construction of off-site improvements through payment of the project's fair share of development impact fees.
- Signing/stripping should be implemented in conjunction with detailed construction plans for the project site.

Appendices

APPENDIX A
Scoping Agreement Information



January 4, 2017

Mr. Anwar Wagdy, TE
City of Victorville
14343 Civic Drive
Victorville, CA 92392

**Subject: SWC US-395/SR-18 TIA: Revised Scoping Letter
City of Victorville**

Dear Mr. Wagdy,

TJW ENGINEERING, INC. (TJW) is pleased to submit this revised traffic impact analysis scoping letter for the proposed SWC US-395/SR-18 project located in the City of Victorville. The proposed project is located at the southwest corner of the US-395/Palmdale Road (SR-18) intersection. The proposed project would be constructed in two phases consisting of the following land uses:

Phase 1:

8,250 square feet of fast food with drive-through land uses (3 fast food restaurants in total)
12,000 square feet of high turnover sit down (fast casual) restaurants
45,000 square feet of retail uses

Phase 2:

5,600 square feet of high turnover sit down (fast casual) restaurants
30,000 square feet of retail uses
Gas Station (16 vehicle fueling positions) with convenience store (5,000 square feet)

The project proposes 2 access points on Palmdale Road (SR-18) and four access points on US-395 as follows:

Palmdale Road (SR-18)

- 1) Full access at existing traffic signal serving the existing shopping center on the NWC corner of the US-395/SR-18 intersection.
- 2) Right-in/Right-out only access at the existing driveway serving Burger King

US-395

- 1) Right-in/Right-out only access at the existing driveway serving Burger King
- 2) Proposed Right-in/Right-out only access driveway on the north side of the proposed gas station
- 3) Proposed Right-in/Right-out only access driveway on the south side of the proposed gas station
- 4) Proposed Signalized access on US-395 at the southern edge of the property

The proposed site plan is included in **Appendix A**.

The following Scope of Work is anticipated for the project:

1.1 TIA Scoping Process and Study Area Definition

TJW will work with City of Victorville staff to determine the appropriate scope, study area, and key parameters for the TIA.

Based on the projected trip generation of the proposed project and the project's trip distribution, based on an SBTAM Select Zone Model Run, discussed below in Section 1.3, the following study area is proposed for the traffic impact analysis:

Study Intersection Locations:

1. Pearmain Street/Palmdale Road (SR-18);
2. Project Signalized Access/Palmdale Road (SR-18)
3. US-395/Seneca Road;
4. US-395/Palmdale Road (SR-18);
5. US-395/Project Signalized Access (with project scenarios only);
6. US-395/Dos Palmas Road;
7. US-395/Luna Road;
8. US-395/La Mesa Road;
9. US-395/Bear Valley Road;
10. Cantina Street/Palmdale Road (SR-18)
11. Mesa Linda Avenue/Dos Palmas Road;
12. Mesa Linda Avenue /Luna Road;
13. Mesa Linda Avenue/La Mesa Road;
14. Topaz Road/Luna Road;
15. Topaz Road/La Mesa Road;
16. Topaz Road/Bear Valley Road;
17. Cobalt Road/Palmdale Road (SR-18);
18. Cobalt Road/Luna Road;
19. Amethyst Road/Palmdale Road (SR-18);
20. Amethyst Road/Luna Road;
21. El Evado Road/Palmdale Road (SR-18); and
22. Amargosa Road/Palmdale Road (SR-18).

Study Roadway Segment Locations:

1. Palmdale Road (SR-18) between Pearmain Road and US-395;
2. Palmdale Road (SR-18) between US-395 and Cobalt Road;
3. Palmdale Road (SR-18) between Cobalt Road and Amethyst Road;
4. Palmdale Road (SR-18) between Amethyst Road and El Evado Road;
5. US-395 between Seneca Road and Palmdale Road (SR-18);
6. US-395 between Palmdale Road (SR-18) and Dos Palmas Road;
7. US-395 between Dos Palmas Road and Luna Road;

8. US-395 between Luna Road La Mesa Road;
9. US-395 between La Mesa Road and Bear Valley Road; and
10. Luna Road between US-395 and Mesa Linda Avenue.

TJW will obtain recent traffic data from Counts Unlimited. The counts would be conducted from 7:0-9:00 AM and from 4:00-6:00 PM, or as directed by the City for study intersections, and 24-hour average daily traffic counts will be collected for study roadway segments.

1.2 Existing Roadway System

TJW will provide an inventory of the roadway network based on field review of the project site. The number of lanes and intersection controls at study intersections, arterials and other study roadways will be identified. Additionally, TJW will document existing bicycle, pedestrian and transit facilities in the study area.

1.3 Trip Generation & Distribution

TJW has calculated trip generation for the proposed project land uses based on the Institute of Transportation Engineers Trip General Manual (9th edition, 2012), with appropriate reductions taken for pass-by trips. Table 1 summarizes trip generation rates that will be utilized in the analysis.

Table 1
ITE Trip Generation Rates

Land Use (ITE Code)		AM In	AM Out	AM Total	PM In	PM Out	PM Total	Daily
Shopping Center (820)	TSF	0.60	0.36	0.96	1.78	1.93	3.71	42.7
Fast Food With Drive Through (934)	TSF	23.16	22.26	45.42	16.98	15.67	32.65	496.12
HTSDR (932)	TSF	5.95	4.86	10.81	5.91	3.94	9.85	127.15
Gas Station w Conv (945)	VFP	5.08	5.08	10.16	6.76	6.75	13.505	162.78

Source: ITE Trip Generation Manual (9th Edition, 2012)

Table 2 summarizes the projected trip generation of the proposed project based on the trip generation rates shown in Table 1, and available pass-by rates in the ITE Trip Generation Handbook (3rd Edition, 2014) modified based on discussion with City of Victorville staff.

Table 2
Projected Trip Generation of Proposed Project

Phase 1		AM In	AM Out	AM Total	PM In	PM Out	PM Total	Daily Trips
Proposed:	8.25 TSF	191	184	375	140	129	269	4,093
Fast Food With Drive-Thru								
Less 35% AM, 35% PM, 35% Daily Pass-by		-67	-64	-131	-49	-45	-94	-1,433
(A) Subtotal Net Fast Food Trip Generation		124	120	244	91	84	175	2,660
Proposed:	12.0 TSF	71	59	130	71	47	118	1,526
High Turnover Sit-Down Rest								
Less 25% PM Pass-by					-18	-12	-30	-30
(B) Subtotal Net HTSDR Trip Generation		71	59	130	53	35	88	1,496
Proposed:	45.0 TSF	27	16	43	80	87	167	1,922
Retail								
Less 25% PM Pass-by					-20	-22	-42	-42
(C) Subtotal Net Retail Trip Generation		27	16	43	60	65	125	1,880
Total Net New Project Trip Generation (A)+(B)+(C)		222	195	417	204	184	388	6,036

Phase 2		AM In	AM Out	AM Total	PM In	PM Out	PM Total	Daily Trips
Proposed:	16 VFP	82	81	163	108	108	216	2,604
Gas Station w/ Conv Market								
Less 50% AM, 45% PM, 45% Daily Pass-By		-41	-41	-82	-49	-49	-98	-1,172
(A) Subtotal Gas Station Trip Generation		41	40	81	59	59	118	1,432
Proposed:	5.6 TSF	33	27	60	33	22	55	712
High Turnover Sit-Down Rest								
Less 25% PM Pass-by					-8	-6	-14	-14
(B) Subtotal Net HTSDR Trip Generation		33	27	60	25	16	41	698
Proposed:	30.0 TSF	18	11	29	53	58	111	1,281
Retail								
Less 25% PM Pass-by					-13	-15	-28	-28
(C) Subtotal Net Retail Trip Generation		18	11	29	40	43	83	1,253
Total Net New Project Trip Generation (A)+(B)+(C)		92	78	170	124	118	242	3,383

Phase 2	AM In	AM Out	AM Total	PM In	PM Out	PM Total	Daily Trips
Phase 1 Gross Trips	289	259	548	291	263	554	7,541
Phase 1 Net Trips	222	195	417	204	184	388	6,036
Phase 2 Gross Trips	133	119	252	194	188	382	4,597
Phase 2 Net Trips	92	78	170	124	118	242	3,383
Total Project Gross Trips	422	378	800	485	451	936	12,138
Total Project Net Trips	314	273	587	328	302	630	9,419

As shown in Table 2, the proposed project is projected to generate 12,138 daily trips, 800 AM peak hour trips and 936 PM peak hour trips at the project driveways. After accounting for pass-by trips, the proposed project is projected to generation 9,419 daily trips, 587 AM peak hour trips and 630 PM peak hour trips

The study intersections defined in section 1.1 are based on the assumption that intersections of General Plan Roadways where the proposed project is projected to add 50 of more trips in either

the AM or PM peak hour need to be analyzed. Based on this threshold, and the projected net trip generation in Table 2, the distribution threshold for an intersection needing analysis is 8% of project trips in the PM peak hour

The proposed study intersections in Section 1.1 are based on the results of the SANBAG Select Zone Model run and the trip distribution thresholds discussed above. Exhibit A shows the projected trip distribution of proposed project trips based on the SANBAG select zone run and the proposed study intersection locations.

1.4 Level of Service Analysis

The analysis of traffic and level of service will be provided for the following scenarios and will include an assessment of traffic mitigation measures if any are required:

- (1) Existing Traffic Conditions;*
- (2) Existing Plus Project Phase 1 Conditions*
- (3) Existing Plus Full Project Conditions;*
- (4) Opening Year (2019) Without Project Conditions;*
- (5) Opening Year (2019) With Project Phase 1 Conditions;*
- (6) Opening Year (2019) With Full Project Conditions;*
- (7) Interim Year Without Project Conditions;*
- (8) Interim Year With Project Phase 1 Conditions;*
- (9) Interim Year With Full Project Conditions;*
- (10) Horizon Year Without Project Conditions;*
- (11) Horizon Year With Project Phase 1 Conditions; and*
- (12) Horizon Year With Full Project Conditions.*

Opening Year and Interim Year volumes will be derived by increasing existing volumes by a yearly ambient growth rate (to be determined based on discussion with City staff) from 2017 volumes to the appropriate analysis year, plus the addition of cumulative project volumes. This scope of work assumes that the City will provide a list of cumulative projects and that TJW will research for existing traffic studies and trip generation/distribution information and/or project trip generation/distribution for the cumulative projects.





Long-term volumes will be derived from SANBAG model runs. As applicable, TJW will post-process model volumes to derive daily, AM peak hour and PM peak hour volumes at the study intersections.

1.4.1 Intersection Level of Service Analysis

A level of service analysis, using Webster software, will be conducted at the identified study intersections that are potentially impacted by the project. The analysis will utilize the Highway Capacity Manual (HCM) analysis methodology.

1.4.2 Street Segment Level of Service Analysis

Legend:

-  Project Site
-  Percent Trip Distribution
-  Proposed Study Intersection
-  Proposed Roadway Segment

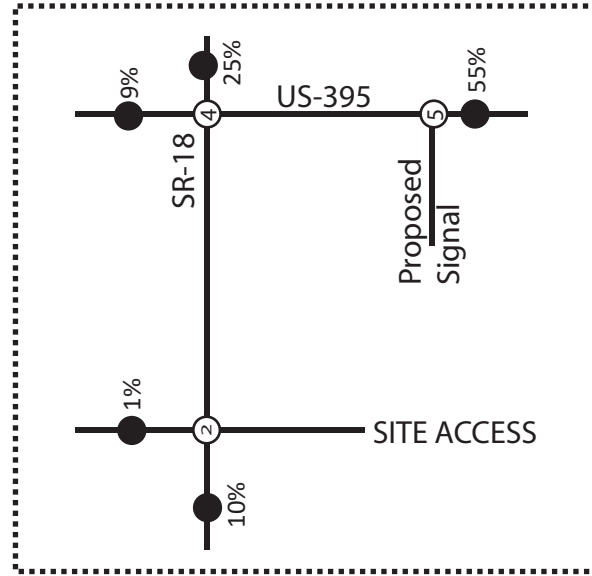
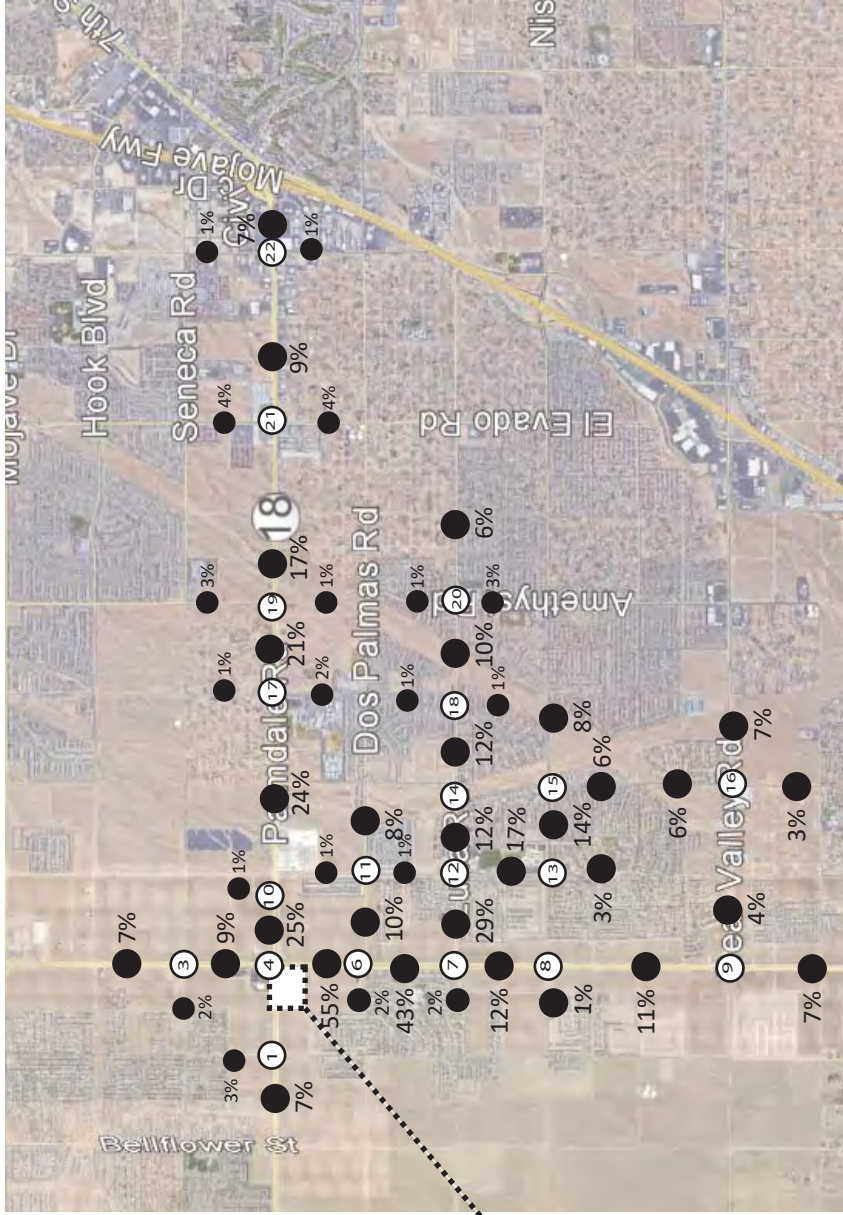


Exhibit A: Projected Trip Distribution and Study Area

SWC US395/Palmdale Road (SR-18) TIA



Not to Scale

Study roadway segments will be analyzed utilizing the City's methodology for street segment analysis which looks at the volume-to-capacity (V/C) ratio of roadway segments based on the functional classification and capacity of the roadway.

1.5 San Bernardino County Congestion Management Program Analysis

The TIA will adhere to applicable City of Victorville guidelines for conducting traffic impact studies as well as applicable SANBAG CMP traffic analysis guidelines contained in Appendix B of the most recent SANBAG Congestion Management Program.

1.6 Caltrans (State Highway) Analysis

The traffic study will analyze any identified study intersections under the jurisdiction of Caltrans in accordance with Caltrans Guide for the Preparation of Traffic Impact Studies (Caltrans, January 2002). Any potential freeway ramp intersections that need to be studied as part of the TIA will be analyzed utilizing both the City's and Caltrans' traffic impact analysis methodologies.

1.7 Project Mitigation

If the level of service analysis shows that the project causes a significant impact at a study facility based on applicable agency thresholds of significance, feasible improvements will be recommended to reduce the impact to a level considered less than significant. As applicable, the project's fair share will be estimated as part of the mitigation section (fair share is 100% for direct impacts). TJW will provide a conceptual level of design to demonstrate feasibility.

As part of the mitigation, if a level of service impact cannot be mitigated due to physical or other environmental constraints, funds may be allocated to improvements on parallel facilities or to transit, Transportation Demand Management (TDM), or other system-wide improvements.

1.8 Site Access and On-Site Circulation

TJW will review the site access locations and will provide recommendations for improving site access and on-site circulation if applicable.

1.9 Traffic Signal Warrants

TJW will prepare peak hour, 4-hour and 8-hour traffic signal warrants where applicable at unsignalized study intersections in the study area for existing and future conditions to determine if/when traffic signals are warranted at these locations.

1.10 Report, Conclusions and Recommendations

The traffic impact analysis report will include an executive summary, introduction and detailed methodology section. Separate sections will cover each analysis scenario, followed by State Highway

analysis, a section discussing recommended mitigation measures, if applicable, site access and on-site circulation, and conclusions. The report will include exhibits and tables supporting the analysis.

1.11 Response to Comments on the Traffic Study

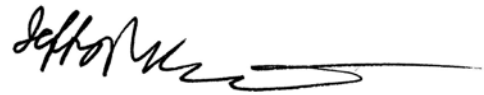
TJW will respond to a set of comprehensive comments from both the client and the City of Victorville. TJW expects to respond to multiple sets of comments from the City and provide multiple revisions and will provide a final TIA report incorporating all changes for final submission to the City.

Please feel free to email us at Thomas@tjwengineering.com, jeff@tjwengineering.com or call us at (949) 878-3509 if you have any questions regarding this letter.

Sincerely,

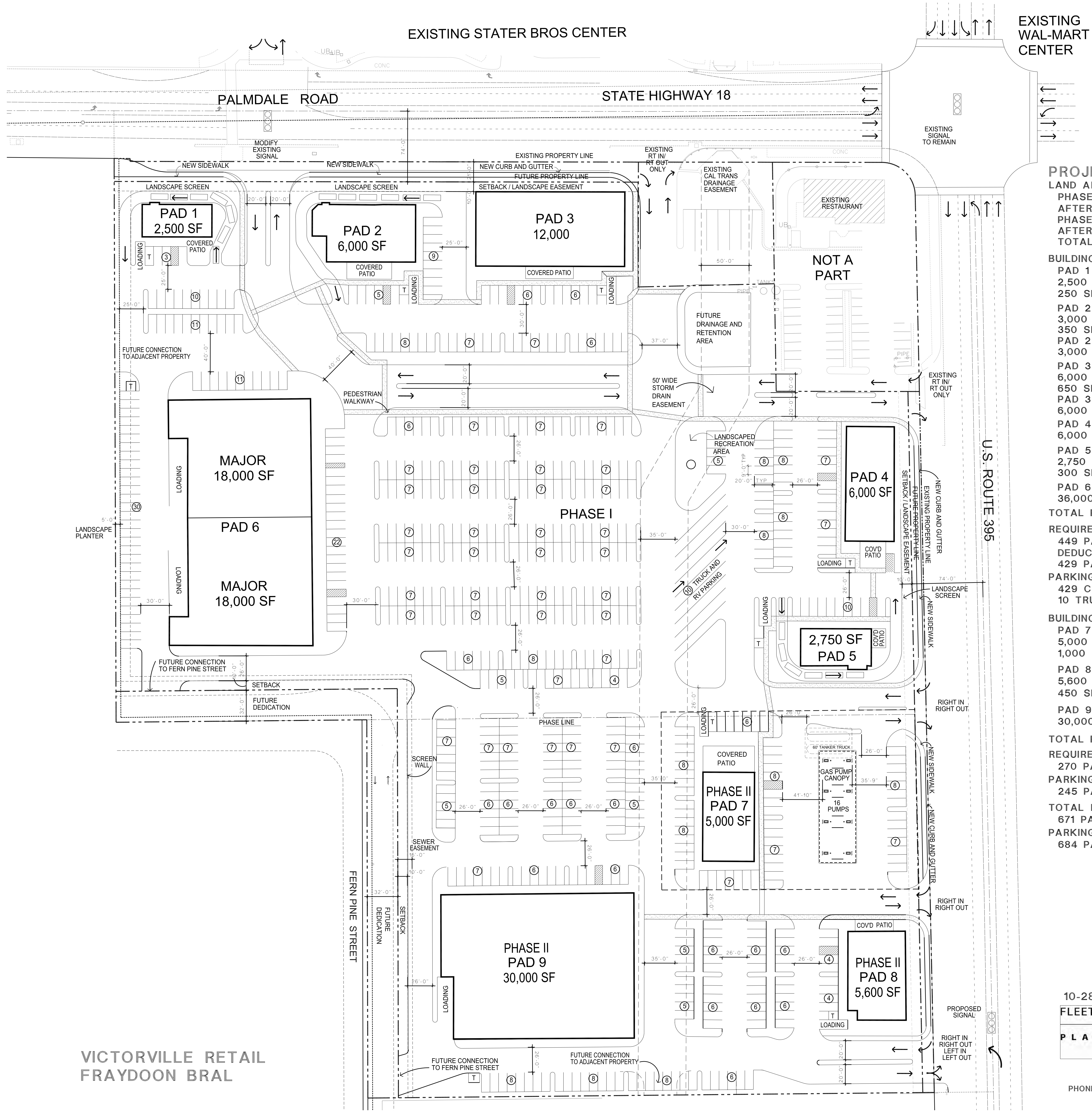


Thomas Wheat, PE, TE
Principal
TJW Engineering, Inc.



Jeffrey Weckstein
Transportation Planner
TJW Engineering, Inc.

Registered Civil Engineer #69467
Registered Traffic Engineer #2565



PROJECT SUMMARY:

LAND AREA
 PHASE I GROSS AREA 10.03 AC
 AFTER DEDICATION 9.45 AC
 PHASE II GROSS AREA 5.36 AC
 AFTER DEDICATION 4.96 AC
 TOTAL NET SITE AREA 14.41 AC

BUILDING AREA PHASE I
 PAD 1 2,500 SF FAST FOOD OR CAR WASH
 2,500 AT 1:100 = 25 PARKING STALLS
 250 SF PATIO AT 1:100 = 2 PARKING STALLS
 PAD 2 3,000 SF FAST FOOD
 3,000 AT 1:100 = 30 PARKING STALLS
 350 SF PATIO AT 1:100 = 3 PARKING STALLS
 PAD 2 3,000 SF RETAIL
 3,000 AT 1:200 = 15 PARKING STALLS
 PAD 3 6,000 SF MULTI-TENANT FOOD
 6,000 AT 1:100 = 60 PARKING STALLS
 650 SF PATIO AT 1:100 = 6 PARKING STALLS
 PAD 3 6,000 SF MULTI-TENANT RETAIL
 6,000 AT 1:200 = 30 PARKING STALLS
 PAD 4 6,000 SF FOOD
 6,000 AT 1:100 = 60 PARKING STALLS
 PAD 5 2,750 SF FAST FOOD
 2,750 AT 1:100 = 27 PARKING STALLS
 300 SF PATIO AT 1:100 = 3 PARKING STALLS
 PAD 6 36,000 SF RETAIL
 36,000 AT 1:200 = 180 CARS
TOTAL PHASE I 63,250 S.F.

REQUIRED PARKING PHASE I
 449 PARKING STALLS
 DEDUCT 20 STACKING AT DRIVE THROUGH
 429 PARKING STALLS REQUIRED

PARKING PROVIDED
 429 CAR PARKING STALLS
 10 TRUCK AND RV PARKING SPACES

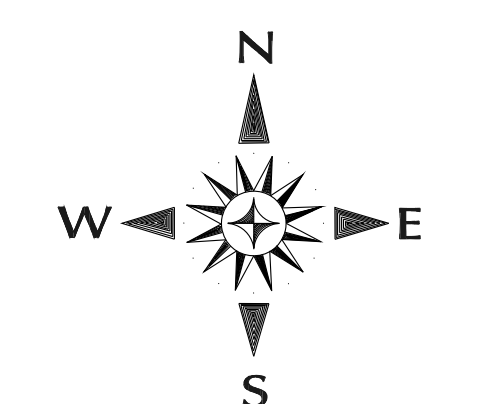
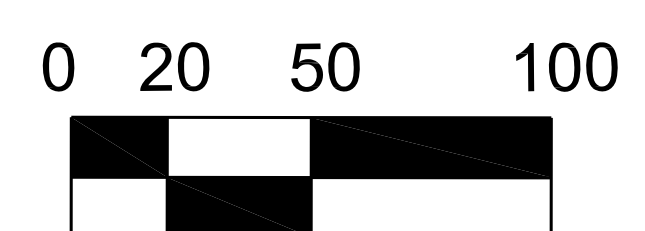
BUILDING AREA PHASE II
 PAD 7 5,000 SF RETAIL FOOD
 5,000 AT 1:100 = 50 PARKING STALLS
 1,000 SF PATIO AT 1:100 = 10 PARKING STALLS
 PAD 8 5,600 SF FOOD
 5,600 AT 1:100 = 56 PARKING STALLS
 450 SF PATIO AT 1:100 = 4 PARKING STALLS
 PAD 9 30,000 SF RETAIL
 30,000 AT 1:200 = 150 PARKING STALLS
TOTAL PHASE II 40,600 S.F.

REQUIRED PARKING PHASE II
 270 PARKING STALLS

PARKING PROVIDED
 245 PARKING STALLS

TOTAL REQUIRED PARKING PHASE I & II
 671 PARKING STALLS

PARKING PROVIDED
 684 PARKING STALLS



VICTORVILLE RETAIL
 FRAYDOON BRAL

10-28-16
FLEETWOOD JOINER ARCHITECTURE
PLANNING ARCHITECTURE
 AVALON ARCHITECTURAL
 20320 SW BIRCH STREET, SUITE 140
 NEWPORT BEACH, CALIFORNIA 92660
 PHONE: 949-640-0606 WEBSITE: www.avalonarchitectural.com

APPENDIX B

Victorville Roadway Classifications, Cross Section, Bikeways Map and Transit



and inside the SCLA Specific Plan area is the width of the roadway; however, the overall ADT capacities are the same for each roadway type. In addition, certain roads, including Amargosa Road, Mariposa Road, and all roads in the Old Town Specific Plan, are limited by their built-out environments and have a set ADT capacity.

The values presented in Table 4.1 represent the approximate ADT volume capacity. A LOS C for roadway segment is the general accepted service level for City such as Victorville and the surrounding Victor Valley and generally, a LOS C ranges between 70% to 79% of the approximate ADT volume capacity. As detailed in Appendix A, several segments are currently and are expected to operate conditions at LOS D or worse.

Facility Type	Number of Lanes	Two-Way Turn Lane	Positive Median (Divided)	Parking	Total Minimum Width (Feet)	ADT Capacity
Special 8 Lane Arterial	8	N	Y	Y/N	148	75,000
Super Arterial (SA1) /Super Arterial Modified (SA2)	6	N	Y	Y\N	124	56,300
Super Arterial (SCLA Specific Plan)	6	N	N	Y\N	122	56,300
Major Arterial	4	Y	Y	Y	100	37,500
Major Arterial (SCLA Specific Plan)	4	N	N	Y	98	37,500
Arterial	4	Y/N	N	Y/N	84	37,500
Amargosa Road & Mariposa Road ¹	4	N	N	N	74	37,500
Secondary Arterial (Old Town Specific Plan)	4	N	N	N	84	25,000
Residential Arterial	4	N	N	Y	100	25,000
Collector	2	Y/N	N	Y/N	64	18,800/ 12,500
Local	2	N	N	Y	60	10,000

¹Certain segments only.

Historic Route 66

One of the original federal routes, Route 66 or Will Rogers Highway was established in 1926. Its original length of approximately 2,500 miles connected the cities of Chicago, Illinois and Los Angeles, California, traversing through the states of Missouri, Kansas, Oklahoma, Texas, New Mexico and Arizona. As a major migratory path west, especially during the Dust Bowl of the 1930s, it supported the economies of the communities through which it passed. These communities later fought to keep it alive when the new interstate freeway system began dominating the country's transportation network. This route was officially decommissioned after the interstate freeways began to define this country's surface transportation and segments of this route that were not replaced by interstate freeway alignments were designated as national scenic byways and renamed 'Historic Route 66' (Hist-66).

Today, from the southern limit of the City of Victorville, Hist-66 follows the current alignment of I-15 to the freeway's interchange with Palmdale Road (SR-18) / 7th Street. North of this interchange, Hist-66 follows the alignment of 7th Street to D Street. Continuing northeast on D Street it follows the National Trails Highway alignment into the community of Oro Grande on the northwestern edge of the City.

Roadway Classifications

There are several different types of roadway classifications maintained by the City of Victorville that range from two lane, undivided collectors to super arterials with six lanes and a positive separation (raised median). The City has developed design standards and specifications for fourteen different street classifications, which are illustrated by their standard cross-sections shown in **Figure Circ-3**, and described below.

The roadways are designated by their primary function and level of mobility. The typical roadway cross-sections illustrated in **Figure Circ-3** are general standards and in certain cases, where implementation of the standard street width may not be possible due to various constraints, such as right of way, existing development, etc., these may be modified. Median, shoulder, lane widths and other features may be modified to the non-desired widths but still provide the functionality and safety designated in standard roadways. The function of the street will still remain the same to serve the City's traffic demand.

Super Arterials

Super Arterials transport large volumes of intercity, intra-city, and regional traffic at higher speeds with limited access control points. Super arterials generally connect to freeways to distribute traffic to other facilities such as major and secondary arterials, and collector facilities serving the City and other regional networks. At a minimum, super arterials have a 124-foot wide right of way consisting of six travel lanes, two parking lanes, and may have a raised median up to twelve-feet wide. On-street parking, if permitted, is restricted to distances 300 feet or greater from the signalized intersections. This classification is modified in the SCLA Specific Plan area.

Super arterials can also have the lane configuration of six travel lanes; a center left turn lane and additional No. 4 lanes to accommodate right turn lanes at intersections and for right in / right out, merge in / merge out movement for commercial driveway access. This lane configuration requires a curb to curb 116 foot width and 136 foot wide right of way. At intersections, the super arterial can have a double left, three through lanes and a right turn lane. The lane configuration requires a centerline to curb of 64 width and centerline to right of way of 74 foot width.

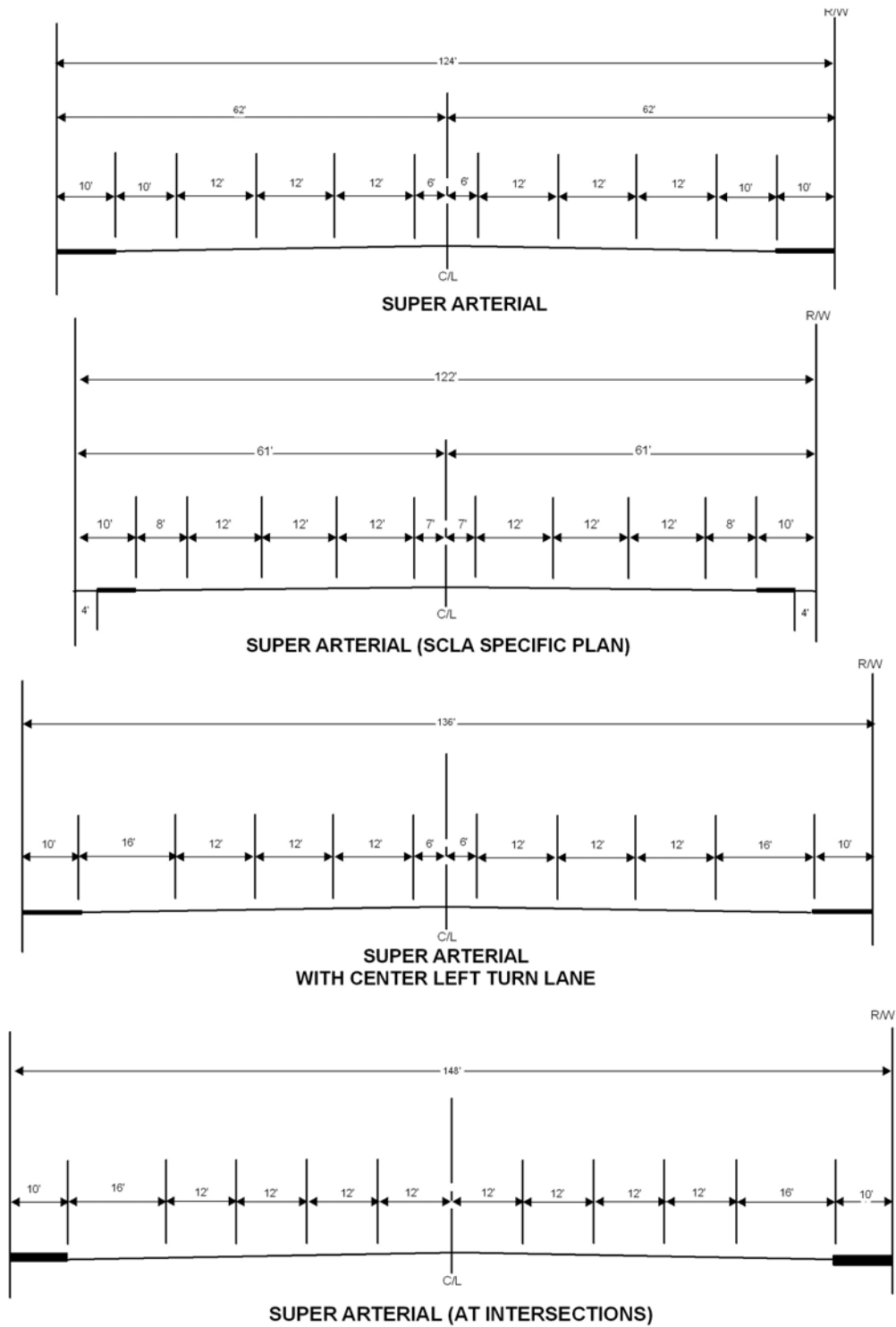


FIGURE Circ-3a: Roadway Classification Standards

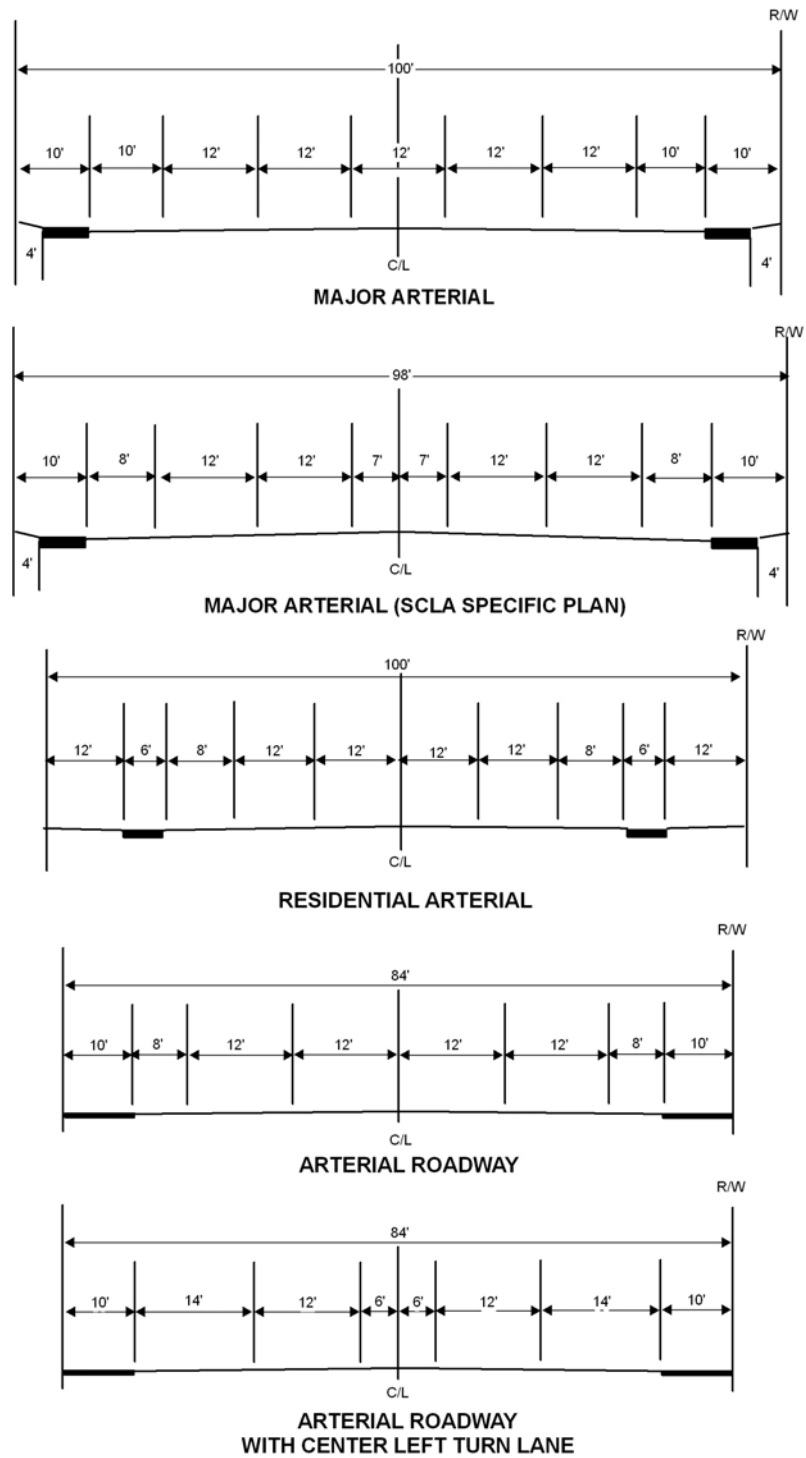


FIGURE Circ-3b: Roadway Classification Standards

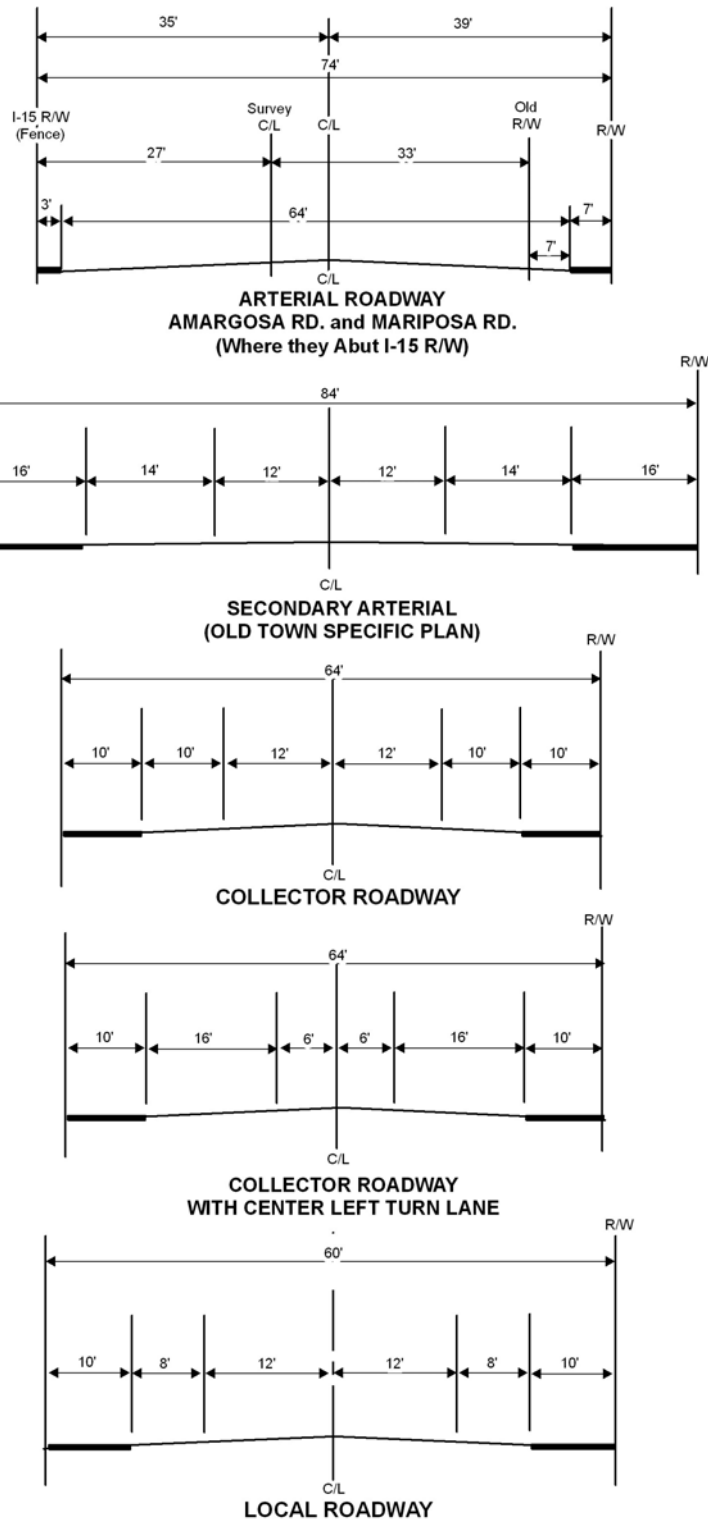


FIGURE Circ-3c: Roadway Classification Standards

Currently, this category includes Bear Valley Road east of Petaluma Road. The City's recently updated Circulation Map at build-out indicates that the full extent of Bear Valley Road, Palmdale Road, Mojave Drive, and US-395 are designated as Super Arterials.

Major Arterials

Major Arterials facilitate mobility of large volumes of intra-city traffic. These streets access freeways or super arterials and distribute traffic to secondary arterials or collector streets. Major Arterials have a 100-foot minimum right of way consisting of a minimum of four travel lanes, two parking lanes and a 12-foot wide, two-way left-turn median lane. Traffic signals are located at major intersections. Parking may be prohibited near intersections or in segments. Similar to the Super Arterials, this roadway is modified in the SCLA Specific Plan area. Existing major arterials in the Planning Area include: 7th Street, Amethyst Road, El Evado Road, Green Tree Boulevard, Hesperia Road, and La Mesa Road east of Amethyst Road

Residential Arterials

Residential Arterials transport large volumes of intra-city traffic to and from residential areas. These streets connect to major arterials, arterials, and collectors. Residential arterials have a minimum right of way of one hundred feet, four traffic lanes, and two eight-foot parking lanes. Traffic signals are located at major intersections. Parking may be prohibited near intersections or in segments. La Mesa Road west of Amethyst Road is the only designated Residential Arterial.

Arterials

Arterials serve the same function as Major Arterials, although serving relatively lower

traffic demands. The standard 84-foot right of way contains four travel lanes with a center left turn lane with parking prohibited. Alternatively, parking may be allowed without a center turn lane and may be prohibited near intersections or in segments. Left-turn and right-turn lanes are provided, as needed, at intersections. Some of the Arterials in Victorville include Amargosa Road, Eagle Ranch Parkway, Hook Boulevard, Mariposa Road, Mesa Linda Avenue, Topaz Road, Village Drive, and most of El Evado Road.

Secondary Arterials

Secondary Arterials are localized in the Old Town area, situated in the northeastern part of the City, bounded by I-15 in the west, Hesperia Road in the east, Mojave Drive/Verde Road in the south and to the north by E Street. The 84-foot R.O.W facilitates for wider sidewalks and four travel lanes. Exclusive parking and turning lanes (left and right) are not provided. 7th Street between Forrest Avenue and D Street is the only Secondary Arterial.

Collectors

Collectors are street that provide circulation within a defined geographic area and connect this area to intra-city traffic routes. Some motorists may use collectors as through routes, but the primary function of a collector is to connect local traffic to larger streets and to provide access to nearby destinations.

Collectors contain two travel lanes and two parking lanes with a 64-foot right of way. Alternatively, collectors may have two travel lanes and a center left turn lane with parking prohibited near intersections or in segments. Collector streets in the Planning Area include 1st Avenue, 9th Avenue, Cobalt Road, Cypress Avenue, Luna Road,

Pacoima Road, Reno Loop, Sycamore Street, and Tawney Ridge Lane.

Local Streets

Local Streets provide direct access to adjacent properties and transport local traffic from these properties to higher volume, higher speed facilities. In general, local streets are not intended to carry through traffic. The 60-foot right of way contains two traffic lanes and two parking lanes. Sidewalks are generally provided within a ten-foot, right of way. Most streets in residential neighborhoods are designed as Local Streets.

Modification of Design Standards in Specific Plans

The above street classification system may be modified for Specific Plans. For example, the SCLA Specific Plan specifies a slightly altered section for Super Arterials and Major Arterials. The Super Arterials in the airport area have a 122-foot wide right of way, with a continuous 14-foot wide left turn pocket and narrower parking lanes. Similarly, Major Arterials have a 98-foot right of way, continuous 14-foot wide left turn pocket and narrower parking lanes. Despite varying standards, functionality of the right of way does not deviate from the respective classification hierarchy.

Roadway Components

Super Arterial Components

Traffic Signals – Super Arterials

Locations for new traffic signals shall be at a minimum of one-half mile spacing, or at collector street classifications or above. Proposed traffic signal locations shall be justified by a traffic study and are subject to the approval of the City Engineer.

Driveway Access – Super Arterials

Residential driveway access is not allowed to a super arterial. Commercial driveway access, if allowed, should be as far away from a street intersection or other driveways as feasible. Shared driveway access with other parcels or other developments may be required. If a commercial driveway access is allowed, an additional number 4, merge in / merge out, lane is required. New driveway access shall allow right in / right out access only. Left turns in and out shall be prohibited. The design of the access control, whether raised median or other controls, is subject to the approval of the City Engineer.

Street Connections – Super Arterials

New street connections to super arterials, including Bear Valley Road, Mojave Drive, Palmdale Road and US-395 will be restricted. Only streets classified as collector or higher may connect to a super arterial. No new local street connections shall be allowed.

Major Arterial, Arterial and Collector Street Components

Traffic Signals – Major Arterial, Arterial and Collector Street

Proposed traffic signals locations shall be justified by a traffic study and are subject to the approval of the City Engineer.

Driveway Access – Major Arterial, Arterial and Collector Street

Residential driveway access is not allowed to new segments or for new subdivisions fronting on existing segments. For infill single family homes on existing segments, forward egress for residential driveways is required by either a standard circular or hammerhead driveway. Commercial driveway access should be as far away from a street intersection or other driveways as feasible,

2035 Roadway Classification

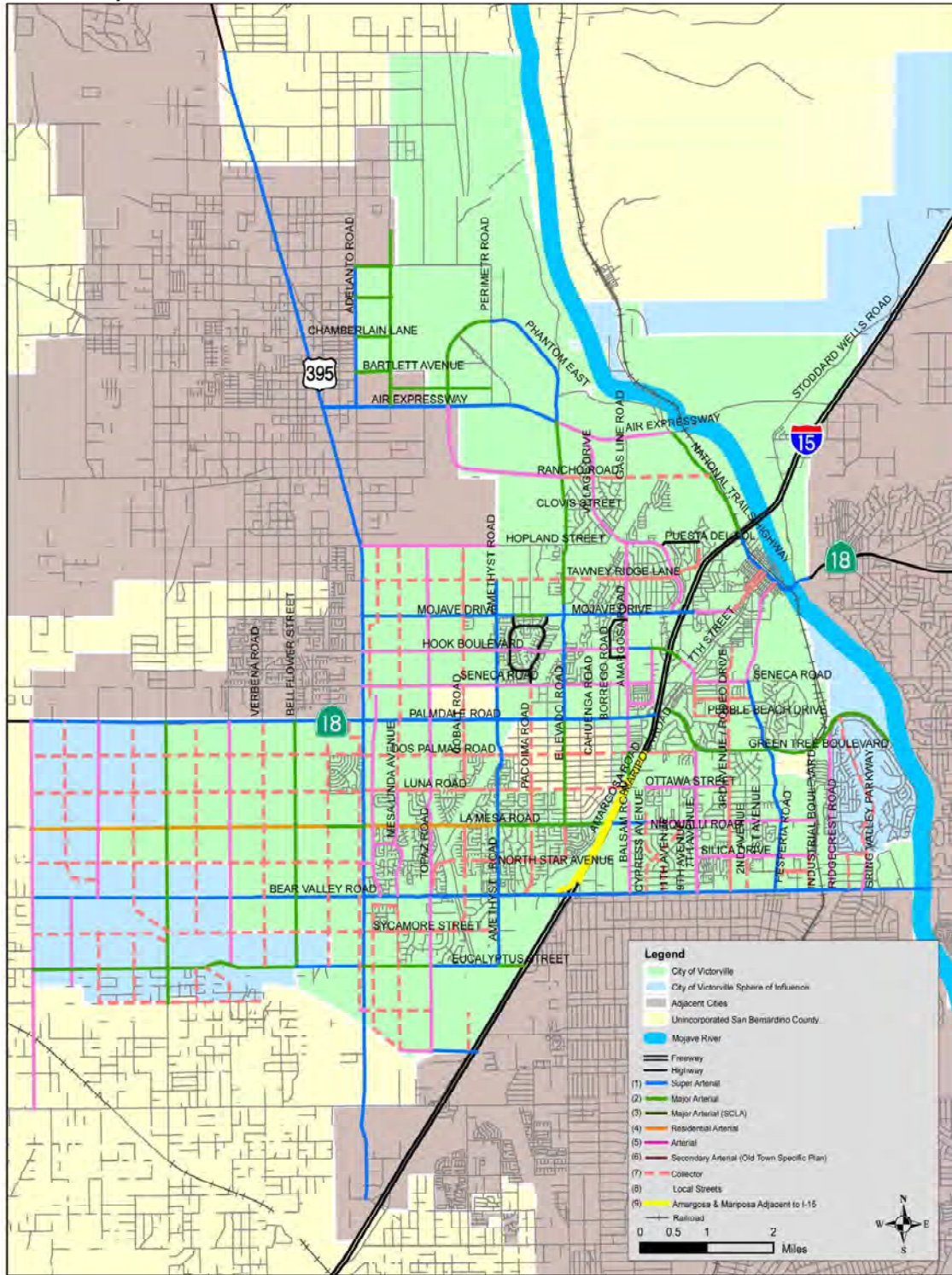


FIGURE Circ-6: 2035 Vehicular Circulation System

City of Victorville General Plan Circulation Map

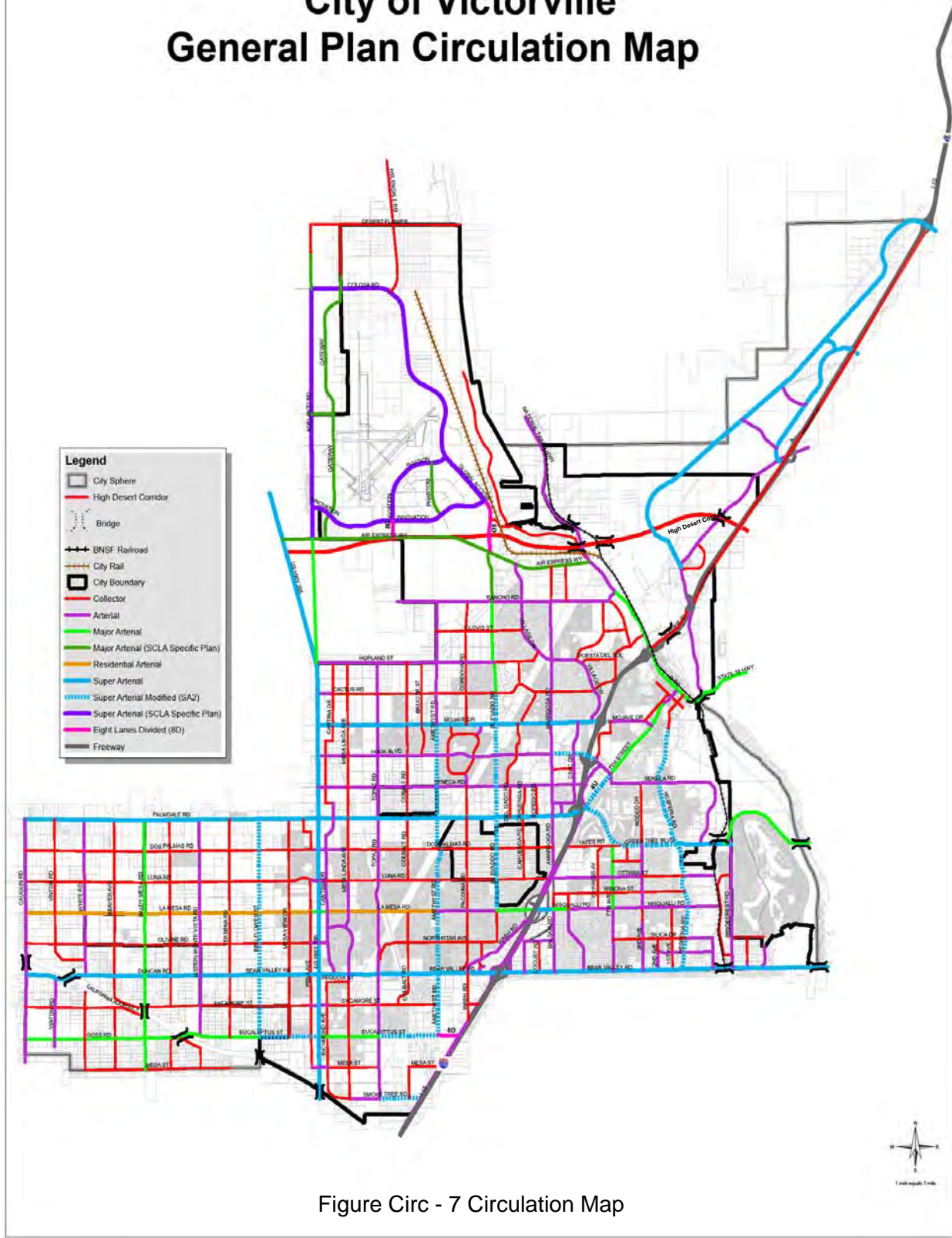


Figure Circ - 7 Circulation Map

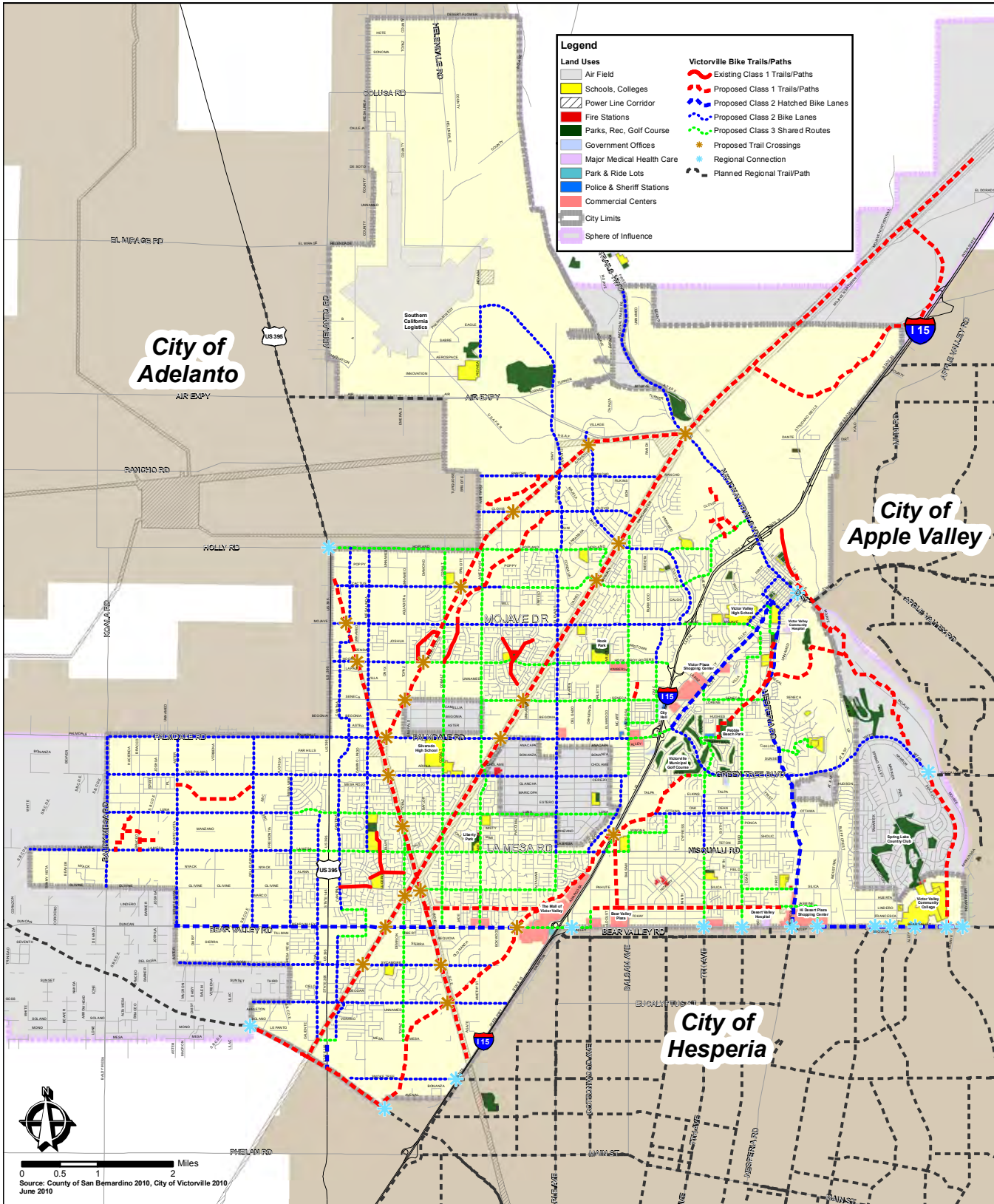


Exhibit 6.1
Non-Motorized Transportation Plan Map

GENERAL GUIDELINES

- ☞ Buses operate from 6:00 a.m. to 9:00 p.m. Monday through Friday, from 7:00 a.m. to 8:00 p.m. on Saturdays, and from 8:00 a.m. to 6:00 p.m. on Sundays.
- ☞ Bus service is not provided on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
- ☞ Fare is due upon boarding vehicle. Exact change is required.
- ☞ Drugs, dangerous weapons and open containers of alcohol are not permitted in VVTA vehicles.
- ☞ No smoking or eating on the bus.
- ☞ VVTA reserves the right to refuse service to persons who are intoxicated, abusive, or offensive to other passengers.
- ☞ Seeing Eye dogs and service animals are permitted. Small dogs and cats in a locked commercial carrier, kept in seat with passenger, are permitted.
- ☞ Arrive at your bus stop five (5) minutes prior to the arrival of the bus.
- ☞ Once you are seated, do not move or change seats while bus is in motion.
- ☞ Package limit is two shopping bags. Large items cannot be transported.
- ☞ Drivers are not responsible for remembering where passengers wish to disembark.
- ☞ In case of floods or severe snow conditions, buses will return to the nearest safe layover zone to await further instructions. Every attempt possible will be made to pick up all passengers and deliver them to their respective destinations.
- ☞ Only non-alcoholic drinks are allowed in solid containers with lids (paper not allowed).
- ☞ Complaints or inquiries regarding service may be directed to (760) 948-4021.
- ☞ Passengers are prohibited from soliciting or distributing literature aboard VVTA buses.

FARES

FIXED ROUTES 31, 32, 33, 40, 41, 43, 44, 45, 46, 47, 48, 51, 52, 53, 54, 55

Regular	\$1.25
Student	\$1.00
Senior/Disabled/Medicare*	\$.60
Children 5 and Under (3 children per adult fare)	FREE

COUNTY ROUTES 21, 22, 23

Regular	\$2.25
Student	\$2.00
Senior/Disabled/Medicare*	\$1.00
Children 5 and Under (3 children per adult fare)	FREE

DEVIATION ROUTES 20, 22, 23, 40, 46, 47, 54

Regular	\$2.00
Student	\$2.00
Senior/Disabled/Medicare*	\$1.00

NOTE: Deviated service is within 3/4 of a mile of the route and is available by reservation only. There is no additional charge for reserved pick-ups or drop-offs at the Pinon Hills and Wrightwood Community Centers or the Pinon Hills Post Office.

DAY PASS (Does not include deviated service)

Fixed Route Regular	\$3.50
Fixed Route Student	\$3.25
Fixed Route Senior/Disabled/Medicare*	\$1.75
County Regular	\$5.50
County Student	\$4.50
County Senior/Disabled/Medicare*	\$2.75

Child:	Ages 5 and under
Disabled:	Individuals with disabilities
Seniors:	Ages 60 and over
Medicare:	Social Security Medicare
Students:	Ages 6-13
Adults:	Ages 14 and over with student I.D. only All other riders

*Medicare card or valid VVTA I.D. Card must be presented. Please note that there is a \$5.00 replacement fee for lost or stolen identification cards. County senior, disabled, and Social Security Medicare card fares are subsidized by Measure I.

31-DAY PASS

- ❖ Available at Apple Valley Town Hall, Hesperia City Hall, Victorville City Hall, Adelanto City Hall, Victor Valley College, and VVTA Administration Office.
- ❖ VVTA Student Photo I.D. cards, VVTA Disabled Photo I.D. cards, and VVTA Senior Photo I.D. cards are available at VVTA Administration Office.
- ❖ Valid from the first time swiped through the farebox.
- ❖ Passes may not be shared and are non-transferable. No refunds or replacements if lost, stolen, mutilated or unused.
- ❖ 31-Day and Day Passes do not include deviated service.

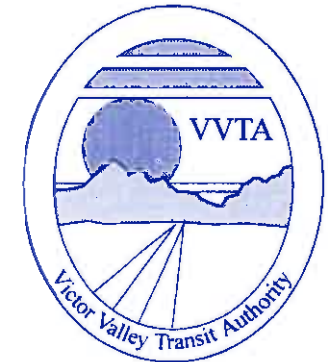
Fixed Route	31-Day Pass Rates	County Route
\$50.00	Regular Passengers	\$75.00
\$40.00	Students (w/Student I.D.)	\$65.00
\$25.00	Senior/Disabled/Medicare*	\$35.00

Route and Schedule Information	948-3030
Route and Schedule TDD	948-3990
Customer Service	948-4021
Direct Access/ADA Reservations	244-4000
Reservations for deviated service in Helendale/Silver Lakes	244-4000
Tri-Community/Lucerne Valley	1-877-545-8000
Schedules available in alternative formats for persons with special needs	948-3030
Free language assistance is available to persons with limited English proficiency	948-3030
Lost and Found	947-5719 ext. 231

www.vvta.org

ROUTE 54

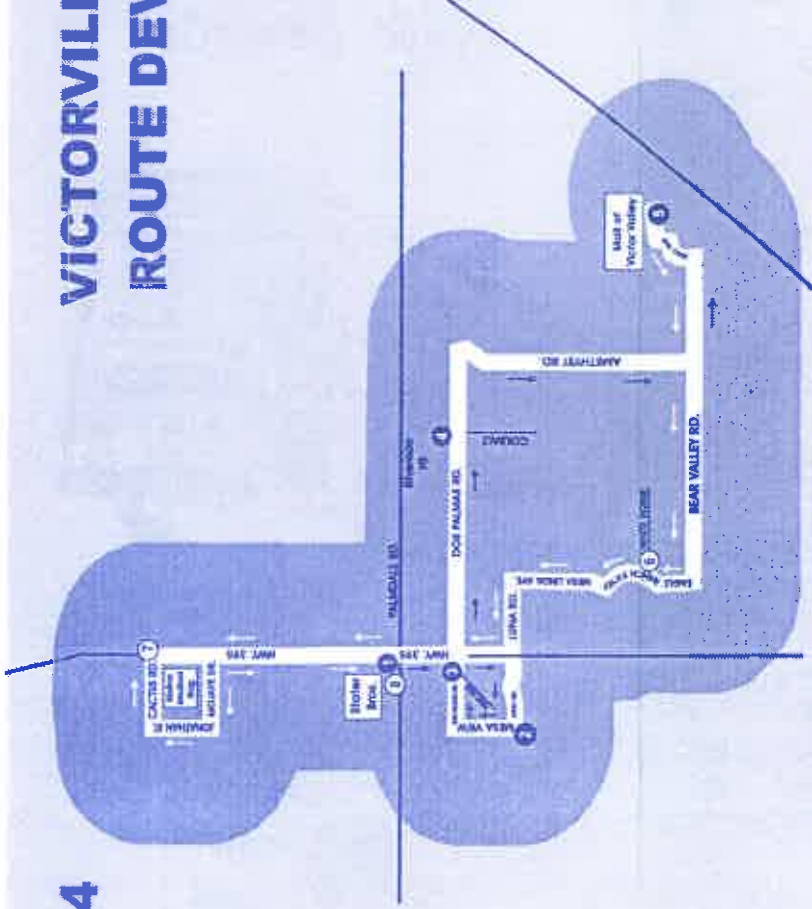
Victorville West Route Deviation



Revised 10/7/2013

ROUTE 54

VICTORVILLE WEST ROUTE DEVIATION



Monday-Friday Schedule

	1	2	3	4	5	6	7	8	
	Hwy 395 & Palmdale	Mesa View & Luna	Dos Palmas & Fern Pine	Dos Palmas & Cobalt	Mesa View & Luna	Mall of Victor Valley	Eagle Ranch & White Horse	Molina Medical Bldg	Hwy 395 & Palmdale
AM	6:31	7:34	8:37	9:41	10:44	11:47	12:50	1:53	2:56
	7:31	8:34	9:37	10:41	11:44	12:47	1:50	2:53	3:56
	8:31	9:34	10:37	11:41	12:44	1:47	2:50	3:53	4:56
	9:31	10:34	11:37	12:41	1:44	2:47	3:50	4:53	5:56
PM	11:31	12:34	1:37	2:41	3:44	4:47	5:50	6:53	7:56
	12:31	1:34	2:37	3:41	4:44	5:47	6:50	7:53	8:56
	1:31	2:34	3:37	4:41	5:44	6:47	7:50	8:53	9:56
	2:31	3:34	4:37	5:41	6:44	7:47	8:50	9:53	10:56
	3:31	4:34	5:37	6:41	7:44	8:47	9:50	10:53	11:56
	4:31	5:34	6:37	7:41	8:44	9:47	10:50	11:53	12:56
	5:31	6:34	7:37	8:41	9:44	10:47	11:50	12:53	1:56
	6:31	7:34	8:37	9:41	10:44	11:47	12:50	1:53	2:56
	7:31	8:34	9:37	10:41	11:44	12:47	1:50	2:53	3:56
	8:31	9:34	10:37	11:41	12:44	1:47	2:50	3:53	4:56

Saturday Schedule

	1	2	3	4	5	6	7	8	
	Hwy 395 & Palmdale	Mesa View & Luna	Dos Palmas & Fern Pine	Dos Palmas & Cobalt	Mesa View & Luna	Mall of Victor Valley	Eagle Ranch & White Horse	Molina Medical Bldg	Hwy 395 & Palmdale
AM	7:31	8:34	9:37	10:41	11:44	12:47	1:50	2:53	3:56
	8:31	9:34	10:37	11:41	12:44	1:47	2:50	3:53	4:56
	9:31	10:34	11:37	12:41	1:44	2:47	3:50	4:53	5:56
	10:31	11:34	12:37	1:41	2:44	3:47	4:50	5:53	6:56
PM	11:31	12:34	1:37	2:41	3:44	4:47	5:50	6:53	7:56
	12:31	1:34	2:37	3:41	4:44	5:47	6:50	7:53	8:56
	1:31	2:34	3:37	4:41	5:44	6:47	7:50	8:53	9:56
	2:31	3:34	4:37	5:41	6:44	7:47	8:50	9:53	10:56
	3:31	4:34	5:37	6:41	7:44	8:47	9:50	10:53	11:56
	4:31	5:34	6:37	7:41	8:44	9:47	10:50	11:53	12:56
	5:31	6:34	7:37	8:41	9:44	10:47	11:50	12:53	1:56
	6:31	7:34	8:37	9:41	10:44	11:47	12:50	1:53	2:56
	7:31	8:34	9:37	10:41	11:44	12:47	1:50	2:53	3:56
	8:31	9:34	10:37	11:41	12:44	1:47	2:50	3:53	4:56

Sunday Schedule

	1	2	3	4	5				
	Hwy 395 & Palmdale	Mesa View & Luna	Dos Palmas & Fern Pine	Dos Palmas & Cobalt	Mesa View & Luna	Mall of Victor Valley	Eagle Ranch & White Horse	Molina Medical Bldg	Hwy 395 & Palmdale
AM	8:31	9:34	10:37	11:41	12:44	1:47	2:50	3:53	4:56
	10:31	11:34	12:37	1:41	2:44	3:47	4:50	5:53	6:56
PM	2:31	3:34	4:37	5:41	6:44	7:47	8:50	9:53	10:56
	4:31	5:34	6:37	7:41	8:44	9:47	10:50	11:53	12:56

DIRECT ACCESS TRANSIT

Direct Access services are available to the disabled who are Direct Access certified riders. For information on how to receive a Direct Access, eligibility application call 948-4021.

ADA/DIRECT ACCESS GUIDELINES

- Reservations may be made from 1 day to 14 days in advance depending on your level of certification.
- Reservations are taken from 8 am to 5 pm Monday - Sunday. (Reservations placed on Sunday will be recorded and confirmed by the following Monday.)
- Registered personal care attendant may ride for free.
- VVTA & Direct Access observe the same holidays.
- Any companion pays a Direct Access fare.
- Companions must not displace Direct Access riders.
- Certified Riders may call 244-4000 to make reservations.

DIRECT ACCESS FARES are charged by zone. A trip between zones will be charged the greater rate.

ADA FARES

Zone 1	\$2.50
Zone 2	\$4.50
Zone 3	\$6.00

INSTRUCTIONS

- A** ▶ ROUTE 00
Destination 5
Run # 00
- B** ▼ **OUTBOUND**
Departure AM

Destination 1	Destination 2	Destination 3	Destination 4	Destination 5
①	②	③	④	⑤
6:30 8:00	6:40 8:10	6:50 8:20	7:05 8:35	7:15 8:45

- A** Route number of the bus.
- B** Direction of travel
- C** Timepoints: Major bus stops are called timepoints. Between each of these timepoints there are designated bus stops located every two or three blocks where you may board the bus. Timepoints are listed at the top of the timetable and are also shown in the map as O. By reading the timetable from left to right, you can follow the movement of the bus as it travels along its route. For example: If you boarded Route 00 at Destination 1 at 6:30 a.m., you would arrive at Destination 4 at 7:05 a.m.

GENERAL GUIDELINES

- ☞ Buses operate from 6:00 a.m. to 9:00 p.m. Monday through Friday, from 7:00 a.m. to 8:00 p.m. on Saturdays, and from 8:00 a.m. to 6:00 p.m. on Sundays.
- ☞ Bus service is not provided on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
- ☞ Fare is due upon boarding vehicle. Exact change is required.
- ☞ Drugs, dangerous weapons and open containers of alcohol are not permitted in VVTA vehicles.
- ☞ No smoking or eating on the bus.
- ☞ VVTA reserves the right to refuse service to persons who are intoxicated, abusive, or offensive to other passengers.
- ☞ Seeing Eye dogs and service animals are permitted. Small dogs and cats in a locked commercial carrier, kept in seat with passenger, are permitted.
- ☞ Arrive at your bus stop five (5) minutes prior to the arrival of the bus.
- ☞ Once you are seated, do not move or change seats while bus is in motion.
- ☞ Package limit is two shopping bags. Large items cannot be transported.
- ☞ Drivers are not responsible for remembering where passengers wish to disembark.
- ☞ In case of floods or severe snow conditions, buses will return to the nearest safe layover zone to await further instructions. Every attempt possible will be made to pick up all passengers and deliver them to their respective destinations.
- ☞ Only non-alcoholic drinks are allowed in solid containers with lids (paper not allowed).
- ☞ Complaints or inquiries regarding service may be directed to (760) 948-4021.
- ☞ Passengers are prohibited from soliciting or distributing literature aboard VVTA buses.

FARES

FIXED ROUTES 31, 32, 33, 40, 41, 43, 44, 45, 46, 47, 48, 51, 52, 53, 54, 55

Regular	\$1.25
Student	\$1.00
Senior/Disabled/Medicare*	\$.60
Children 5 and Under (3 children per adult fare)	FREE

COUNTY ROUTES 21, 22, 23

Regular	\$2.25
Student	\$2.00
Senior/Disabled/Medicare*	\$1.00
Children 5 and Under (3 children per adult fare)	FREE

DEVIATION ROUTES 20, 22, 23, 40, 46, 47, 54

Regular	\$2.00
Student	\$2.00
Senior/Disabled/Medicare*	\$1.00

NOTE: Deviated service is within 3/4 of a mile of the route and is available by reservation only. There is no additional charge for reserved pick-ups or drop-offs at the Pinon Hills and Wrightwood Community Centers or the Pinon Hills Post Office.

DAY PASS (Does not include deviated service)

Fixed Route Regular	\$3.50
Fixed Route Student	\$3.25
Fixed Route Senior/Disabled/Medicare*	\$1.75
County Regular	\$5.50
County Student	\$4.50
County Senior/Disabled/Medicare*	\$2.75

Child:	Ages 5 and under
Disabled:	Individuals with disabilities
Seniors:	Ages 60 and over
Medicare:	Social Security Medicare
Students:	Ages 6-13
Adults:	Ages 14 and over with student I.D. only All other riders

*Medicare card or valid VVTA I.D. Card must be presented. Please note that there is a \$5.00 replacement fee for lost or stolen identification cards. County senior, disabled, and Social Security Medicare card fares are subsidized by Measure I.

31-DAY PASS

- ❖ Available at Apple Valley Town Hall, Hesperia City Hall, Victorville City Hall, Adelanto City Hall, Victor Valley College, and VVTA Administration Office.
- ❖ VVTA Student Photo I.D. cards, VVTA Disabled Photo I.D. cards, and VVTA Senior Photo I.D. cards are available at VVTA Administration Office.
- ❖ Valid from the first time swiped through the farebox.
- ❖ Passes may not be shared and are non-transferable. No refunds or replacements if lost, stolen, mutilated or unused.
- ❖ 31-Day and Day Passes do not include deviated service.

Fixed Route	31-Day Pass Rates	County Route
\$50.00	Regular Passengers	\$75.00
\$40.00	Students (w/Student I.D.)	\$65.00
\$25.00	Senior/Disabled/Medicare*	\$35.00

Route and Schedule Information	948-3030
Route and Schedule TDD	948-3990
Customer Service	948-4021
Direct Access/ADA Reservations	244-4000
Reservations for deviated service in Helendale/Silver Lakes	244-4000
Tri-Community/Lucerne Valley	1-877-545-8000
Schedules available in alternative formats for persons with special needs	948-3030
Free language assistance is available to persons with limited English proficiency	948-3030
Lost and Found	947-5719 ext. 231

www.vvta.org

ROUTE 33

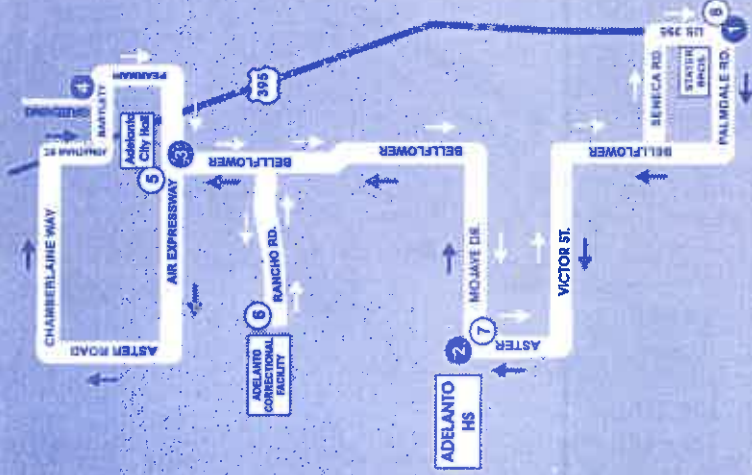
Adelanto Circulator



Revised 10/7/2013

ROUTE 33

**ADELANTO
CIRCULATOR**



Monday-Friday Schedule

	1	2	3	4	5	6	7	8
	Highway 395 & Palmdale	Mojave & Aster	Bellflower & Air Expressway	Bartlett & Greening	Adelanto City Hall	Rancho & JSED Office	Mojave & Aster	Highway 395 & Palmdale
A.M.	6:31	6:39	6:47	5:57	6:01	6:06	6:14	6:24
	7:31	7:39	7:47	6:57	7:01	7:06	7:14	7:24
	8:31	8:39	8:47	7:57	8:01	8:06	8:14	8:24
	9:31	9:39	9:47	8:57	9:01	9:06	9:14	9:24
	10:31	10:39	10:47	9:57	10:01	10:06	10:14	10:24
	11:31	11:39	11:47	10:57	11:01	11:06	11:14	11:24
	12:31	12:39	12:47	11:57	12:01	12:06	12:14	12:24
P.M.	1:31	1:39	1:47	12:57	1:01	1:06	1:14	1:24
	2:31	2:39	2:47	1:57	2:01	2:06	2:14	2:24
	3:31	3:39	3:47	2:57	3:01	3:06	3:14	3:24
	4:31	4:39	4:47	3:57	4:01	4:06	4:14	4:24
	5:31	5:39	5:47	4:57	5:01	5:06	5:14	5:24
	6:31	6:39	6:47	5:57	6:01	6:06	6:14	6:24
	7:31	7:39	7:47	6:57	7:01	7:06	7:14	7:24
	8:31	8:39	8:47	7:57	8:01	8:06	8:14	8:24

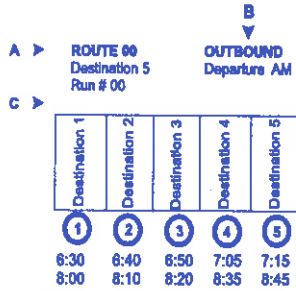
Saturday Schedule

	Highway 395 & Palmdale	Mojave & Aster	Bellflower & Air Expressway	Bartlett & Greening	Adelanto City Hall	Rancho & JSED Office	Mojave & Aster	Highway 395 & Palmdale
A.M.	7:31	7:39	7:47	6:57	7:01	7:06	7:14	7:24
	8:31	8:39	8:47	7:57	8:01	8:06	8:14	8:24
	9:31	9:39	9:47	8:57	9:01	9:06	9:14	9:24
	10:31	10:39	10:47	9:57	10:01	10:06	10:14	10:24
	11:31	11:39	11:47	10:57	11:01	11:06	11:14	11:24
	12:31	12:39	12:47	11:57	12:01	12:06	12:14	12:24
P.M.	1:31	1:39	1:47	12:57	1:01	1:06	1:14	1:24
	2:31	2:39	2:47	1:57	2:01	2:06	2:14	2:24
	3:31	3:39	3:47	2:57	3:01	3:06	3:14	3:24
	4:31	4:39	4:47	3:57	4:01	4:06	4:14	4:24
	5:31	5:39	5:47	4:57	5:01	5:06	5:14	5:24
	6:31	6:39	6:47	5:57	6:01	6:06	6:14	6:24
	7:31	7:39	7:47	6:57	7:01	7:06	7:14	7:24

Sunday Schedule

	Highway 395 & Palmdale	Mojave & Aster	Bellflower & Air Expressway	Bartlett & Greening	Adelanto City Hall	Rancho & JSED Office	Mojave & Aster	Highway 395 & Palmdale
A.M.	9:31	9:39	9:47	7:57	8:01	8:06	8:14	8:24
	11:31	11:39	11:47	9:57	10:01	10:06	10:14	10:24
P.M.	1:31	1:39	1:47	11:57	12:01	12:06	12:14	12:24
	3:31	3:39	3:47	1:57	2:01	2:06	2:14	2:24
	5:31	5:39	5:47	3:57	4:01	4:06	4:14	4:24

INSTRUCTIONS



A Route number of the bus.
 B Direction of travel
 C Timepoints: Major bus stops are called timepoints. Between each of these timepoints there are designated bus stops located every two or three blocks where you may board the bus. Timepoints are listed at the top of the timetable and are also shown in the map as D. By reading the timetable from left to right, you can follow the movement of the bus as it travels along its route. For example: If you boarded Route 00 at Destination 1 at 6:30 a.m., you would arrive at Destination 4 at 7:05 a.m.

DIRECT ACCESS TRANSIT

Direct Access services are available to the disabled who are Direct Access certified riders. For information on how to receive a Direct Access eligibility application call 948-4021.

ADA/DIRECT ACCESS GUIDELINES

- Reservations may be made from 1 day to 14 days in advance depending on your level of certification.
- Reservations are taken from 8 am to 5 pm Monday - Sunday. (Reservations placed on Sunday will be recorded and confirmed by the following Monday.)
- Registered personal care attendant may ride for free.
- VVTA & Direct Access observe the same holidays.
- Any companion pays a Direct Access fare.
- Companions must not displace Direct Access riders.
- Certified Riders may call 244-4000 to make reservations.

DIRECT ACCESS FARES are charged by zone. A trip between zones will be charged the greater rate.

ADA FARES

- Zone 1 ... \$2.50
- Zone 2 ... \$4.50
- Zone 3 ... \$6.00

GENERAL GUIDELINES

- ☞ Buses operate from 6:00 a.m. to 9:00 p.m. Monday through Friday, from 7:00 a.m. to 8:00 p.m. on Saturdays, and from 8:00 a.m. to 6:00 p.m. on Sundays.
- ☞ Bus service is not provided on the following holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day.
- ☞ Fare is due upon boarding vehicle. Exact change is required.
- ☞ Drugs, dangerous weapons and open containers of alcohol are not permitted in VVTA vehicles.
- ☞ No smoking or eating on the bus.
- ☞ VVTA reserves the right to refuse service to persons who are intoxicated, abusive, or offensive to other passengers.
- ☞ Seeing Eye dogs and service animals are permitted. Small dogs and cats in a locked commercial carrier, kept in seat with passenger, are permitted.
- ☞ Arrive at your bus stop five (5) minutes prior to the arrival of the bus.
- ☞ Once you are seated, do not move or change seats while bus is in motion.
- ☞ Package limit is two shopping bags. Large items cannot be transported.
- ☞ Drivers are not responsible for remembering where passengers wish to disembark.
- ☞ In case of floods or severe snow conditions, buses will return to the nearest safe layover zone to await further instructions. Every attempt possible will be made to pick up all passengers and deliver them to their respective destinations.
- ☞ Only non-alcoholic drinks are allowed in solid containers with lids (paper not allowed).
- ☞ Complaints or inquiries regarding service may be directed to (760) 948-4021.
- ☞ Passengers are prohibited from soliciting or distributing literature aboard VVTA buses.

FARES

FIXED ROUTES 31, 32, 33, 40, 41, 43, 44, 45, 46, 47, 48, 51, 52, 53, 54

Regular	\$1.25
Student	\$1.00
Senior/Disabled/Medicare*	\$.60
Children 5 and Under (3 children per adult fare)	FREE

COUNTY ROUTES 21, 22, 23

Regular	\$2.25
Student	\$2.00
Senior/Disabled/Medicare*	\$1.00
Children 5 and Under (3 children per adult fare)	FREE

DEVIATION ROUTES 21, 22, 23, 40, 46, 47, 54

Regular	\$2.00
Student	\$2.00
Senior/Disabled/Medicare*	\$1.00

NOTE: Deviated service is within 3/4 of a mile of the route and is available by reservation only. There is no additional charge for reserved pick-ups or drop-offs at the Pinon Hills and Wrightwood Community Centers or the Pinon Hills Post Office.

DAY PASS (Does not include deviated service)

Fixed Route Regular	\$3.50
Fixed Route Student	\$3.25
Fixed Route Senior/Disabled/Medicare*	\$1.75
County Regular	\$5.50
County Student	\$4.50
County Senior/Disabled/Medicare*	\$2.75

Child: Ages 5 and under
 Disabled: Individuals with disabilities
 Seniors: Ages 60 and over
 Medicare: Social Security Medicare
 Students: Ages 6-13
 Ages 14 and over with student I.D. only
 Adults: All other riders

*Medicare card or valid VVTA I.D. Card must be presented. Please note that there is a \$5.00 replacement fee for lost or stolen identification cards. County senior, disabled, and Social Security Medicare card fares are subsidized by Measure I.

31-DAY PASS

- ❖ Available at Apple Valley Town Hall, Hesperia City Hall, Victorville City Hall, Adelanto City Hall, Victor Valley College, and VVTA Administration Office.
- ❖ VVTA Student Photo I.D. cards, VVTA Disabled Photo I.D. cards, and VVTA Senior Photo I.D. cards are available at VVTA Administration Office.
- ❖ Valid from the first time swiped through the farebox.
- ❖ Passes may not be shared and are non-transferable. No refunds or replacements if lost, stolen, mutilated or unused.
- ❖ 31-Day and Day Passes do not include deviated service.

Fixed Route	31-Day Pass Rates	County Route
\$50.00	Regular Passengers	\$75.00
\$40.00	Students (w/Student I.D.)	\$65.00
\$25.00	Senior/Disabled/Medicare*	\$35.00

Route and Schedule Information 948-3030
 Route and Schedule TDD 948-3990
 Customer Service 948-4021
 Direct Access/ADA Reservations 244-4000
 Reservations for deviated service in
 Helendale/Silver Lakes 244-4000
 Tri-Community/Lucerne Valley 1-877-545-8000
 Schedules available in alternative formats for persons with special needs 948-3030
 Free language assistance is available to persons with limited English proficiency 948-3030
 Lost and Found 947-5719 ext. 231

www.vvta.org

ROUTE 31

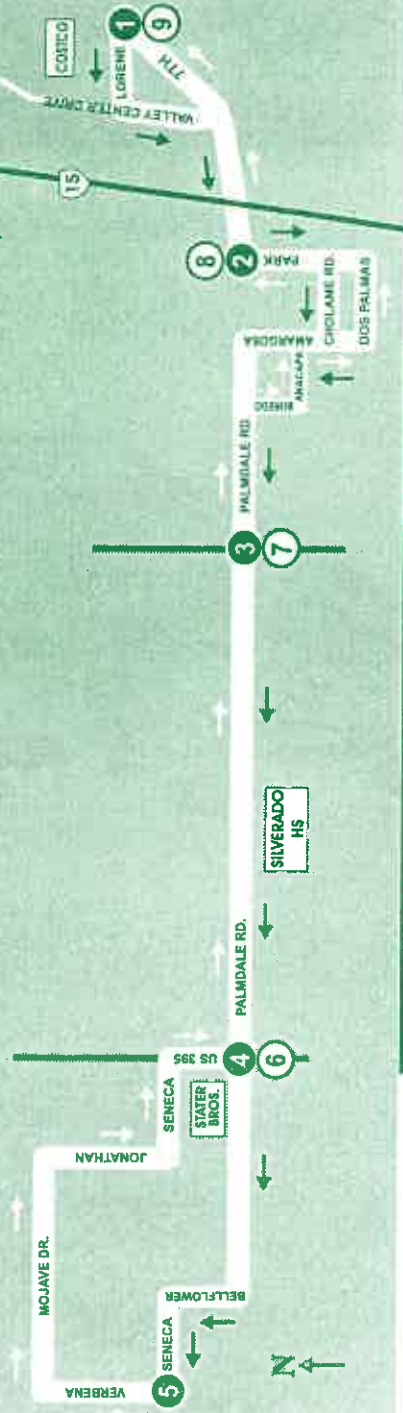
*Adelanto
South*



Revised 10/7/2013

ROUTE 31

ADELANTO-VICTORVILLE



Monday-Friday Schedule

	1	2	3	4	5	6	7	8	9
	Lorene & 7th	Park & Palmdale	Palmdale & El Evado	Palmdale & Hwy 395	Seneca & Verbena	Hwy 395 & Palmdale	Palmdale & El Evado	Park & Palmdale	Lorene & 7th
AM	6:00	6:04	6:09	6:14	6:18	6:31	6:37	6:43	6:52
	7:00	7:04	7:09	7:14	7:18	7:31	7:37	7:43	7:52
	7:30	7:34	7:39	7:44	7:48	8:01	8:07	8:13	8:22
	8:00	8:04	8:09	8:14	8:18	8:31	8:37	8:43	8:52
	8:30	8:34	8:39	8:44	8:48	9:01	9:07	9:13	9:22
	9:00	9:04	9:09	9:14	9:18	9:31	9:37	9:43	9:52
	9:30	9:34	9:39	9:44	9:48	10:01	10:07	10:13	10:22
	10:00	10:04	10:09	10:14	10:18	10:31	10:37	10:43	10:52
	10:30	10:34	10:39	10:44	10:48	11:01	11:07	11:13	11:22
	11:00	11:04	11:09	11:14	11:18	11:31	11:37	11:43	11:52
	11:30	11:34	11:39	11:44	11:48	12:01	12:07	12:13	12:22
PM	12:00	12:04	12:09	12:14	12:18	12:31	12:37	12:43	12:52
	12:30	12:34	12:39	12:44	12:48	1:01	1:07	1:13	1:22
	1:00	1:04	1:09	1:14	1:18	1:31	1:37	1:43	1:52
	1:30	1:34	1:39	1:44	1:48	2:01	2:07	2:13	2:22
	2:00	2:04	2:09	2:14	2:18	2:31	2:37	2:43	2:52
	2:30	2:34	2:39	2:44	2:48	3:01	3:07	3:13	3:22
	3:00	3:04	3:09	3:14	3:18	3:31	3:37	3:43	3:52
	3:30	3:34	3:39	3:44	3:48	4:01	4:07	4:13	4:22
	4:00	4:04	4:09	4:14	4:18	4:31	4:37	4:43	4:52
	5:00	5:04	5:09	5:14	5:18	5:31	5:37	5:43	5:52
	6:00	6:04	6:09	6:14	6:18	6:31	6:37	6:43	6:52
	7:00	7:04	7:09	7:14	7:18	7:31	7:37	7:43	7:52
	8:00	8:04	8:09	8:14	8:18	8:31	8:37	8:43	8:52

Saturday Schedule

	1	2	3	4	5	6	7	8	9
	Lorene & 7th	Park & Palmdale	Palmdale & El Evado	Palmdale & Hwy 395	Seneca & Verbena	Hwy 395 & Palmdale	Palmdale & El Evado	Park & Palmdale	Lorene & 7th
AM	7:00	7:04	7:09	7:14	7:18	7:31	7:37	7:43	7:52
	8:00	8:04	8:09	8:14	8:18	8:31	8:37	8:43	8:52
	9:00	9:04	9:09	9:14	9:18	9:31	9:37	9:43	9:52
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	11:00	11:04	11:09	11:14	11:18	11:31	11:37	11:43	11:52
PM	12:00	12:04	12:09	12:14	12:18	12:31	12:37	12:43	12:52
	1:00	1:04	1:09	1:14	1:18	1:31	1:37	1:43	1:52
	2:00	2:04	2:09	2:14	2:18	2:31	2:37	2:43	2:52
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	6:00	6:04	6:09	6:14	6:18	6:31	6:37	6:43	6:52
	7:00	7:04	7:09	7:14	7:18	7:31	7:37	7:43	7:52

Sunday Schedule

	1	2	3	4	5	6	7	8	9
	Lorene & 7th	Park & Palmdale	Palmdale & El Evado	Palmdale & Hwy 395	Seneca & Verbena	Hwy 395 & Palmdale	Palmdale & El Evado	Park & Palmdale	Lorene & 7th
AM	8:00	8:04	8:09	8:14	8:18	8:31	8:37	8:43	8:52
	9:00	9:04	9:09	9:14	9:18	9:31	9:37	9:43	9:52
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	1:00	1:04	1:09	1:14	1:18	1:31	1:37	1:43	1:52
	2:00	2:04	2:09	2:14	2:18	2:31	2:37	2:43	2:52
	3:00	3:04	3:09	3:14	3:18	3:31	3:37	3:43	3:52
	4:00	4:04	4:09	4:14	4:18	4:31	4:37	4:43	4:52
	5:00	5:04	5:09	5:14	5:18	5:31	5:37	5:43	5:52
	6:00	6:04	6:09	6:14	6:18	6:31	6:37	6:43	6:52
	7:00	7:04	7:09	7:14	7:18	7:31	7:37	7:43	7:52

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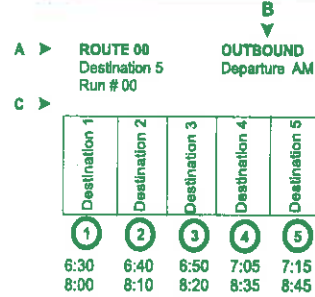
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 Zone 2 ... \$4.50
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- B** Direction of travel
- C** Timepoints: Major bus stops are called timepoints. Between each of these timepoints there are designated bus stops located every two or three blocks where you may board the bus. Timepoints are listed at the top of the timetable and are also shown in the map as O. By reading the timetable from left to right, you can follow the movement of the bus as it travels along its route. For example: If you boarded Route 00 at Destination 1 at 6:30 a.m., you would arrive at Destination 4 at 7:05 a.m.

APPENDIX C
Existing Traffic Counts

City of Victorville
 N/S: US-395
 E/W: Luna Road
 Weather: Clear

File Name : VIC395LUAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

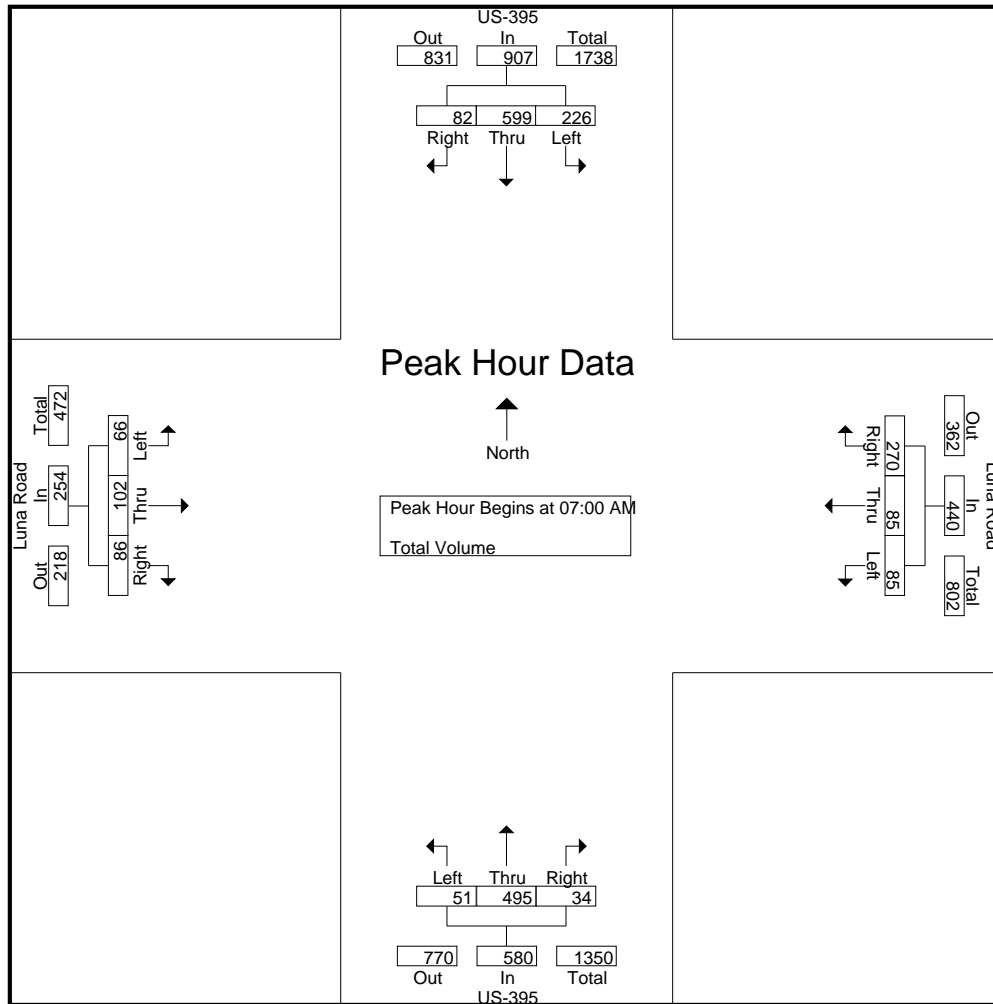
Groups Printed- Total Volume

Start Time	US-395 Southbound				Luna Road Westbound				US-395 Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	63	135	14	212	26	14	47	87	5	121	11	137	14	22	27	63	499
07:15 AM	74	155	9	238	18	16	95	129	8	112	10	130	16	20	14	50	547
07:30 AM	61	146	19	226	19	23	75	117	15	130	7	152	19	26	21	66	561
07:45 AM	28	163	40	231	22	32	53	107	23	132	6	161	17	34	24	75	574
Total	226	599	82	907	85	85	270	440	51	495	34	580	66	102	86	254	2181
08:00 AM	35	145	18	198	15	25	40	80	8	107	3	118	11	35	21	67	463
08:15 AM	29	136	17	182	27	20	47	94	4	118	5	127	13	23	11	47	450
08:30 AM	40	141	20	201	24	9	48	81	7	128	5	140	14	20	13	47	469
08:45 AM	27	111	16	154	16	9	36	61	4	120	6	130	16	8	8	32	377
Total	131	533	71	735	82	63	171	316	23	473	19	515	54	86	53	193	1759
Grand Total	357	1132	153	1642	167	148	441	756	74	968	53	1095	120	188	139	447	3940
Apprch %	21.7	68.9	9.3		22.1	19.6	58.3		6.8	88.4	4.8		26.8	42.1	31.1		
Total %	9.1	28.7	3.9	41.7	4.2	3.8	11.2	19.2	1.9	24.6	1.3	27.8	3	4.8	3.5	11.3	

Start Time	US-395 Southbound				Luna Road Westbound				US-395 Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	63	135	14	212	26	14	47	87	5	121	11	137	14	22	27	63	499
07:15 AM	74	155	9	238	18	16	95	129	8	112	10	130	16	20	14	50	547
07:30 AM	61	146	19	226	19	23	75	117	15	130	7	152	19	26	21	66	561
07:45 AM	28	163	40	231	22	32	53	107	23	132	6	161	17	34	24	75	574
Total Volume	226	599	82	907	85	85	270	440	51	495	34	580	66	102	86	254	2181
% App. Total	24.9	66	9		19.3	19.3	61.4		8.8	85.3	5.9		26	40.2	33.9		
PHF	.764	.919	.513	.953	.817	.664	.711	.853	.554	.938	.773	.901	.868	.750	.796	.847	.950

City of Victorville
 N/S: US-395
 E/W: Luna Road
 Weather: Clear

File Name : VIC395LUAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	07:00 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	63	135	14	212	26	14	47	87	5	121	11	137	16	20	14	50
+15 mins.	74	155	9	238	18	16	95	129	8	112	10	130	19	26	21	66
+30 mins.	61	146	19	226	19	23	75	117	15	130	7	152	17	34	24	75
+45 mins.	28	163	40	231	22	32	53	107	23	132	6	161	11	35	21	67
Total Volume	226	599	82	907	85	85	270	440	51	495	34	580	63	115	80	258
% App. Total	24.9	66	9		19.3	19.3	61.4		8.8	85.3	5.9		24.4	44.6	31	
PHF	.764	.919	.513	.953	.817	.664	.711	.853	.554	.938	.773	.901	.829	.821	.833	.860

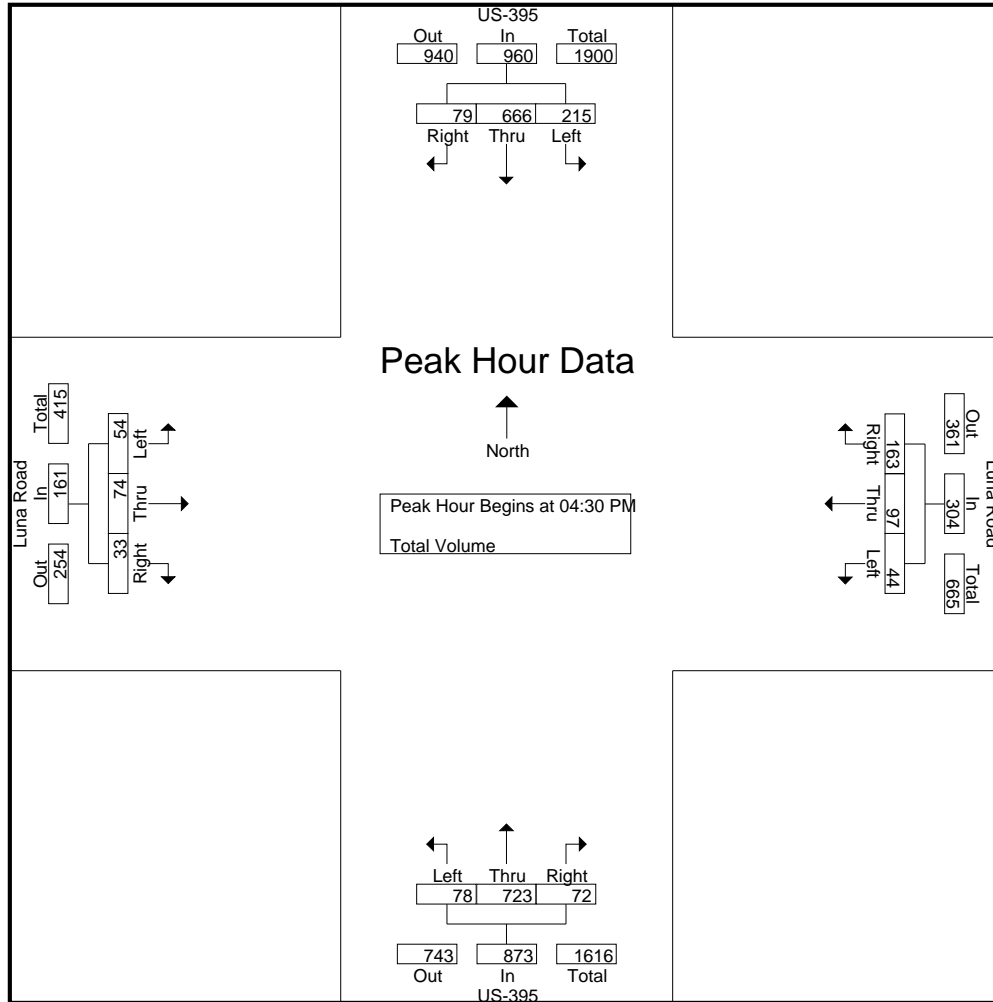
City of Victorville
 N/S: US-395
 E/W: Luna Road
 Weather: Clear

File Name : VIC395LUPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				Luna Road Westbound				US-395 Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	63	174	16	253	11	17	42	70	18	182	8	208	10	10	13	33	564
04:15 PM	51	160	19	230	13	20	45	78	16	164	13	193	10	18	14	42	543
04:30 PM	58	190	15	263	19	16	45	80	21	191	9	221	10	20	5	35	599
04:45 PM	47	168	18	233	8	27	35	70	18	199	17	234	7	17	7	31	568
Total	219	692	68	979	51	80	167	298	73	736	47	856	37	65	39	141	2274
05:00 PM	55	146	13	214	7	24	33	64	26	171	31	228	15	24	10	49	555
05:15 PM	55	162	33	250	10	30	50	90	13	162	15	190	22	13	11	46	576
05:30 PM	43	161	21	225	10	30	46	86	15	175	21	211	9	23	4	36	558
05:45 PM	59	159	23	241	8	31	34	73	23	182	24	229	14	19	6	39	582
Total	212	628	90	930	35	115	163	313	77	690	91	858	60	79	31	170	2271
Grand Total	431	1320	158	1909	86	195	330	611	150	1426	138	1714	97	144	70	311	4545
Apprch %	22.6	69.1	8.3		14.1	31.9	54		8.8	83.2	8.1		31.2	46.3	22.5		
Total %	9.5	29	3.5	42	1.9	4.3	7.3	13.4	3.3	31.4	3	37.7	2.1	3.2	1.5	6.8	

Start Time	US-395 Southbound				Luna Road Westbound				US-395 Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	58	190	15	263	19	16	45	80	21	191	9	221	10	20	5	35	599
04:45 PM	47	168	18	233	8	27	35	70	18	199	17	234	7	17	7	31	568
05:00 PM	55	146	13	214	7	24	33	64	26	171	31	228	15	24	10	49	555
05:15 PM	55	162	33	250	10	30	50	90	13	162	15	190	22	13	11	46	576
Total Volume	215	666	79	960	44	97	163	304	78	723	72	873	54	74	33	161	2298
% App. Total	22.4	69.4	8.2		14.5	31.9	53.6		8.9	82.8	8.2		33.5	46	20.5		
PHF	.927	.876	.598	.913	.579	.808	.815	.844	.750	.908	.581	.933	.614	.771	.750	.821	.959



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

	04:00 PM				05:00 PM				04:15 PM				05:00 PM			
+0 mins.	63	174	16	253	7	24	33	64	16	164	13	193	15	24	10	49
+15 mins.	51	160	19	230	10	30	50	90	21	191	9	221	22	13	11	46
+30 mins.	58	190	15	263	10	30	46	86	18	199	17	234	9	23	4	36
+45 mins.	47	168	18	233	8	31	34	73	26	171	31	228	14	19	6	39
Total Volume	219	692	68	979	35	115	163	313	81	725	70	876	60	79	31	170
% App. Total	22.4	70.7	6.9		11.2	36.7	52.1		9.2	82.8	8		35.3	46.5	18.2	
PHF	.869	.911	.895	.931	.875	.927	.815	.869	.779	.911	.565	.936	.682	.823	.705	.867

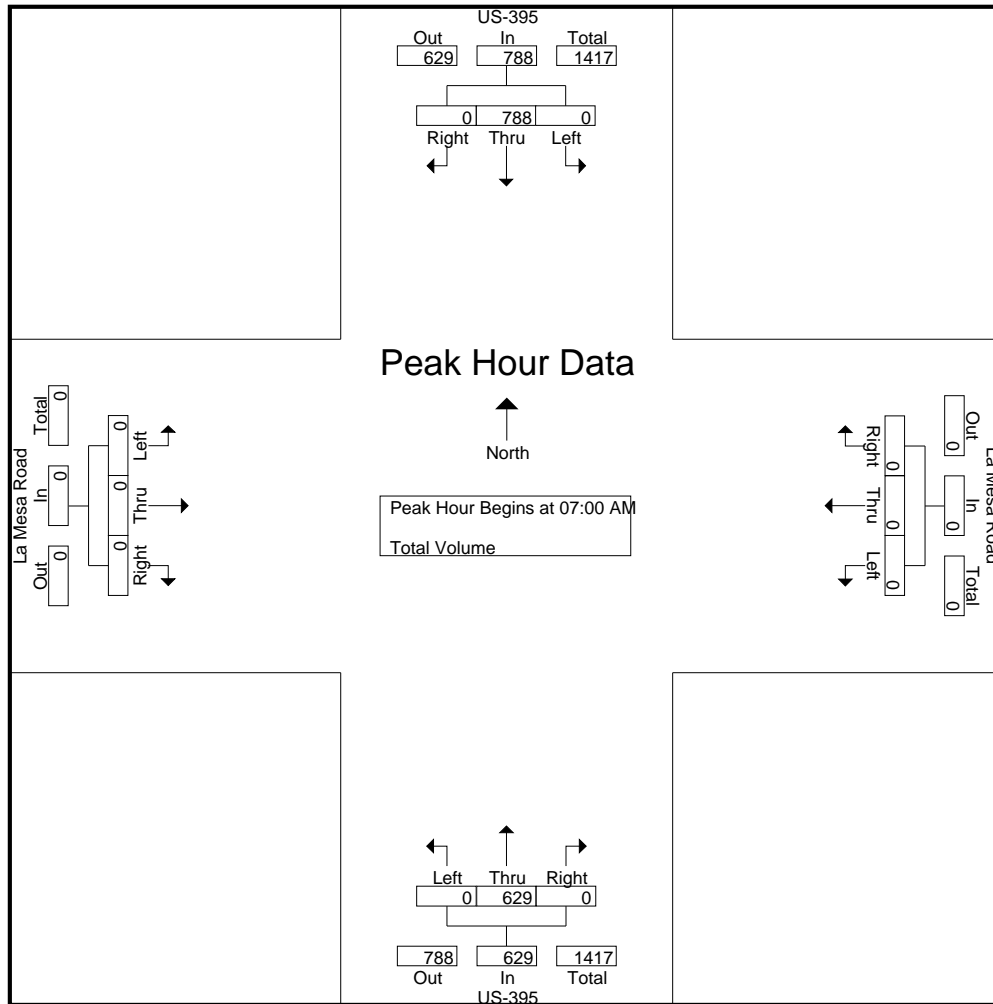
City of Victorville
 N/S: US-395
 E/W: La Mesa Road
 Weather: Clear

File Name : VIC395LMAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				La Mesa Road Westbound				US-395 Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	194	0	194	0	0	0	0	0	145	0	145	0	0	0	0	339
07:15 AM	0	188	0	188	0	0	0	0	0	141	0	141	0	0	0	0	329
07:30 AM	0	187	0	187	0	0	0	0	0	166	0	166	0	0	0	0	353
07:45 AM	0	219	0	219	0	0	0	0	0	177	0	177	0	0	0	0	396
Total	0	788	0	788	0	0	0	0	0	629	0	629	0	0	0	0	1417
08:00 AM	0	182	0	182	0	0	0	0	0	126	0	126	0	0	0	0	308
08:15 AM	0	171	0	171	0	0	0	0	0	129	0	129	0	0	0	0	300
08:30 AM	0	191	0	191	0	0	0	0	0	144	0	144	0	0	0	0	335
08:45 AM	0	129	0	129	0	0	0	0	0	148	0	148	0	0	0	0	277
Total	0	673	0	673	0	0	0	0	0	547	0	547	0	0	0	0	1220
Grand Total	0	1461	0	1461	0	0	0	0	0	1176	0	1176	0	0	0	0	2637
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	55.4	0	55.4	0	0	0	0	0	44.6	0	44.6	0	0	0	0	

Start Time	US-395 Southbound				La Mesa Road Westbound				US-395 Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	194	0	194	0	0	0	0	0	145	0	145	0	0	0	0	339
07:15 AM	0	188	0	188	0	0	0	0	0	141	0	141	0	0	0	0	329
07:30 AM	0	187	0	187	0	0	0	0	0	166	0	166	0	0	0	0	353
07:45 AM	0	219	0	219	0	0	0	0	0	177	0	177	0	0	0	0	396
Total Volume	0	788	0	788	0	0	0	0	0	629	0	629	0	0	0	0	1417
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.900	.000	.900	.000	.000	.000	.000	.000	.888	.000	.888	.000	.000	.000	.000	.895



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	0	194	0	194	0	0	0	0	0	145	0	145	0	0	0	0
+15 mins.	0	188	0	188	0	0	0	0	0	141	0	141	0	0	0	0
+30 mins.	0	187	0	187	0	0	0	0	0	166	0	166	0	0	0	0
+45 mins.	0	219	0	219	0	0	0	0	0	177	0	177	0	0	0	0
Total Volume	0	788	0	788	0	0	0	0	0	629	0	629	0	0	0	0
% App. Total	0	100	0		0	0	0	0	0	100	0		0	0	0	0
PHF	.000	.900	.000	.900	.000	.000	.000	.000	.000	.888	.000	.888	.000	.000	.000	.000

City of Victorville
 N/S: US-395
 E/W: La Mesa Road
 Weather: Clear

File Name : VIC395LMPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

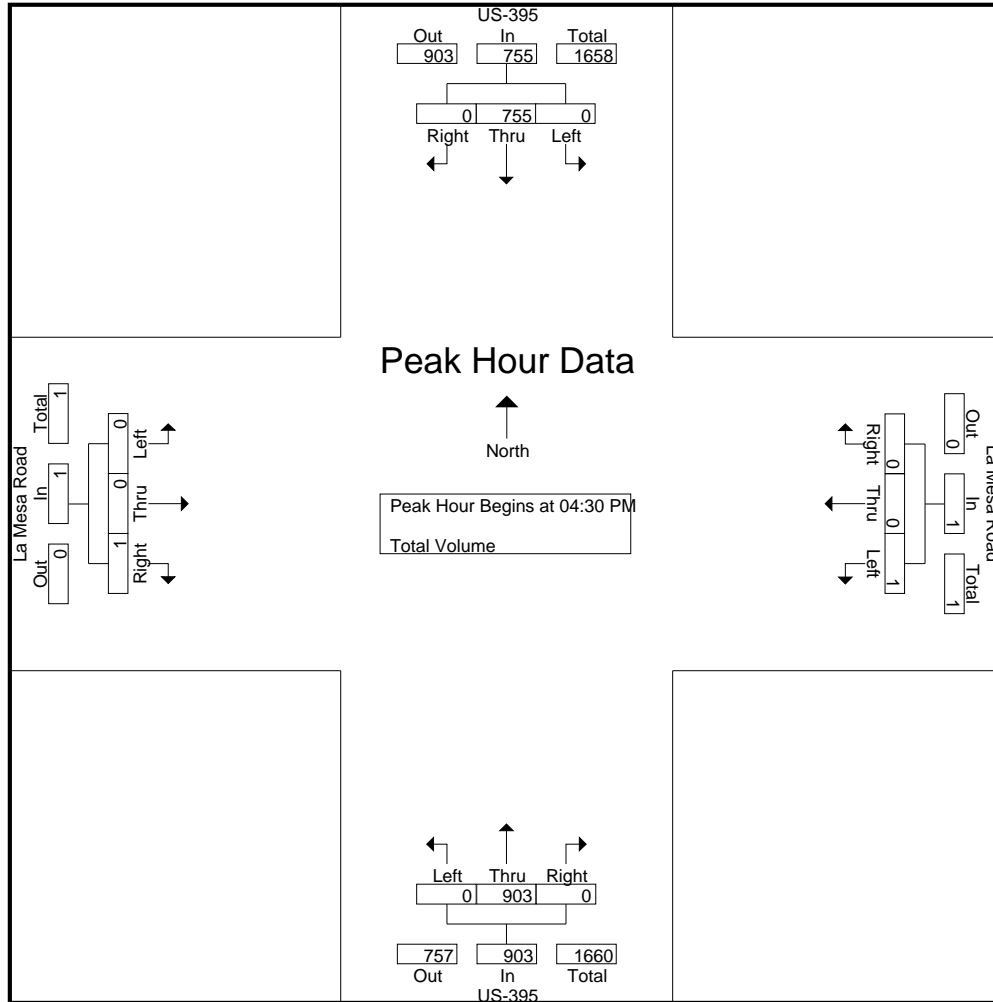
Groups Printed- Total Volume

Start Time	US-395 Southbound				La Mesa Road Westbound				US-395 Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	192	0	192	0	0	0	0	0	217	0	217	0	0	0	0	409
04:15 PM	0	186	0	186	0	0	0	0	0	194	0	194	0	0	0	0	380
04:30 PM	0	208	0	208	0	0	0	0	0	229	0	229	0	0	1	1	438
04:45 PM	0	191	0	191	0	0	0	0	0	239	0	239	0	0	0	0	430
Total	0	777	0	777	0	0	0	0	0	879	0	879	0	0	1	1	1657
05:00 PM	0	171	0	171	0	0	0	0	0	236	0	236	0	0	0	0	407
05:15 PM	0	185	0	185	1	0	0	1	0	199	0	199	0	0	0	0	385
05:30 PM	0	176	0	176	0	0	0	0	0	216	0	216	0	0	0	0	392
05:45 PM	0	182	0	182	0	0	0	0	0	238	0	238	0	0	0	0	420
Total	0	714	0	714	1	0	0	1	0	889	0	889	0	0	0	0	1604
Grand Total	0	1491	0	1491	1	0	0	1	0	1768	0	1768	0	0	1	1	3261
Apprch %	0	100	0		100	0	0		0	100	0		0	0	100		
Total %	0	45.7	0	45.7	0	0	0	0	0	54.2	0	54.2	0	0	0	0	

Start Time	US-395 Southbound				La Mesa Road Westbound				US-395 Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	208	0	208	0	0	0	0	0	229	0	229	0	0	1	1	438
04:45 PM	0	191	0	191	0	0	0	0	0	239	0	239	0	0	0	0	430
05:00 PM	0	171	0	171	0	0	0	0	0	236	0	236	0	0	0	0	407
05:15 PM	0	185	0	185	1	0	0	1	0	199	0	199	0	0	0	0	385
Total Volume	0	755	0	755	1	0	0	1	0	903	0	903	0	0	1	1	1660
% App. Total	0	100	0		100	0	0		0	100	0		0	0	100		
PHF	.000	.907	.000	.907	.250	.000	.000	.250	.000	.945	.000	.945	.000	.000	.250	.250	.947

City of Victorville
 N/S: US-395
 E/W: La Mesa Road
 Weather: Clear

File Name : VIC395LMPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	04:00 PM				04:30 PM				04:30 PM				04:00 PM			
+0 mins.	0	192	0	192	0	0	0	0	0	229	0	229	0	0	0	0
+15 mins.	0	186	0	186	0	0	0	0	0	239	0	239	0	0	0	0
+30 mins.	0	208	0	208	0	0	0	0	0	236	0	236	0	0	1	1
+45 mins.	0	191	0	191	1	0	0	1	0	199	0	199	0	0	0	0
Total Volume	0	777	0	777	1	0	0	1	0	903	0	903	0	0	1	1
% App. Total	0	100	0		100	0	0		0	100	0		0	0	100	
PHF	.000	.934	.000	.934	.250	.000	.000	.250	.000	.945	.000	.945	.000	.000	.250	.250

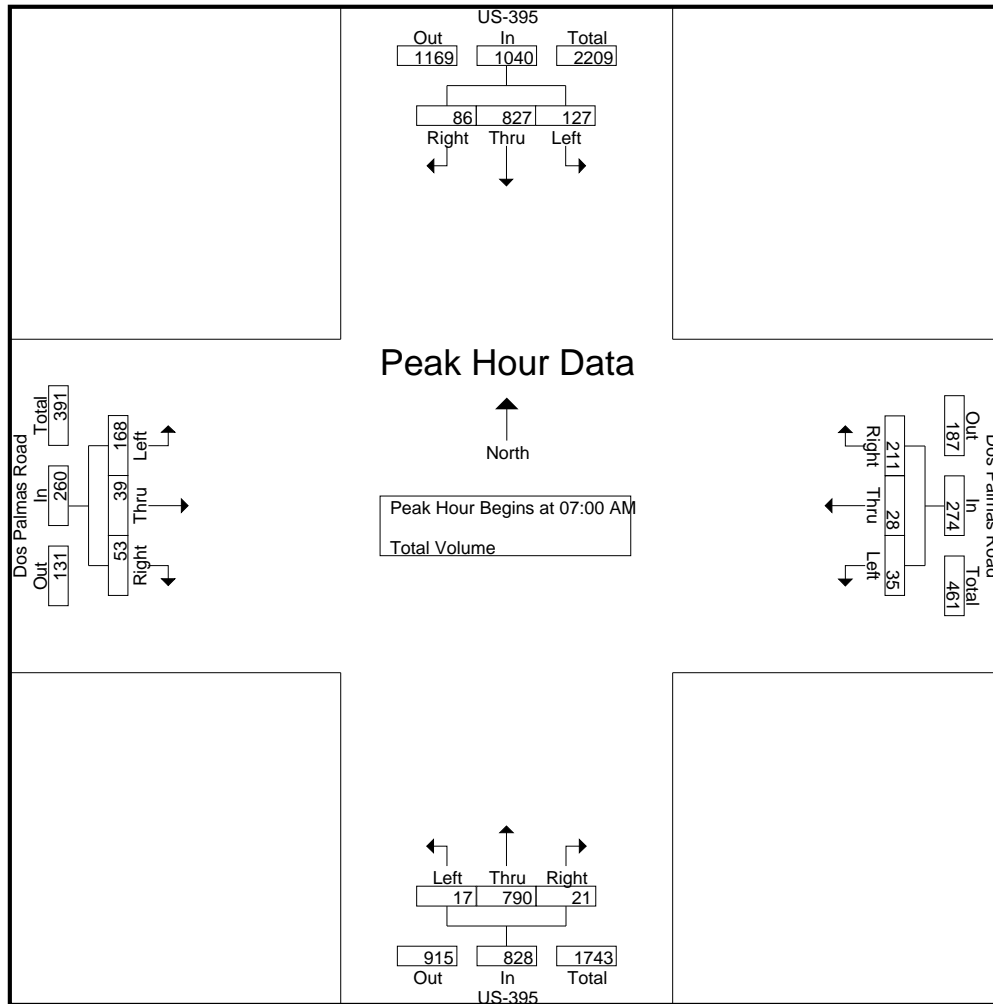
City of Victorville
 N/S: US-395
 E/W: Dos Palmas Road
 Weather: Clear

File Name : VIC395DOAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				Dos Palmas Road Westbound				US-395 Northbound				Dos Palmas Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	42	199	9	250	10	3	43	56	1	172	6	179	32	7	17	56	541
07:15 AM	41	212	16	269	5	5	76	86	7	203	7	217	32	9	16	57	629
07:30 AM	28	203	26	257	14	9	61	84	3	216	5	224	41	10	12	63	628
07:45 AM	16	213	35	264	6	11	31	48	6	199	3	208	63	13	8	84	604
Total	127	827	86	1040	35	28	211	274	17	790	21	828	168	39	53	260	2402
08:00 AM	11	168	34	213	7	16	22	45	4	148	2	154	49	13	16	78	490
08:15 AM	11	176	27	214	6	8	11	25	2	165	3	170	45	6	13	64	473
08:30 AM	9	171	14	194	8	1	16	25	8	180	1	189	37	5	13	55	463
08:45 AM	4	138	14	156	5	1	13	19	1	166	2	169	26	3	10	39	383
Total	35	653	89	777	26	26	62	114	15	659	8	682	157	27	52	236	1809
Grand Total	162	1480	175	1817	61	54	273	388	32	1449	29	1510	325	66	105	496	4211
Apprch %	8.9	81.5	9.6		15.7	13.9	70.4		2.1	96	1.9		65.5	13.3	21.2		
Total %	3.8	35.1	4.2	43.1	1.4	1.3	6.5	9.2	0.8	34.4	0.7	35.9	7.7	1.6	2.5	11.8	

Start Time	US-395 Southbound				Dos Palmas Road Westbound				US-395 Northbound				Dos Palmas Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	42	199	9	250	10	3	43	56	1	172	6	179	32	7	17	56	541
07:15 AM	41	212	16	269	5	5	76	86	7	203	7	217	32	9	16	57	629
07:30 AM	28	203	26	257	14	9	61	84	3	216	5	224	41	10	12	63	628
07:45 AM	16	213	35	264	6	11	31	48	6	199	3	208	63	13	8	84	604
Total Volume	127	827	86	1040	35	28	211	274	17	790	21	828	168	39	53	260	2402
% App. Total	12.2	79.5	8.3		12.8	10.2	77		2.1	95.4	2.5		64.6	15	20.4		
PHF	.756	.971	.614	.967	.625	.636	.694	.797	.607	.914	.750	.924	.667	.750	.779	.774	.955



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

	07:00 AM				07:00 AM				07:00 AM				07:30 AM			
+0 mins.	42	199	9	250	10	3	43	56	1	172	6	179	41	10	12	63
+15 mins.	41	212	16	269	5	5	76	86	7	203	7	217	63	13	8	84
+30 mins.	28	203	26	257	14	9	61	84	3	216	5	224	49	13	16	78
+45 mins.	16	213	35	264	6	11	31	48	6	199	3	208	45	6	13	64
Total Volume	127	827	86	1040	35	28	211	274	17	790	21	828	198	42	49	289
% App. Total	12.2	79.5	8.3		12.8	10.2	77		2.1	95.4	2.5		68.5	14.5	17	
PHF	.756	.971	.614	.967	.625	.636	.694	.797	.607	.914	.750	.924	.786	.808	.766	.860

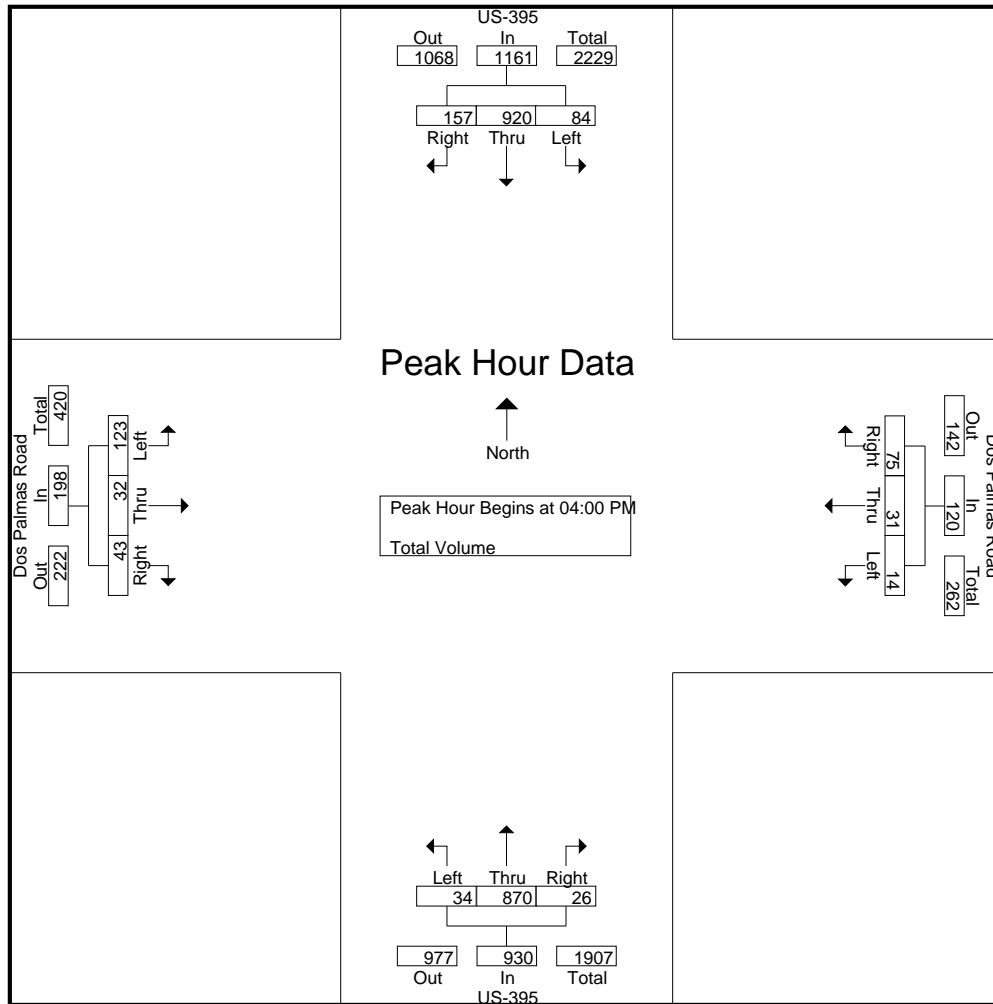
City of Victorville
 N/S: US-395
 E/W: Dos Palmas Road
 Weather: Clear

File Name : VIC395DOPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				Dos Palmas Road Westbound				US-395 Northbound				Dos Palmas Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	20	253	44	317	2	11	15	28	10	229	5	244	32	10	8	50	639
04:15 PM	21	207	44	272	6	7	28	41	6	195	9	210	34	9	10	53	576
04:30 PM	25	234	36	295	6	9	9	24	10	221	5	236	31	6	14	51	606
04:45 PM	18	226	33	277	0	4	23	27	8	225	7	240	26	7	11	44	588
Total	84	920	157	1161	14	31	75	120	34	870	26	930	123	32	43	198	2409
05:00 PM	19	206	48	273	5	9	13	27	7	208	6	221	26	4	12	42	563
05:15 PM	20	228	53	301	4	9	20	33	13	214	3	230	30	5	14	49	613
05:30 PM	19	218	48	285	4	12	15	31	12	208	4	224	41	5	9	55	595
05:45 PM	19	210	37	266	5	11	16	32	8	219	3	230	34	10	12	56	584
Total	77	862	186	1125	18	41	64	123	40	849	16	905	131	24	47	202	2355
Grand Total	161	1782	343	2286	32	72	139	243	74	1719	42	1835	254	56	90	400	4764
Apprch %	7	78	15		13.2	29.6	57.2		4	93.7	2.3		63.5	14	22.5		
Total %	3.4	37.4	7.2	48	0.7	1.5	2.9	5.1	1.6	36.1	0.9	38.5	5.3	1.2	1.9	8.4	

Start Time	US-395 Southbound				Dos Palmas Road Westbound				US-395 Northbound				Dos Palmas Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	20	253	44	317	2	11	15	28	10	229	5	244	32	10	8	50	639
04:15 PM	21	207	44	272	6	7	28	41	6	195	9	210	34	9	10	53	576
04:30 PM	25	234	36	295	6	9	9	24	10	221	5	236	31	6	14	51	606
04:45 PM	18	226	33	277	0	4	23	27	8	225	7	240	26	7	11	44	588
Total Volume	84	920	157	1161	14	31	75	120	34	870	26	930	123	32	43	198	2409
% App. Total	7.2	79.2	13.5		11.7	25.8	62.5		3.7	93.5	2.8		62.1	16.2	21.7		
PHF	.840	.909	.892	.916	.583	.705	.670	.732	.850	.950	.722	.953	.904	.800	.768	.934	.942



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

	04:00 PM				05:00 PM				04:00 PM				05:00 PM			
+0 mins.	20	253	44	317	5	9	13	27	10	229	5	244	26	4	12	42
+15 mins.	21	207	44	272	4	9	20	33	6	195	9	210	30	5	14	49
+30 mins.	25	234	36	295	4	12	15	31	10	221	5	236	41	5	9	55
+45 mins.	18	226	33	277	5	11	16	32	8	225	7	240	34	10	12	56
Total Volume	84	920	157	1161	18	41	64	123	34	870	26	930	131	24	47	202
% App. Total	7.2	79.2	13.5		14.6	33.3	52		3.7	93.5	2.8		64.9	11.9	23.3	
PHF	.840	.909	.892	.916	.900	.854	.800	.932	.850	.950	.722	.953	.799	.600	.839	.902

City of Victorville
 N/S: US-395
 E/W: Bear Valley Road
 Weather: Clear

File Name : VIC395BEAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

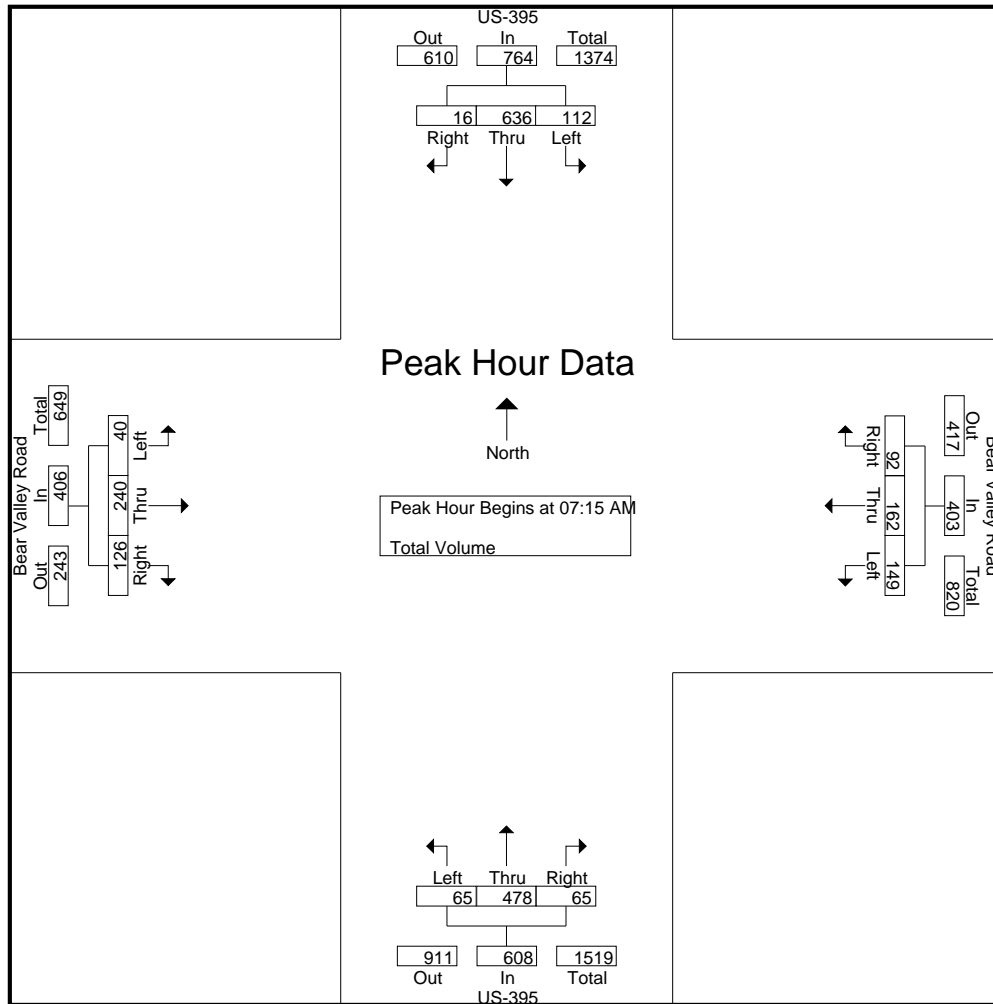
Groups Printed- Total Volume

Start Time	US-395 Southbound				Bear Valley Road Westbound				US-395 Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	25	168	1	194	39	28	27	94	14	101	11	126	10	34	29	73	487
07:15 AM	21	157	2	180	30	36	20	86	11	124	27	162	10	59	31	100	528
07:30 AM	33	160	6	199	36	59	26	121	25	131	7	163	7	53	38	98	581
07:45 AM	33	162	5	200	47	41	28	116	17	120	11	148	9	76	33	118	582
Total	112	647	14	773	152	164	101	417	67	476	56	599	36	222	131	389	2178
08:00 AM	25	157	3	185	36	26	18	80	12	103	20	135	14	52	24	90	490
08:15 AM	31	133	4	168	42	46	27	115	11	100	8	119	12	55	24	91	493
08:30 AM	36	154	5	195	28	20	25	73	8	109	21	138	8	51	21	80	486
08:45 AM	15	114	4	133	27	36	9	72	9	104	16	129	7	66	27	100	434
Total	107	558	16	681	133	128	79	340	40	416	65	521	41	224	96	361	1903
Grand Total	219	1205	30	1454	285	292	180	757	107	892	121	1120	77	446	227	750	4081
Apprch %	15.1	82.9	2.1		37.6	38.6	23.8		9.6	79.6	10.8		10.3	59.5	30.3		
Total %	5.4	29.5	0.7	35.6	7	7.2	4.4	18.5	2.6	21.9	3	27.4	1.9	10.9	5.6	18.4	

Start Time	US-395 Southbound				Bear Valley Road Westbound				US-395 Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	21	157	2	180	30	36	20	86	11	124	27	162	10	59	31	100	528
07:30 AM	33	160	6	199	36	59	26	121	25	131	7	163	7	53	38	98	581
07:45 AM	33	162	5	200	47	41	28	116	17	120	11	148	9	76	33	118	582
08:00 AM	25	157	3	185	36	26	18	80	12	103	20	135	14	52	24	90	490
Total Volume	112	636	16	764	149	162	92	403	65	478	65	608	40	240	126	406	2181
% App. Total	14.7	83.2	2.1		37	40.2	22.8		10.7	78.6	10.7		9.9	59.1	31		
PHF	.848	.981	.667	.955	.793	.686	.821	.833	.650	.912	.602	.933	.714	.789	.829	.860	.937

City of Victorville
 N/S: US-395
 E/W: Bear Valley Road
 Weather: Clear

File Name : VIC395BEAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	07:00 AM				07:30 AM				07:15 AM				07:15 AM			
+0 mins.	25	168	1	194	36	59	26	121	11	124	27	162	10	59	31	100
+15 mins.	21	157	2	180	47	41	28	116	25	131	7	163	7	53	38	98
+30 mins.	33	160	6	199	36	26	18	80	17	120	11	148	9	76	33	118
+45 mins.	33	162	5	200	42	46	27	115	12	103	20	135	14	52	24	90
Total Volume	112	647	14	773	161	172	99	432	65	478	65	608	40	240	126	406
% App. Total	14.5	83.7	1.8		37.3	39.8	22.9		10.7	78.6	10.7		9.9	59.1	31	
PHF	.848	.963	.583	.966	.856	.729	.884	.893	.650	.912	.602	.933	.714	.789	.829	.860

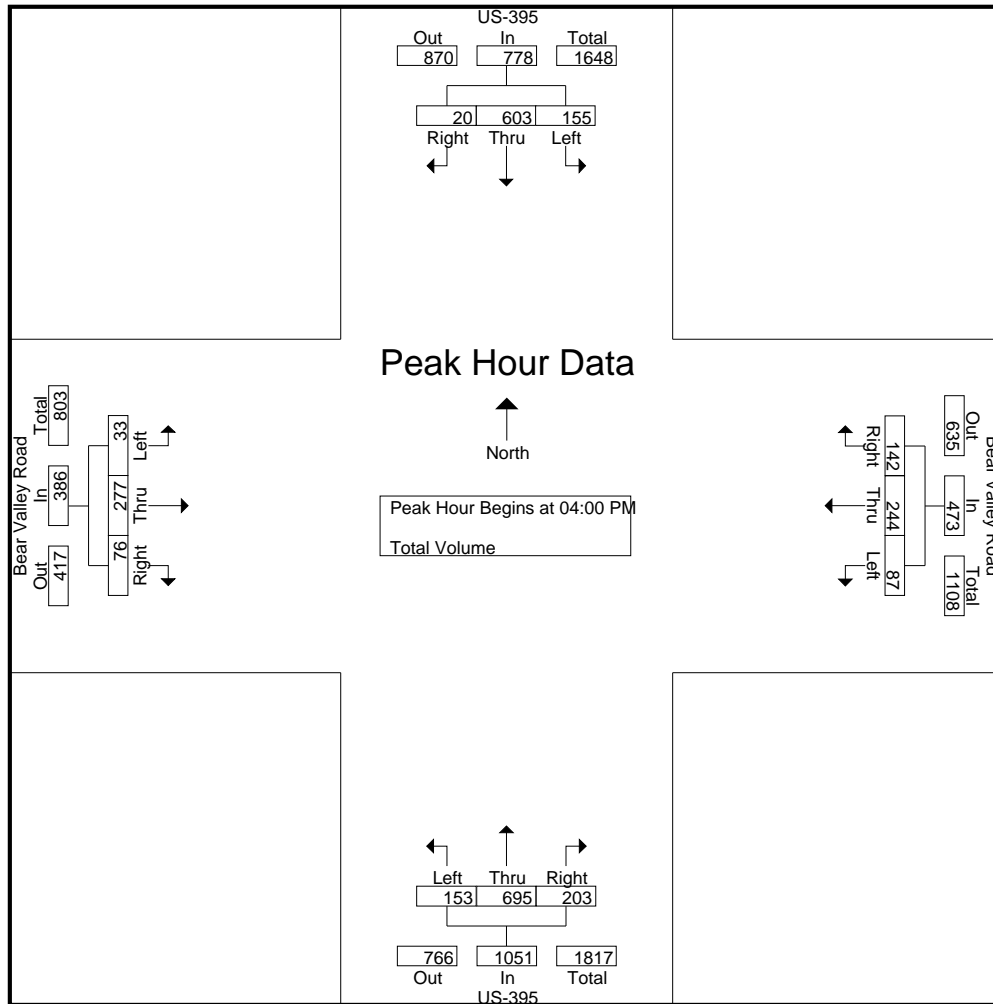
City of Victorville
 N/S: US-395
 E/W: Bear Valley Road
 Weather: Clear

File Name : VIC395BEPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				Bear Valley Road Westbound				US-395 Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	32	146	7	185	27	49	31	107	38	156	39	233	13	85	28	126	651
04:15 PM	36	149	5	190	14	68	35	117	43	162	52	257	7	72	15	94	658
04:30 PM	43	157	6	206	24	57	40	121	40	195	61	296	6	60	20	86	709
04:45 PM	44	151	2	197	22	70	36	128	32	182	51	265	7	60	13	80	670
Total	155	603	20	778	87	244	142	473	153	695	203	1051	33	277	76	386	2688
05:00 PM	33	133	4	170	17	50	36	103	27	181	37	245	4	41	29	74	592
05:15 PM	38	140	4	182	17	77	36	130	52	175	59	286	7	50	14	71	669
05:30 PM	31	140	3	174	30	68	44	142	28	171	51	250	6	36	10	52	618
05:45 PM	37	132	4	173	19	72	43	134	31	177	58	266	8	48	8	64	637
Total	139	545	15	699	83	267	159	509	138	704	205	1047	25	175	61	261	2516
Grand Total	294	1148	35	1477	170	511	301	982	291	1399	408	2098	58	452	137	647	5204
Apprch %	19.9	77.7	2.4		17.3	52	30.7		13.9	66.7	19.4		9	69.9	21.2		
Total %	5.6	22.1	0.7	28.4	3.3	9.8	5.8	18.9	5.6	26.9	7.8	40.3	1.1	8.7	2.6	12.4	

Start Time	US-395 Southbound				Bear Valley Road Westbound				US-395 Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	32	146	7	185	27	49	31	107	38	156	39	233	13	85	28	126	651
04:15 PM	36	149	5	190	14	68	35	117	43	162	52	257	7	72	15	94	658
04:30 PM	43	157	6	206	24	57	40	121	40	195	61	296	6	60	20	86	709
04:45 PM	44	151	2	197	22	70	36	128	32	182	51	265	7	60	13	80	670
Total Volume	155	603	20	778	87	244	142	473	153	695	203	1051	33	277	76	386	2688
% App. Total	19.9	77.5	2.6		18.4	51.6	30		14.6	66.1	19.3		8.5	71.8	19.7		
PHF	.881	.960	.714	.944	.806	.871	.888	.924	.890	.891	.832	.888	.635	.815	.679	.766	.948



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

	04:00 PM				05:00 PM				04:30 PM				04:00 PM			
+0 mins.	32	146	7	185	17	50	36	103	40	195	61	296	13	85	28	126
+15 mins.	36	149	5	190	17	77	36	130	32	182	51	265	7	72	15	94
+30 mins.	43	157	6	206	30	68	44	142	27	181	37	245	6	60	20	86
+45 mins.	44	151	2	197	19	72	43	134	52	175	59	286	7	60	13	80
Total Volume	155	603	20	778	83	267	159	509	151	733	208	1092	33	277	76	386
% App. Total	19.9	77.5	2.6		16.3	52.5	31.2		13.8	67.1	19		8.5	71.8	19.7	
PHF	.881	.960	.714	.944	.692	.867	.903	.896	.726	.940	.852	.922	.635	.815	.679	.766

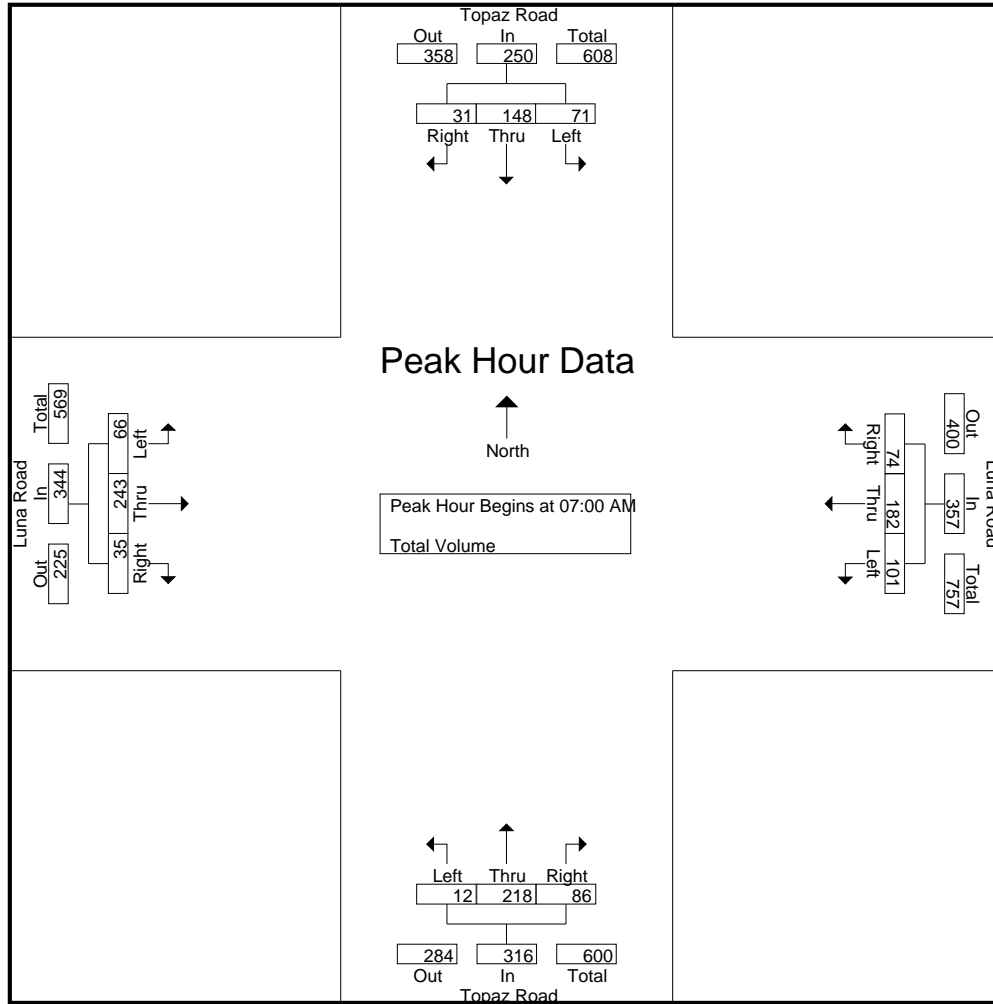
City of Victorville
 N/S: Topaz Road
 E/W: Luna Road
 Weather: Clear

File Name : VICTOLUAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Topaz Road Southbound				Luna Road Westbound				Topaz Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	14	29	6	49	23	71	18	112	3	54	16	73	14	59	12	85	319
07:15 AM	18	28	7	53	35	33	27	95	5	71	34	110	23	74	6	103	361
07:30 AM	29	62	5	96	21	42	26	89	4	59	21	84	14	65	9	88	357
07:45 AM	10	29	13	52	22	36	3	61	0	34	15	49	15	45	8	68	230
Total	71	148	31	250	101	182	74	357	12	218	86	316	66	243	35	344	1267
08:00 AM	6	22	5	33	17	45	3	65	1	17	7	25	3	59	6	68	191
08:15 AM	1	6	0	7	10	41	6	57	2	15	2	19	4	39	2	45	128
08:30 AM	0	4	2	6	5	24	0	29	2	8	6	16	2	19	5	26	77
08:45 AM	0	3	2	5	4	7	3	14	1	4	6	11	1	18	0	19	49
Total	7	35	9	51	36	117	12	165	6	44	21	71	10	135	13	158	445
Grand Total	78	183	40	301	137	299	86	522	18	262	107	387	76	378	48	502	1712
Apprch %	25.9	60.8	13.3		26.2	57.3	16.5		4.7	67.7	27.6		15.1	75.3	9.6		
Total %	4.6	10.7	2.3	17.6	8	17.5	5	30.5	1.1	15.3	6.2	22.6	4.4	22.1	2.8	29.3	

Start Time	Topaz Road Southbound				Luna Road Westbound				Topaz Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	14	29	6	49	23	71	18	112	3	54	16	73	14	59	12	85	319
07:15 AM	18	28	7	53	35	33	27	95	5	71	34	110	23	74	6	103	361
07:30 AM	29	62	5	96	21	42	26	89	4	59	21	84	14	65	9	88	357
07:45 AM	10	29	13	52	22	36	3	61	0	34	15	49	15	45	8	68	230
Total Volume	71	148	31	250	101	182	74	357	12	218	86	316	66	243	35	344	1267
% App. Total	28.4	59.2	12.4		28.3	51	20.7		3.8	69	27.2		19.2	70.6	10.2		
PHF	.612	.597	.596	.651	.721	.641	.685	.797	.600	.768	.632	.718	.717	.821	.729	.835	.877



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	14	29	6	49	23	71	18	112	3	54	16	73	14	59	12	85
+15 mins.	18	28	7	53	35	33	27	95	5	71	34	110	23	74	6	103
+30 mins.	29	62	5	96	21	42	26	89	4	59	21	84	14	65	9	88
+45 mins.	10	29	13	52	22	36	3	61	0	34	15	49	15	45	8	68
Total Volume	71	148	31	250	101	182	74	357	12	218	86	316	66	243	35	344
% App. Total	28.4	59.2	12.4		28.3	51	20.7		3.8	69	27.2		19.2	70.6	10.2	
PHF	.612	.597	.596	.651	.721	.641	.685	.797	.600	.768	.632	.718	.717	.821	.729	.835

City of Victorville
 N/S: Topaz Road
 E/W: Luna Road
 Weather: Clear

File Name : VICTOLUPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

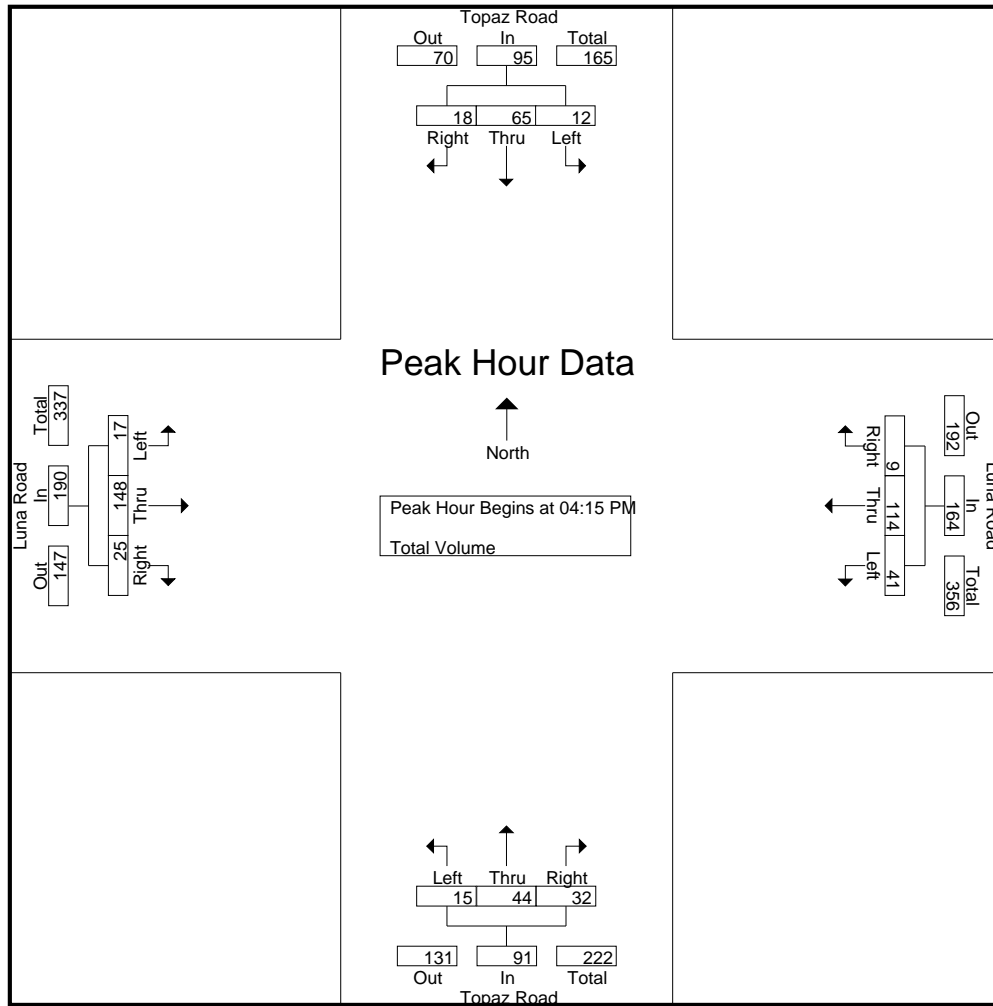
Groups Printed- Total Volume

Start Time	Topaz Road Southbound				Luna Road Westbound				Topaz Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	2	12	4	18	4	32	3	39	8	9	6	23	2	26	5	33	113
04:15 PM	7	14	4	25	11	32	0	43	4	8	12	24	3	42	10	55	147
04:30 PM	2	18	1	21	15	31	1	47	4	12	9	25	3	36	5	44	137
04:45 PM	1	19	8	28	4	21	5	30	3	14	3	20	5	35	4	44	122
Total	12	63	17	92	34	116	9	159	19	43	30	92	13	139	24	176	519
05:00 PM	2	14	5	21	11	30	3	44	4	10	8	22	6	35	6	47	134
05:15 PM	4	11	3	18	8	37	2	47	10	10	6	26	1	34	1	36	127
05:30 PM	2	15	2	19	6	42	2	50	4	12	8	24	1	37	3	41	134
05:45 PM	0	3	3	6	9	43	1	53	5	18	2	25	1	34	7	42	126
Total	8	43	13	64	34	152	8	194	23	50	24	97	9	140	17	166	521
Grand Total	20	106	30	156	68	268	17	353	42	93	54	189	22	279	41	342	1040
Apprch %	12.8	67.9	19.2		19.3	75.9	4.8		22.2	49.2	28.6		6.4	81.6	12		
Total %	1.9	10.2	2.9	15	6.5	25.8	1.6	33.9	4	8.9	5.2	18.2	2.1	26.8	3.9	32.9	

Start Time	Topaz Road Southbound				Luna Road Westbound				Topaz Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	7	14	4	25	11	32	0	43	4	8	12	24	3	42	10	55	147
04:30 PM	2	18	1	21	15	31	1	47	4	12	9	25	3	36	5	44	137
04:45 PM	1	19	8	28	4	21	5	30	3	14	3	20	5	35	4	44	122
05:00 PM	2	14	5	21	11	30	3	44	4	10	8	22	6	35	6	47	134
Total Volume	12	65	18	95	41	114	9	164	15	44	32	91	17	148	25	190	540
% App. Total	12.6	68.4	18.9		25	69.5	5.5		16.5	48.4	35.2		8.9	77.9	13.2		
PHF	.429	.855	.563	.848	.683	.891	.450	.872	.938	.786	.667	.910	.708	.881	.625	.864	.918

City of Victorville
 N/S: Topaz Road
 E/W: Luna Road
 Weather: Clear

File Name : VICTOLUPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	04:15 PM				05:00 PM				05:00 PM				04:15 PM			
+0 mins.	7	14	4	25	11	30	3	44	4	10	8	22	3	42	10	55
+15 mins.	2	18	1	21	8	37	2	47	10	10	6	26	3	36	5	44
+30 mins.	1	19	8	28	6	42	2	50	4	12	8	24	5	35	4	44
+45 mins.	2	14	5	21	9	43	1	53	5	18	2	25	6	35	6	47
Total Volume	12	65	18	95	34	152	8	194	23	50	24	97	17	148	25	190
% App. Total	12.6	68.4	18.9		17.5	78.4	4.1		23.7	51.5	24.7		8.9	77.9	13.2	
PHF	.429	.855	.563	.848	.773	.884	.667	.915	.575	.694	.750	.933	.708	.881	.625	.864

City of Victorville
 N/S: Topaz Road
 E/W: La Mesa Road
 Weather: Clear

File Name : VICTOLMAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

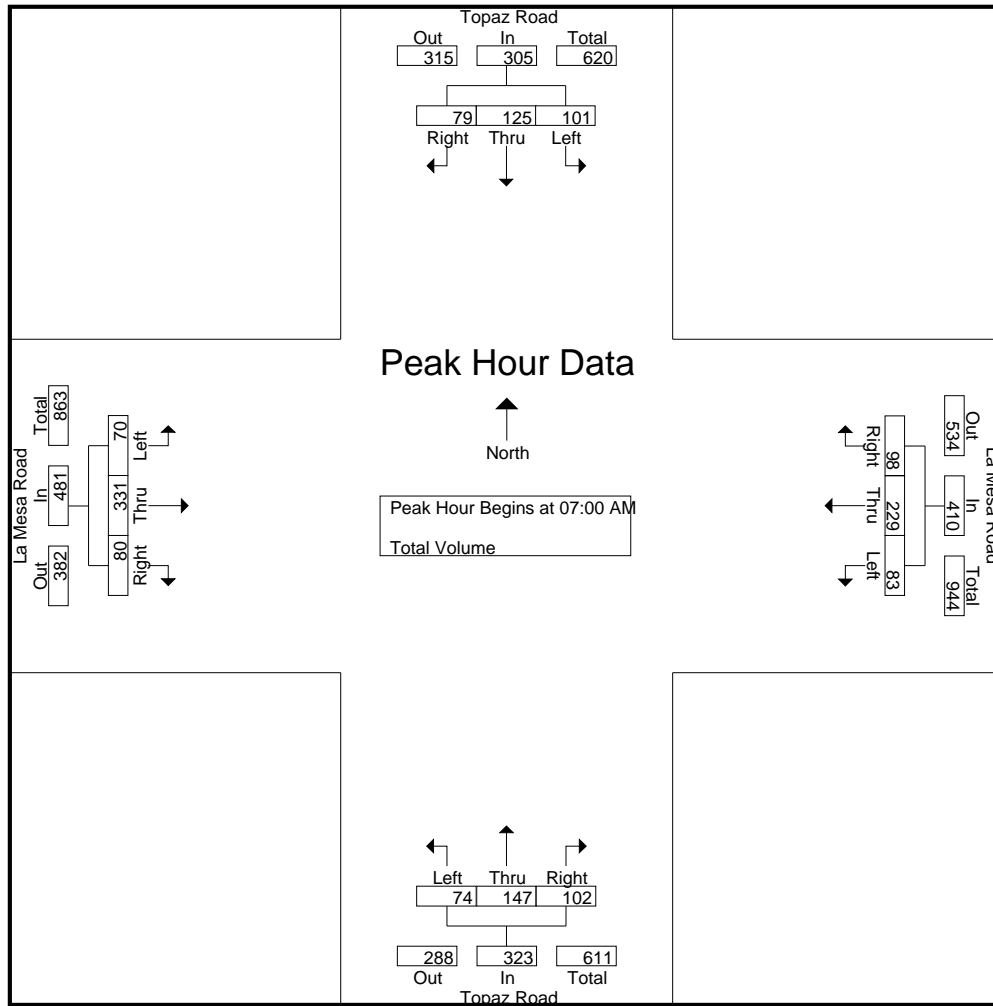
Groups Printed- Total Volume

Start Time	Topaz Road Southbound				La Mesa Road Westbound				Topaz Road Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	23	22	20	65	32	66	34	132	21	30	23	74	11	66	22	99	370
07:15 AM	21	29	25	75	20	62	32	114	36	54	32	122	24	101	36	161	472
07:30 AM	41	40	18	99	18	66	25	109	13	36	23	72	20	107	16	143	423
07:45 AM	16	34	16	66	13	35	7	55	4	27	24	55	15	57	6	78	254
Total	101	125	79	305	83	229	98	410	74	147	102	323	70	331	80	481	1519
08:00 AM	17	26	9	52	15	31	9	55	6	16	18	40	1	66	14	81	228
08:15 AM	8	13	2	23	23	37	4	64	7	12	17	36	1	66	12	79	202
08:30 AM	7	6	2	15	9	31	4	44	8	8	18	34	4	61	13	78	171
08:45 AM	1	3	3	7	10	22	3	35	7	11	18	36	0	43	10	53	131
Total	33	48	16	97	57	121	20	198	28	47	71	146	6	236	49	291	732
Grand Total	134	173	95	402	140	350	118	608	102	194	173	469	76	567	129	772	2251
Apprch %	33.3	43	23.6		23	57.6	19.4		21.7	41.4	36.9		9.8	73.4	16.7		
Total %	6	7.7	4.2	17.9	6.2	15.5	5.2	27	4.5	8.6	7.7	20.8	3.4	25.2	5.7	34.3	

Start Time	Topaz Road Southbound				La Mesa Road Westbound				Topaz Road Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	23	22	20	65	32	66	34	132	21	30	23	74	11	66	22	99	370
07:15 AM	21	29	25	75	20	62	32	114	36	54	32	122	24	101	36	161	472
07:30 AM	41	40	18	99	18	66	25	109	13	36	23	72	20	107	16	143	423
07:45 AM	16	34	16	66	13	35	7	55	4	27	24	55	15	57	6	78	254
Total Volume	101	125	79	305	83	229	98	410	74	147	102	323	70	331	80	481	1519
% App. Total	33.1	41	25.9		20.2	55.9	23.9		22.9	45.5	31.6		14.6	68.8	16.6		
PHF	.616	.781	.790	.770	.648	.867	.721	.777	.514	.681	.797	.662	.729	.773	.556	.747	.805

City of Victorville
 N/S: Topaz Road
 E/W: La Mesa Road
 Weather: Clear

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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	23	22	20	65	32	66	34	132	21	30	23	74	11	66	22	99
+15 mins.	21	29	25	75	20	62	32	114	36	54	32	122	24	101	36	161
+30 mins.	41	40	18	99	18	66	25	109	13	36	23	72	20	107	16	143
+45 mins.	16	34	16	66	13	35	7	55	4	27	24	55	15	57	6	78
Total Volume	101	125	79	305	83	229	98	410	74	147	102	323	70	331	80	481
% App. Total	33.1	41	25.9		20.2	55.9	23.9		22.9	45.5	31.6		14.6	68.8	16.6	
PHF	.616	.781	.790	.770	.648	.867	.721	.777	.514	.681	.797	.662	.729	.773	.556	.747

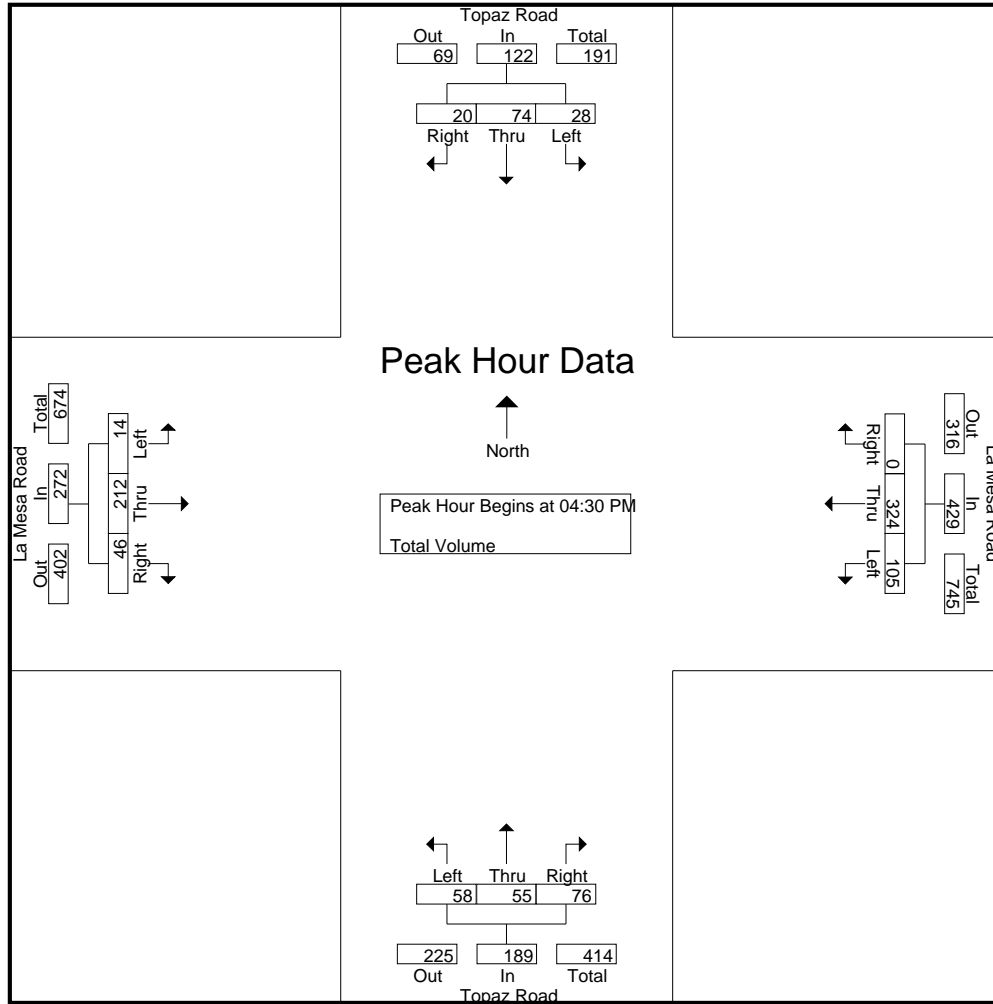
City of Victorville
 N/S: Topaz Road
 E/W: La Mesa Road
 Weather: Clear

File Name : VICTOLMPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Topaz Road Southbound				La Mesa Road Westbound				Topaz Road Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	8	15	4	27	24	70	0	94	6	12	16	34	0	57	3	60	215
04:15 PM	9	21	9	39	19	67	0	86	12	14	22	48	7	47	10	64	237
04:30 PM	7	25	8	40	24	78	0	102	9	9	24	42	4	51	13	68	252
04:45 PM	9	18	2	29	20	83	0	103	18	16	16	50	3	55	14	72	254
Total	33	79	23	135	87	298	0	385	45	51	78	174	14	210	40	264	958
05:00 PM	7	18	6	31	25	74	0	99	20	12	15	47	5	60	9	74	251
05:15 PM	5	13	4	22	36	89	0	125	11	18	21	50	2	46	10	58	255
05:30 PM	7	18	6	31	17	83	1	101	9	16	16	41	3	59	7	69	242
05:45 PM	6	14	2	22	23	82	5	110	15	12	10	37	3	42	9	54	223
Total	25	63	18	106	101	328	6	435	55	58	62	175	13	207	35	255	971
Grand Total	58	142	41	241	188	626	6	820	100	109	140	349	27	417	75	519	1929
Apprch %	24.1	58.9	17		22.9	76.3	0.7		28.7	31.2	40.1		5.2	80.3	14.5		
Total %	3	7.4	2.1	12.5	9.7	32.5	0.3	42.5	5.2	5.7	7.3	18.1	1.4	21.6	3.9	26.9	

Start Time	Topaz Road Southbound				La Mesa Road Westbound				Topaz Road Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	7	25	8	40	24	78	0	102	9	9	24	42	4	51	13	68	252
04:45 PM	9	18	2	29	20	83	0	103	18	16	16	50	3	55	14	72	254
05:00 PM	7	18	6	31	25	74	0	99	20	12	15	47	5	60	9	74	251
05:15 PM	5	13	4	22	36	89	0	125	11	18	21	50	2	46	10	58	255
Total Volume	28	74	20	122	105	324	0	429	58	55	76	189	14	212	46	272	1012
% App. Total	23	60.7	16.4		24.5	75.5	0		30.7	29.1	40.2		5.1	77.9	16.9		
PHF	.778	.740	.625	.763	.729	.910	.000	.858	.725	.764	.792	.945	.700	.883	.821	.919	.992



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

	04:15 PM				05:00 PM				04:30 PM				04:15 PM			
+0 mins.	9	21	9	39	25	74	0	99	9	9	24	42	7	47	10	64
+15 mins.	7	25	8	40	36	89	0	125	18	16	16	50	4	51	13	68
+30 mins.	9	18	2	29	17	83	1	101	20	12	15	47	3	55	14	72
+45 mins.	7	18	6	31	23	82	5	110	11	18	21	50	5	60	9	74
Total Volume	32	82	25	139	101	328	6	435	58	55	76	189	19	213	46	278
% App. Total	23	59	18		23.2	75.4	1.4		30.7	29.1	40.2		6.8	76.6	16.5	
PHF	.889	.820	.694	.869	.701	.921	.300	.870	.725	.764	.792	.945	.679	.888	.821	.939

City of Victorville
 N/S: Topaz Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : VICTOBEAM
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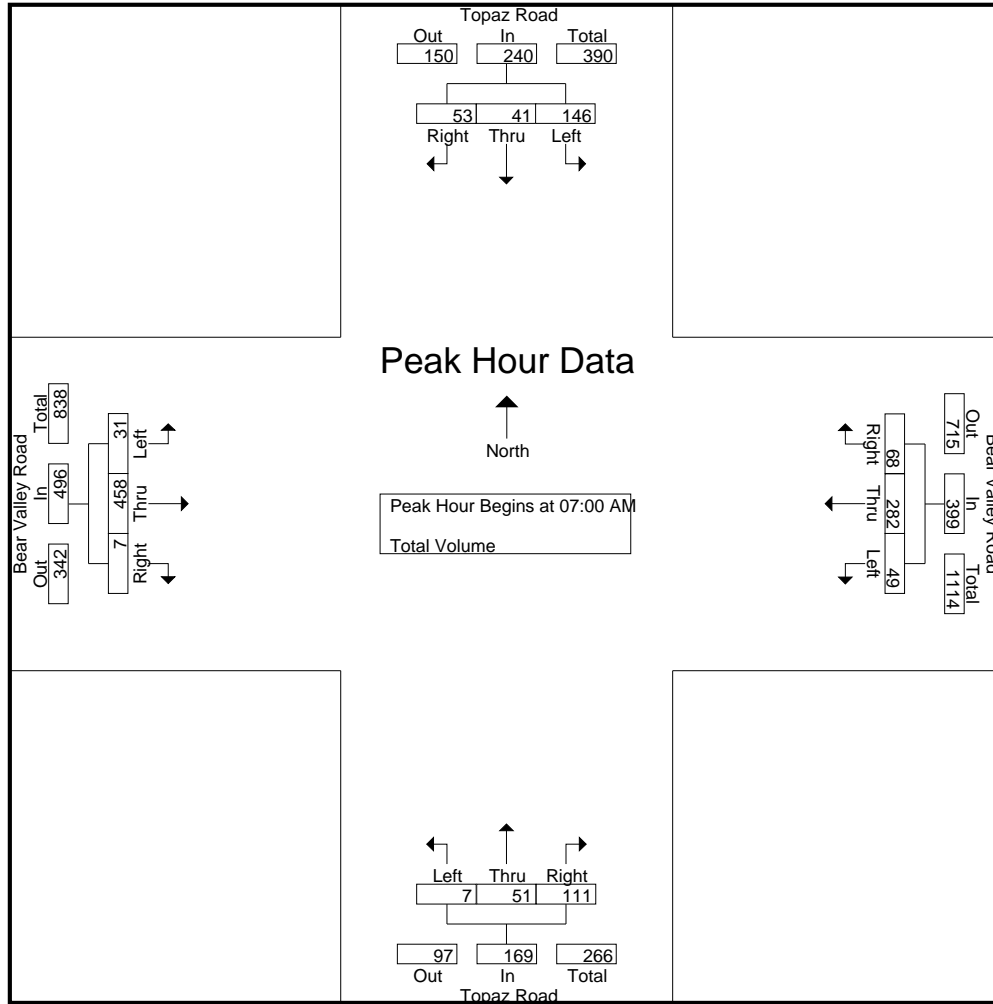
Groups Printed- Total Volume

Start Time	Topaz Road Southbound				Bear Valley Road Westbound				Topaz Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	31	12	11	54	18	75	24	117	2	13	29	44	7	93	2	102	317
07:15 AM	44	15	14	73	16	43	18	77	2	23	28	53	12	118	3	133	336
07:30 AM	43	11	17	71	7	79	17	103	2	7	37	46	6	131	2	139	359
07:45 AM	28	3	11	42	8	85	9	102	1	8	17	26	6	116	0	122	292
Total	146	41	53	240	49	282	68	399	7	51	111	169	31	458	7	496	1304
08:00 AM	26	4	9	39	7	43	11	61	1	7	13	21	5	128	0	133	254
08:15 AM	22	7	5	34	13	67	9	89	1	5	9	15	3	109	1	113	251
08:30 AM	22	4	3	29	6	57	13	76	0	7	15	22	2	101	1	104	231
08:45 AM	29	3	2	34	9	54	14	77	1	0	13	14	3	114	0	117	242
Total	99	18	19	136	35	221	47	303	3	19	50	72	13	452	2	467	978
Grand Total	245	59	72	376	84	503	115	702	10	70	161	241	44	910	9	963	2282
Apprch %	65.2	15.7	19.1		12	71.7	16.4		4.1	29	66.8		4.6	94.5	0.9		
Total %	10.7	2.6	3.2	16.5	3.7	22	5	30.8	0.4	3.1	7.1	10.6	1.9	39.9	0.4	42.2	

Start Time	Topaz Road Southbound				Bear Valley Road Westbound				Topaz Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	31	12	11	54	18	75	24	117	2	13	29	44	7	93	2	102	317
07:15 AM	44	15	14	73	16	43	18	77	2	23	28	53	12	118	3	133	336
07:30 AM	43	11	17	71	7	79	17	103	2	7	37	46	6	131	2	139	359
07:45 AM	28	3	11	42	8	85	9	102	1	8	17	26	6	116	0	122	292
Total Volume	146	41	53	240	49	282	68	399	7	51	111	169	31	458	7	496	1304
% App. Total	60.8	17.1	22.1		12.3	70.7	17		4.1	30.2	65.7		6.2	92.3	1.4		
PHF	.830	.683	.779	.822	.681	.829	.708	.853	.875	.554	.750	.797	.646	.874	.583	.892	.908

City of Victorville
 N/S: Topaz Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : VICTOBEAM
 Site Code : 99917016
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	31	12	11	54	18	75	24	117	2	13	29	44	12	118	3	133
+15 mins.	44	15	14	73	16	43	18	77	2	23	28	53	6	131	2	139
+30 mins.	43	11	17	71	7	79	17	103	2	7	37	46	6	116	0	122
+45 mins.	28	3	11	42	8	85	9	102	1	8	17	26	5	128	0	133
Total Volume	146	41	53	240	49	282	68	399	7	51	111	169	29	493	5	527
% App. Total	60.8	17.1	22.1		12.3	70.7	17		4.1	30.2	65.7		5.5	93.5	0.9	
PHF	.830	.683	.779	.822	.681	.829	.708	.853	.875	.554	.750	.797	.604	.941	.417	.948

City of Victorville
 N/S: Topaz Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : VICTOBEPM
 Site Code : 99917016
 Start Date : 1/18/2017
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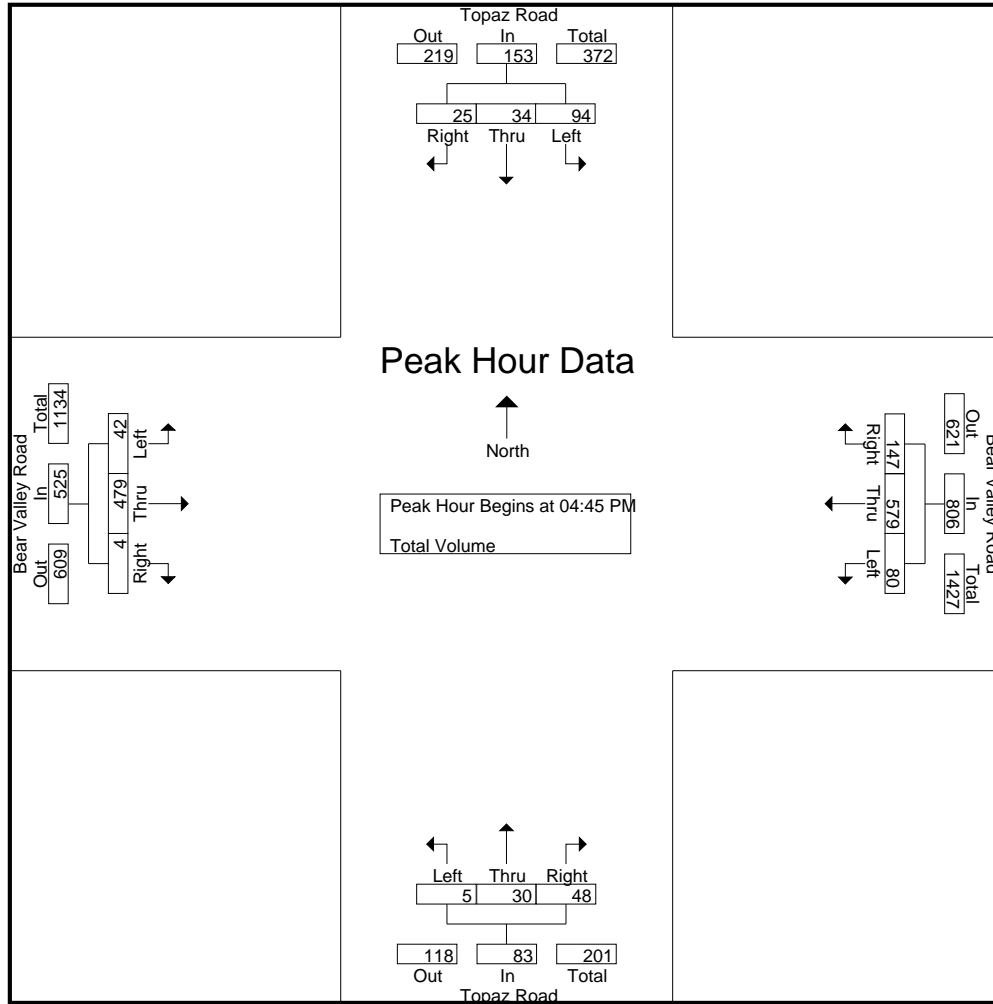
Groups Printed- Total Volume

Start Time	Topaz Road Southbound				Bear Valley Road Westbound				Topaz Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	20	11	8	39	22	128	26	176	0	8	21	29	8	137	3	148	392
04:15 PM	31	9	3	43	17	131	28	176	2	6	10	18	11	134	4	149	386
04:30 PM	29	12	4	45	12	108	23	143	4	8	18	30	10	136	3	149	367
04:45 PM	18	9	2	29	13	163	40	216	1	6	10	17	7	140	0	147	409
Total	98	41	17	156	64	530	117	711	7	28	59	94	36	547	10	593	1554
05:00 PM	26	7	7	40	31	107	40	178	1	9	16	26	9	108	2	119	363
05:15 PM	30	11	9	50	17	145	32	194	2	9	11	22	14	129	1	144	410
05:30 PM	20	7	7	34	19	164	35	218	1	6	11	18	12	102	1	115	385
05:45 PM	16	5	7	28	21	159	49	229	1	5	15	21	12	109	2	123	401
Total	92	30	30	152	88	575	156	819	5	29	53	87	47	448	6	501	1559
Grand Total	190	71	47	308	152	1105	273	1530	12	57	112	181	83	995	16	1094	3113
Apprch %	61.7	23.1	15.3		9.9	72.2	17.8		6.6	31.5	61.9		7.6	91	1.5		
Total %	6.1	2.3	1.5	9.9	4.9	35.5	8.8	49.1	0.4	1.8	3.6	5.8	2.7	32	0.5	35.1	

Start Time	Topaz Road Southbound				Bear Valley Road Westbound				Topaz Road Northbound				Bear Valley Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	18	9	2	29	13	163	40	216	1	6	10	17	7	140	0	147	409
05:00 PM	26	7	7	40	31	107	40	178	1	9	16	26	9	108	2	119	363
05:15 PM	30	11	9	50	17	145	32	194	2	9	11	22	14	129	1	144	410
05:30 PM	20	7	7	34	19	164	35	218	1	6	11	18	12	102	1	115	385
Total Volume	94	34	25	153	80	579	147	806	5	30	48	83	42	479	4	525	1567
% App. Total	61.4	22.2	16.3		9.9	71.8	18.2		6	36.1	57.8		8	91.2	0.8		
PHF	.783	.773	.694	.765	.645	.883	.919	.924	.625	.833	.750	.798	.750	.855	.500	.893	.955

City of Victorville
 N/S: Topaz Road
 E/W: Bear Valley Road
 Weather: Clear

File Name : VICTOBEPM
 Site Code : 99917016
 Start Date : 1/18/2017
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				05:00 PM				04:30 PM				04:00 PM			
+0 mins.	29	12	4	45	31	107	40	178	4	8	18	30	8	137	3	148
+15 mins.	18	9	2	29	17	145	32	194	1	6	10	17	11	134	4	149
+30 mins.	26	7	7	40	19	164	35	218	1	9	16	26	10	136	3	149
+45 mins.	30	11	9	50	21	159	49	229	2	9	11	22	7	140	0	147
Total Volume	103	39	22	164	88	575	156	819	8	32	55	95	36	547	10	593
% App. Total	62.8	23.8	13.4		10.7	70.2	19		8.4	33.7	57.9		6.1	92.2	1.7	
PHF	.858	.813	.611	.820	.710	.877	.796	.894	.500	.889	.764	.792	.818	.977	.625	.995

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: Luna Road
 Weather: Clear

File Name : VICMLLUAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

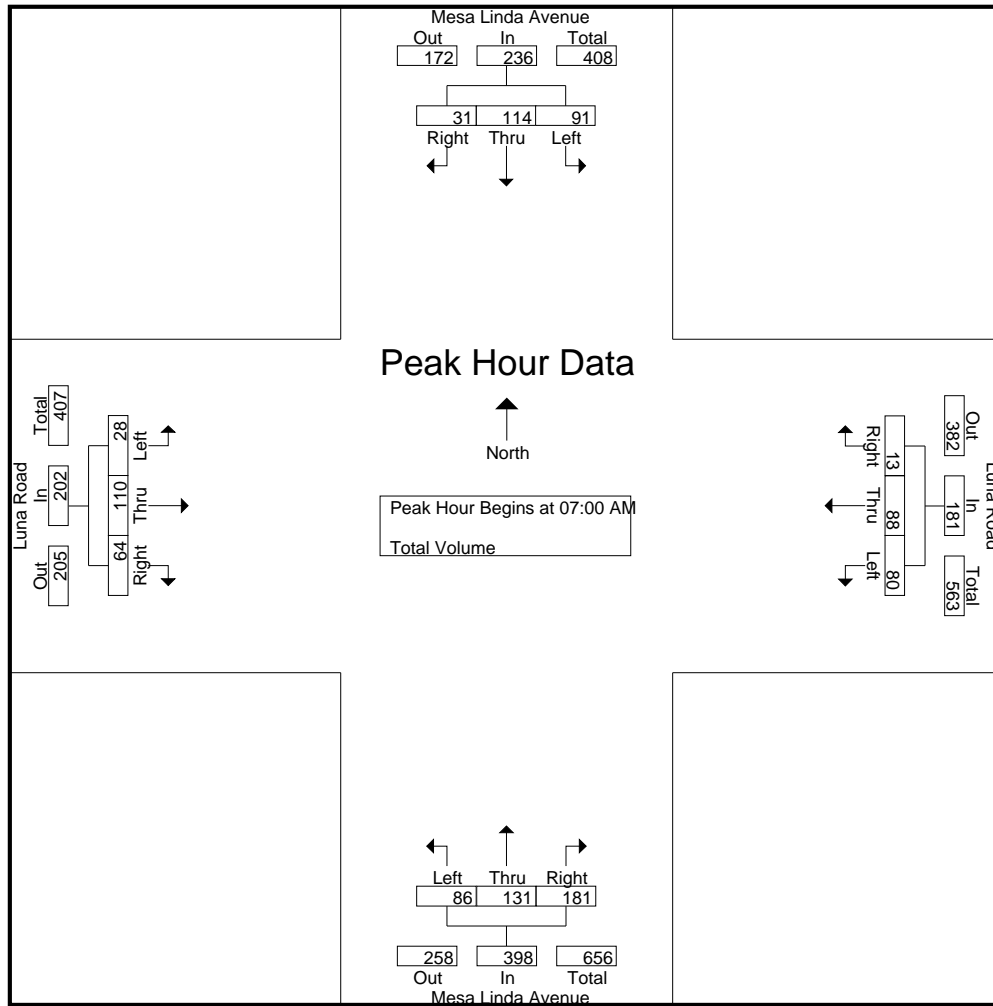
Groups Printed- Total Volume

Start Time	Mesa Linda Avenue Southbound				Luna Road Westbound				Mesa Linda Avenue Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	51	32	6	89	28	13	2	43	14	26	43	83	1	44	13	58	273
07:15 AM	30	39	8	77	26	20	4	50	37	49	63	149	11	23	20	54	330
07:30 AM	6	29	8	43	14	28	5	47	26	40	54	120	9	18	28	55	265
07:45 AM	4	14	9	27	12	27	2	41	9	16	21	46	7	25	3	35	149
Total	91	114	31	236	80	88	13	181	86	131	181	398	28	110	64	202	1017
08:00 AM	9	17	5	31	10	31	2	43	8	6	14	28	4	36	11	51	153
08:15 AM	8	12	4	24	8	39	8	55	11	6	9	26	1	27	6	34	139
08:30 AM	0	11	3	14	6	21	2	29	2	11	5	18	0	17	15	32	93
08:45 AM	0	11	4	15	1	16	1	18	5	7	3	15	2	13	6	21	69
Total	17	51	16	84	25	107	13	145	26	30	31	87	7	93	38	138	454
Grand Total	108	165	47	320	105	195	26	326	112	161	212	485	35	203	102	340	1471
Apprch %	33.8	51.6	14.7		32.2	59.8	8		23.1	33.2	43.7		10.3	59.7	30		
Total %	7.3	11.2	3.2	21.8	7.1	13.3	1.8	22.2	7.6	10.9	14.4	33	2.4	13.8	6.9	23.1	

Start Time	Mesa Linda Avenue Southbound				Luna Road Westbound				Mesa Linda Avenue Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	51	32	6	89	28	13	2	43	14	26	43	83	1	44	13	58	273
07:15 AM	30	39	8	77	26	20	4	50	37	49	63	149	11	23	20	54	330
07:30 AM	6	29	8	43	14	28	5	47	26	40	54	120	9	18	28	55	265
07:45 AM	4	14	9	27	12	27	2	41	9	16	21	46	7	25	3	35	149
Total Volume	91	114	31	236	80	88	13	181	86	131	181	398	28	110	64	202	1017
% App. Total	38.6	48.3	13.1		44.2	48.6	7.2		21.6	32.9	45.5		13.9	54.5	31.7		
PHF	.446	.731	.861	.663	.714	.786	.650	.905	.581	.668	.718	.668	.636	.625	.571	.871	.770

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: Luna Road
 Weather: Clear

File Name : VICMLLUAM
 Site Code : 99917016
 Start Date : 1/18/2017
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:30 AM				07:00 AM				07:00 AM			
+0 mins.	51	32	6	89	14	28	5	47	14	26	43	83	1	44	13	58
+15 mins.	30	39	8	77	12	27	2	41	37	49	63	149	11	23	20	54
+30 mins.	6	29	8	43	10	31	2	43	26	40	54	120	9	18	28	55
+45 mins.	4	14	9	27	8	39	8	55	9	16	21	46	7	25	3	35
Total Volume	91	114	31	236	44	125	17	186	86	131	181	398	28	110	64	202
% App. Total	38.6	48.3	13.1		23.7	67.2	9.1		21.6	32.9	45.5		13.9	54.5	31.7	
PHF	.446	.731	.861	.663	.786	.801	.531	.845	.581	.668	.718	.668	.636	.625	.571	.871

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: Luna Road
 Weather: Clear

File Name : VICMLLUPM
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 Start Date : 1/18/2017
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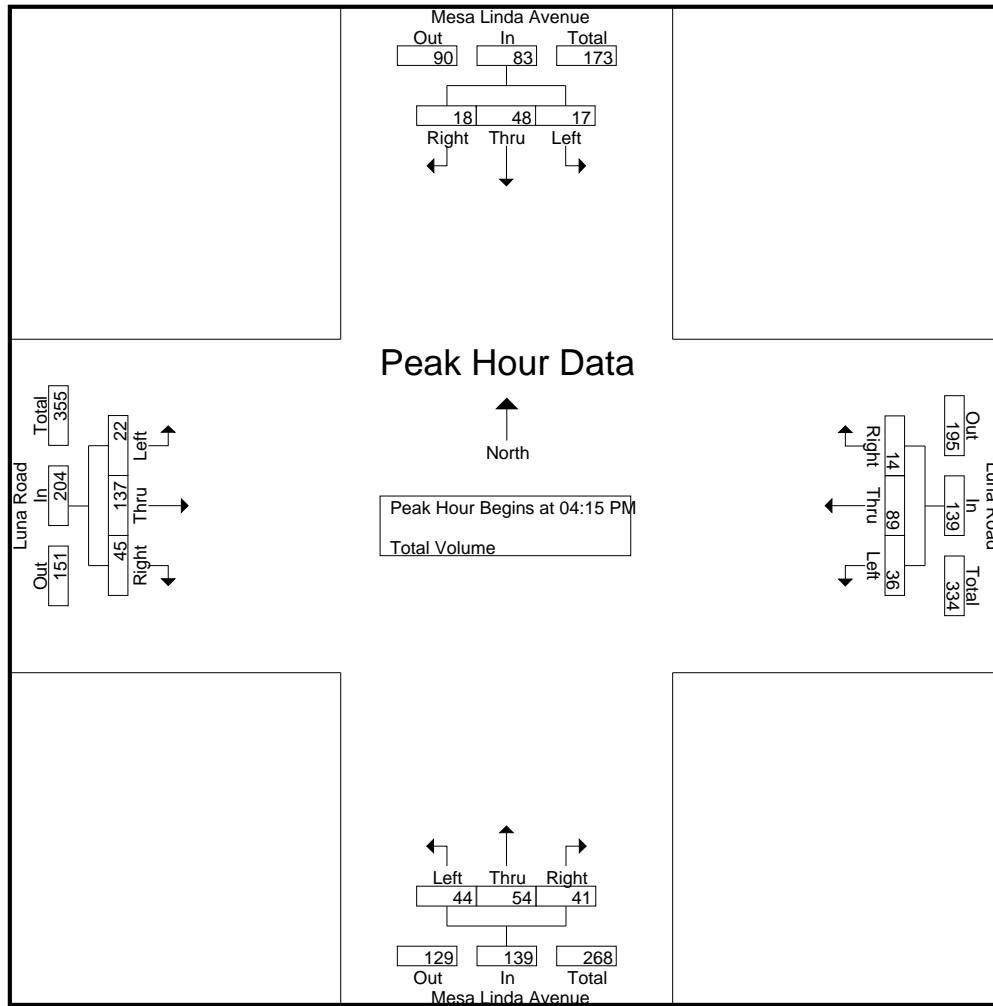
Groups Printed- Total Volume

Start Time	Mesa Linda Avenue Southbound				Luna Road Westbound				Mesa Linda Avenue Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	3	13	1	17	6	28	8	42	8	12	9	29	3	22	9	34	122
04:15 PM	10	10	5	25	7	25	3	35	10	7	11	28	3	41	6	50	138
04:30 PM	2	15	0	17	15	30	1	46	11	17	9	37	3	30	7	40	140
04:45 PM	2	14	5	21	8	16	5	29	14	10	5	29	5	39	21	65	144
Total	17	52	11	80	36	99	17	152	43	46	34	123	14	132	43	189	544
05:00 PM	3	9	8	20	6	18	5	29	9	20	16	45	11	27	11	49	143
05:15 PM	3	6	6	15	7	33	6	46	15	4	12	31	8	20	11	39	131
05:30 PM	2	18	0	20	12	26	5	43	14	13	5	32	4	33	9	46	141
05:45 PM	5	11	5	21	8	30	5	43	9	18	5	32	8	35	10	53	149
Total	13	44	19	76	33	107	21	161	47	55	38	140	31	115	41	187	564
Grand Total	30	96	30	156	69	206	38	313	90	101	72	263	45	247	84	376	1108
Apprch %	19.2	61.5	19.2		22	65.8	12.1		34.2	38.4	27.4		12	65.7	22.3		
Total %	2.7	8.7	2.7	14.1	6.2	18.6	3.4	28.2	8.1	9.1	6.5	23.7	4.1	22.3	7.6	33.9	

Start Time	Mesa Linda Avenue Southbound				Luna Road Westbound				Mesa Linda Avenue Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:15 PM																	
04:15 PM	10	10	5	25	7	25	3	35	10	7	11	28	3	41	6	50	138
04:30 PM	2	15	0	17	15	30	1	46	11	17	9	37	3	30	7	40	140
04:45 PM	2	14	5	21	8	16	5	29	14	10	5	29	5	39	21	65	144
05:00 PM	3	9	8	20	6	18	5	29	9	20	16	45	11	27	11	49	143
Total Volume	17	48	18	83	36	89	14	139	44	54	41	139	22	137	45	204	565
% App. Total	20.5	57.8	21.7		25.9	64	10.1		31.7	38.8	29.5		10.8	67.2	22.1		
PHF	.425	.800	.563	.830	.600	.742	.700	.755	.786	.675	.641	.772	.500	.835	.536	.785	.981

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: Luna Road
 Weather: Clear

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

	04:15 PM				05:00 PM				04:30 PM				04:15 PM			
+0 mins.	10	10	5	25	6	18	5	29	11	17	9	37	3	41	6	50
+15 mins.	2	15	0	17	7	33	6	46	14	10	5	29	3	30	7	40
+30 mins.	2	14	5	21	12	26	5	43	9	20	16	45	5	39	21	65
+45 mins.	3	9	8	20	8	30	5	43	15	4	12	31	11	27	11	49
Total Volume	17	48	18	83	33	107	21	161	49	51	42	142	22	137	45	204
% App. Total	20.5	57.8	21.7		20.5	66.5	13		34.5	35.9	29.6		10.8	67.2	22.1	
PHF	.425	.800	.563	.830	.688	.811	.875	.875	.817	.638	.656	.789	.500	.835	.536	.785

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: La Mesa Road
 Weather: Clear

File Name : VICMLLMAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

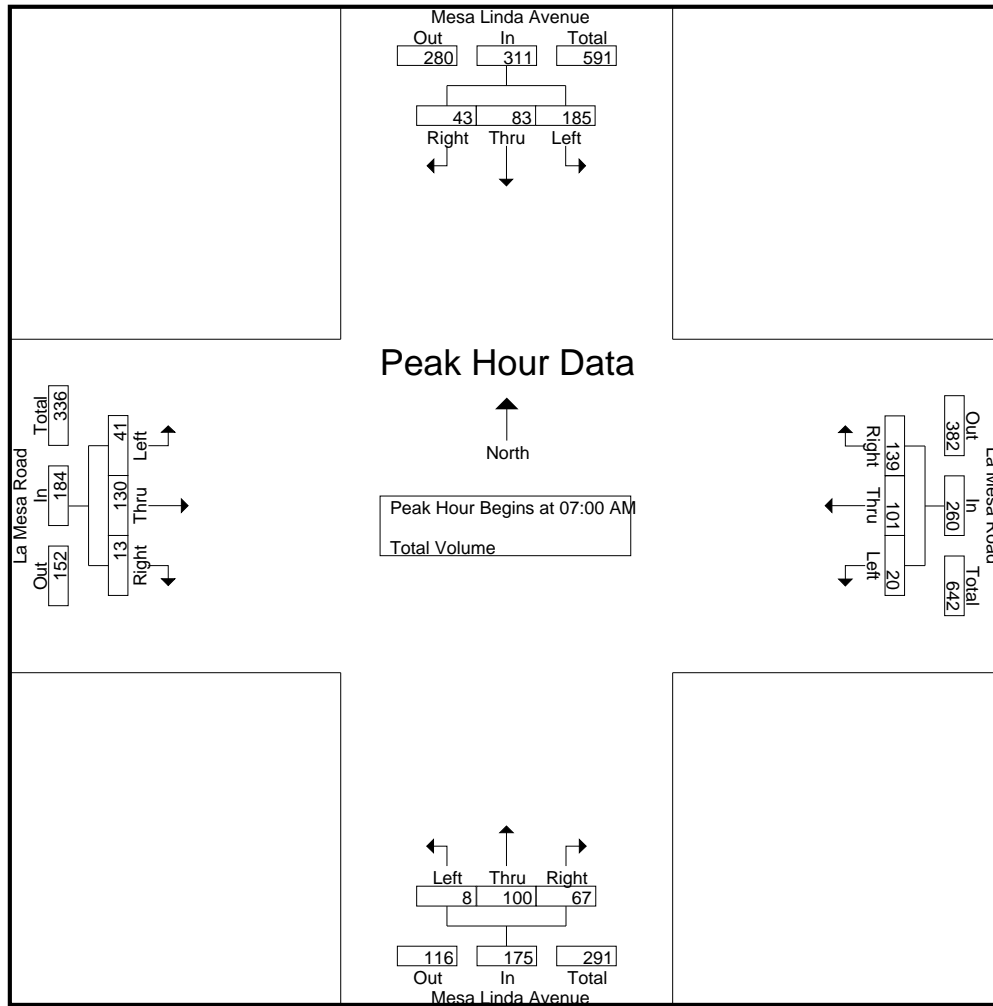
Groups Printed- Total Volume

Start Time	Mesa Linda Avenue Southbound				La Mesa Road Westbound				Mesa Linda Avenue Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	40	10	11	61	5	15	65	85	4	31	18	53	10	28	4	42	241
07:15 AM	67	40	13	120	4	27	37	68	2	43	23	68	11	36	7	54	310
07:30 AM	63	24	14	101	4	34	21	59	2	19	20	41	18	45	2	65	266
07:45 AM	15	9	5	29	7	25	16	48	0	7	6	13	2	21	0	23	113
Total	185	83	43	311	20	101	139	260	8	100	67	175	41	130	13	184	930
08:00 AM	30	4	3	37	4	22	15	41	4	7	6	17	1	21	0	22	117
08:15 AM	25	2	2	29	4	15	17	36	0	2	14	16	1	22	2	25	106
08:30 AM	31	6	0	37	3	19	18	40	1	3	13	17	3	22	0	25	119
08:45 AM	20	5	2	27	4	16	11	31	0	3	7	10	1	19	1	21	89
Total	106	17	7	130	15	72	61	148	5	15	40	60	6	84	3	93	431
Grand Total	291	100	50	441	35	173	200	408	13	115	107	235	47	214	16	277	1361
Apprch %	66	22.7	11.3		8.6	42.4	49		5.5	48.9	45.5		17	77.3	5.8		
Total %	21.4	7.3	3.7	32.4	2.6	12.7	14.7	30	1	8.4	7.9	17.3	3.5	15.7	1.2	20.4	

Start Time	Mesa Linda Avenue Southbound				La Mesa Road Westbound				Mesa Linda Avenue Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	40	10	11	61	5	15	65	85	4	31	18	53	10	28	4	42	241
07:15 AM	67	40	13	120	4	27	37	68	2	43	23	68	11	36	7	54	310
07:30 AM	63	24	14	101	4	34	21	59	2	19	20	41	18	45	2	65	266
07:45 AM	15	9	5	29	7	25	16	48	0	7	6	13	2	21	0	23	113
Total Volume	185	83	43	311	20	101	139	260	8	100	67	175	41	130	13	184	930
% App. Total	59.5	26.7	13.8		7.7	38.8	53.5		4.6	57.1	38.3		22.3	70.7	7.1		
PHF	.690	.519	.768	.648	.714	.743	.535	.765	.500	.581	.728	.643	.569	.722	.464	.708	.750

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: La Mesa Road
 Weather: Clear

File Name : VICMLLMAM
 Site Code : 99917016
 Start Date : 1/18/2017
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	40	10	11	61	5	15	65	85	4	31	18	53	10	28	4	42
+15 mins.	67	40	13	120	4	27	37	68	2	43	23	68	11	36	7	54
+30 mins.	63	24	14	101	4	34	21	59	2	19	20	41	18	45	2	65
+45 mins.	15	9	5	29	7	25	16	48	0	7	6	13	2	21	0	23
Total Volume	185	83	43	311	20	101	139	260	8	100	67	175	41	130	13	184
% App. Total	59.5	26.7	13.8		7.7	38.8	53.5		4.6	57.1	38.3		22.3	70.7	7.1	
PHF	.690	.519	.768	.648	.714	.743	.535	.765	.500	.581	.728	.643	.569	.722	.464	.708

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: La Mesa Road
 Weather: Clear

File Name : VICMLLMPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

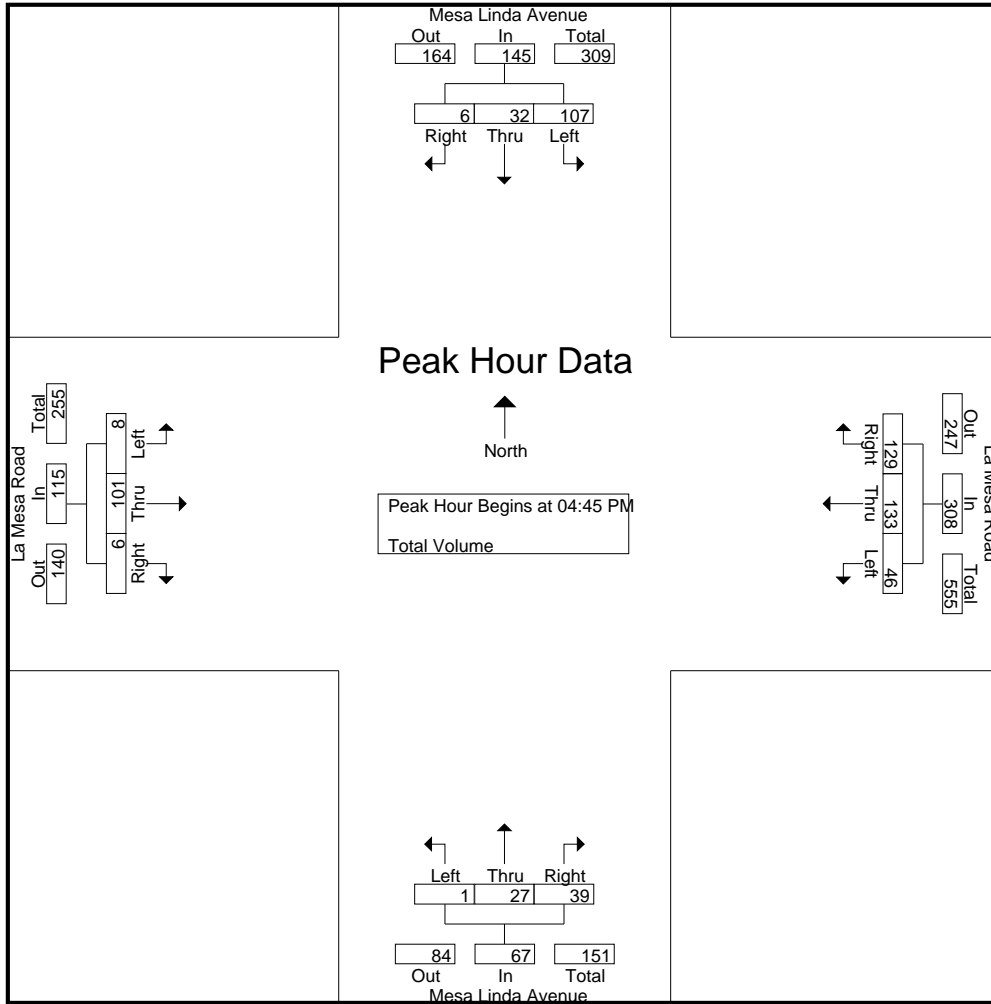
Groups Printed- Total Volume

Start Time	Mesa Linda Avenue Southbound				La Mesa Road Westbound				Mesa Linda Avenue Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	24	7	6	37	9	34	26	69	0	7	3	10	0	26	0	26	142
04:15 PM	20	4	1	25	9	23	25	57	1	6	11	18	3	28	1	32	132
04:30 PM	29	9	2	40	10	36	28	74	0	4	5	9	2	29	1	32	155
04:45 PM	31	11	2	44	10	28	42	80	0	5	11	16	2	21	2	25	165
Total	104	31	11	146	38	121	121	280	1	22	30	53	7	104	4	115	594
05:00 PM	29	8	0	37	7	35	32	74	0	10	10	20	4	25	0	29	160
05:15 PM	23	8	1	32	15	36	23	74	1	6	6	13	2	22	3	27	146
05:30 PM	24	5	3	32	14	34	32	80	0	6	12	18	0	33	1	34	164
05:45 PM	21	4	0	25	8	33	36	77	0	5	5	10	2	23	0	25	137
Total	97	25	4	126	44	138	123	305	1	27	33	61	8	103	4	115	607
Grand Total	201	56	15	272	82	259	244	585	2	49	63	114	15	207	8	230	1201
Apprch %	73.9	20.6	5.5		14	44.3	41.7		1.8	43	55.3		6.5	90	3.5		
Total %	16.7	4.7	1.2	22.6	6.8	21.6	20.3	48.7	0.2	4.1	5.2	9.5	1.2	17.2	0.7	19.2	

Start Time	Mesa Linda Avenue Southbound				La Mesa Road Westbound				Mesa Linda Avenue Northbound				La Mesa Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	31	11	2	44	10	28	42	80	0	5	11	16	2	21	2	25	165
05:00 PM	29	8	0	37	7	35	32	74	0	10	10	20	4	25	0	29	160
05:15 PM	23	8	1	32	15	36	23	74	1	6	6	13	2	22	3	27	146
05:30 PM	24	5	3	32	14	34	32	80	0	6	12	18	0	33	1	34	164
Total Volume	107	32	6	145	46	133	129	308	1	27	39	67	8	101	6	115	635
% App. Total	73.8	22.1	4.1		14.9	43.2	41.9		1.5	40.3	58.2		7	87.8	5.2		
PHF	.863	.727	.500	.824	.767	.924	.768	.963	.250	.675	.813	.838	.500	.765	.500	.846	.962

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: La Mesa Road
 Weather: Clear

File Name : VICMLLMPM
 Site Code : 99917016
 Start Date : 1/18/2017
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:30 PM				04:45 PM				04:45 PM				04:15 PM			
+0 mins.	29	9	2	40	10	28	42	80	0	5	11	16	3	28	1	32
+15 mins.	31	11	2	44	7	35	32	74	0	10	10	20	2	29	1	32
+30 mins.	29	8	0	37	15	36	23	74	1	6	6	13	2	21	2	25
+45 mins.	23	8	1	32	14	34	32	80	0	6	12	18	4	25	0	29
Total Volume	112	36	5	153	46	133	129	308	1	27	39	67	11	103	4	118
% App. Total	73.2	23.5	3.3		14.9	43.2	41.9		1.5	40.3	58.2		9.3	87.3	3.4	
PHF	.903	.818	.625	.869	.767	.924	.768	.963	.250	.675	.813	.838	.688	.888	.500	.922

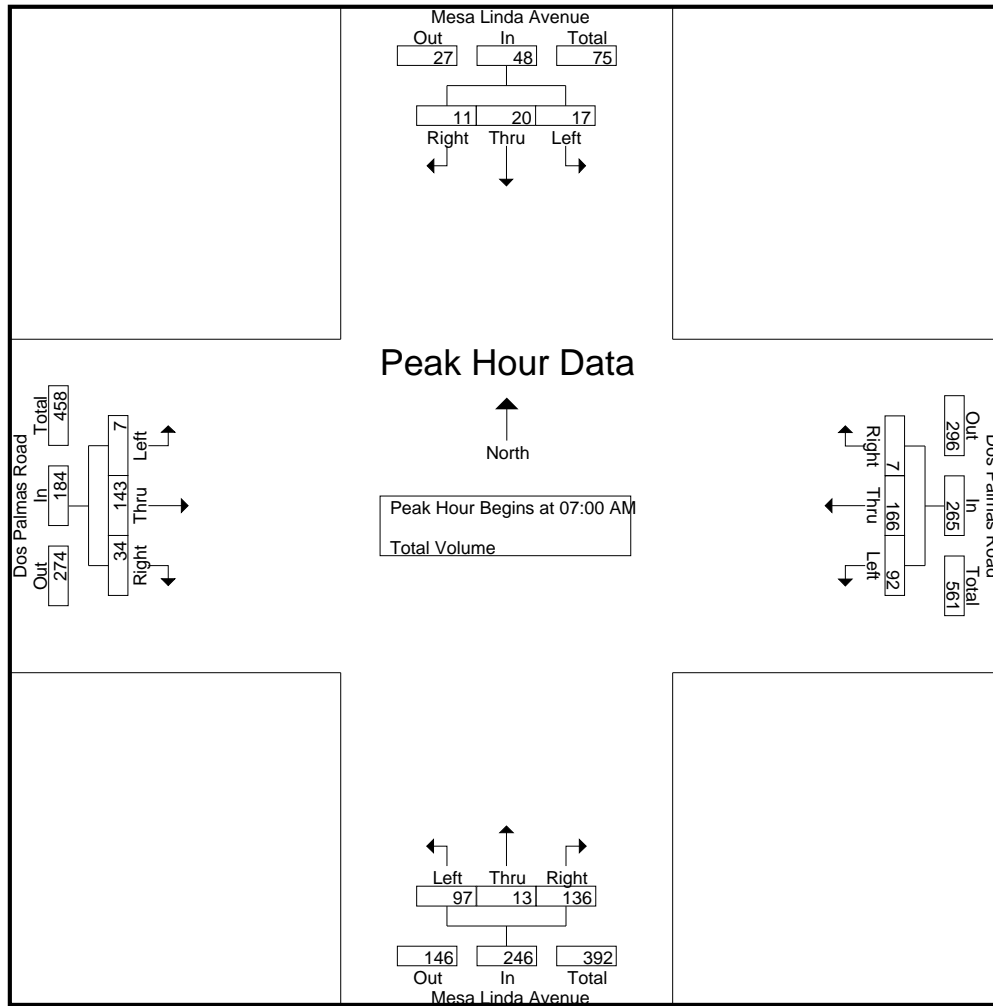
City of Victorville
 N/S: Mesa Linda Avenue
 E/W: Dos Palmas Road
 Weather: Clear

File Name : VICMLDOAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Mesa Linda Avenue Southbound				Dos Palmas Road Westbound				Mesa Linda Avenue Northbound				Dos Palmas Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	5	11	4	20	26	32	1	59	27	2	32	61	0	29	22	51	191
07:15 AM	1	3	3	7	25	45	4	74	40	3	45	88	2	52	4	58	227
07:30 AM	3	4	1	8	27	54	1	82	19	7	35	61	1	36	4	41	192
07:45 AM	8	2	3	13	14	35	1	50	11	1	24	36	4	26	4	34	133
Total	17	20	11	48	92	166	7	265	97	13	136	246	7	143	34	184	743
08:00 AM	2	3	4	9	10	32	2	44	9	1	12	22	2	20	6	28	103
08:15 AM	3	2	3	8	8	21	1	30	5	2	5	12	2	13	5	20	70
08:30 AM	4	3	2	9	6	12	0	18	7	3	4	14	1	7	7	15	56
08:45 AM	1	0	4	5	5	10	0	15	6	1	6	13	1	8	2	11	44
Total	10	8	13	31	29	75	3	107	27	7	27	61	6	48	20	74	273
Grand Total	27	28	24	79	121	241	10	372	124	20	163	307	13	191	54	258	1016
Apprch %	34.2	35.4	30.4		32.5	64.8	2.7		40.4	6.5	53.1		5	74	20.9		
Total %	2.7	2.8	2.4	7.8	11.9	23.7	1	36.6	12.2	2	16	30.2	1.3	18.8	5.3	25.4	

Start Time	Mesa Linda Avenue Southbound				Dos Palmas Road Westbound				Mesa Linda Avenue Northbound				Dos Palmas Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	5	11	4	20	26	32	1	59	27	2	32	61	0	29	22	51	191
07:15 AM	1	3	3	7	25	45	4	74	40	3	45	88	2	52	4	58	227
07:30 AM	3	4	1	8	27	54	1	82	19	7	35	61	1	36	4	41	192
07:45 AM	8	2	3	13	14	35	1	50	11	1	24	36	4	26	4	34	133
Total Volume	17	20	11	48	92	166	7	265	97	13	136	246	7	143	34	184	743
% App. Total	35.4	41.7	22.9		34.7	62.6	2.6		39.4	5.3	55.3		3.8	77.7	18.5		
PHF	.531	.455	.688	.600	.852	.769	.438	.808	.606	.464	.756	.699	.438	.688	.386	.793	.818



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

	07:00 AM				07:00 AM				07:00 AM				07:00 AM			
+0 mins.	5	11	4	20	26	32	1	59	27	2	32	61	0	29	22	51
+15 mins.	1	3	3	7	25	45	4	74	40	3	45	88	2	52	4	58
+30 mins.	3	4	1	8	27	54	1	82	19	7	35	61	1	36	4	41
+45 mins.	8	2	3	13	14	35	1	50	11	1	24	36	4	26	4	34
Total Volume	17	20	11	48	92	166	7	265	97	13	136	246	7	143	34	184
% App. Total	35.4	41.7	22.9		34.7	62.6	2.6		39.4	5.3	55.3		3.8	77.7	18.5	
PHF	.531	.455	.688	.600	.852	.769	.438	.808	.606	.464	.756	.699	.438	.688	.386	.793

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: Dos Palmas Road
 Weather: Clear

File Name : VICMLDOPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

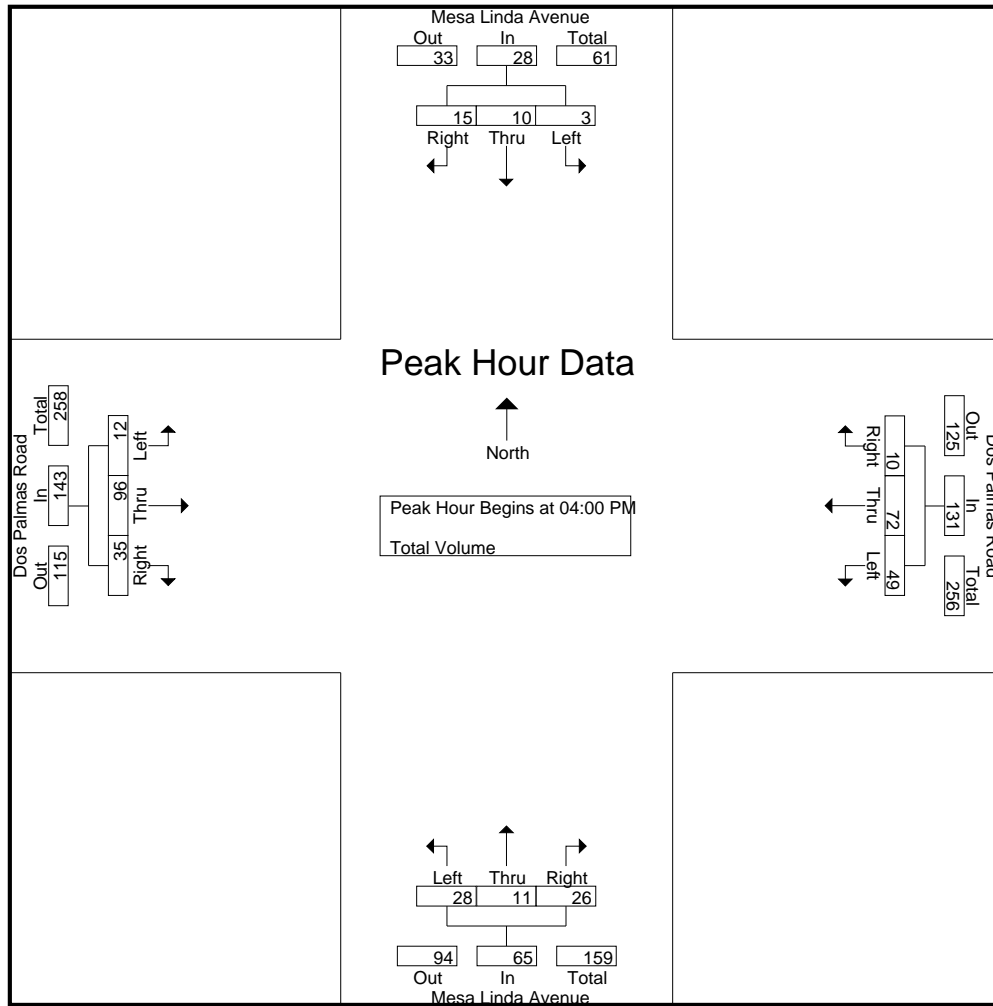
Groups Printed- Total Volume

Start Time	Mesa Linda Avenue Southbound				Dos Palmas Road Westbound				Mesa Linda Avenue Northbound				Dos Palmas Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	2	3	5	15	18	3	36	7	3	5	15	4	23	8	35	91
04:15 PM	1	2	4	7	7	21	0	28	11	1	8	20	2	24	10	36	91
04:30 PM	2	4	3	9	14	17	4	35	4	3	8	15	2	27	9	38	97
04:45 PM	0	2	5	7	13	16	3	32	6	4	5	15	4	22	8	34	88
Total	3	10	15	28	49	72	10	131	28	11	26	65	12	96	35	143	367
05:00 PM	2	4	2	8	10	17	4	31	11	3	7	21	5	17	3	25	85
05:15 PM	0	1	4	5	11	18	4	33	10	1	4	15	4	13	8	25	78
05:30 PM	1	1	2	4	11	25	3	39	4	2	12	18	4	14	9	27	88
05:45 PM	1	2	4	7	7	21	3	31	7	4	7	18	3	21	7	31	87
Total	4	8	12	24	39	81	14	134	32	10	30	72	16	65	27	108	338
Grand Total	7	18	27	52	88	153	24	265	60	21	56	137	28	161	62	251	705
Apprch %	13.5	34.6	51.9		33.2	57.7	9.1		43.8	15.3	40.9		11.2	64.1	24.7		
Total %	1	2.6	3.8	7.4	12.5	21.7	3.4	37.6	8.5	3	7.9	19.4	4	22.8	8.8	35.6	

Start Time	Mesa Linda Avenue Southbound				Dos Palmas Road Westbound				Mesa Linda Avenue Northbound				Dos Palmas Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	2	3	5	15	18	3	36	7	3	5	15	4	23	8	35	91
04:15 PM	1	2	4	7	7	21	0	28	11	1	8	20	2	24	10	36	91
04:30 PM	2	4	3	9	14	17	4	35	4	3	8	15	2	27	9	38	97
04:45 PM	0	2	5	7	13	16	3	32	6	4	5	15	4	22	8	34	88
Total Volume	3	10	15	28	49	72	10	131	28	11	26	65	12	96	35	143	367
% App. Total	10.7	35.7	53.6		37.4	55	7.6		43.1	16.9	40		8.4	67.1	24.5		
PHF	.375	.625	.750	.778	.817	.857	.625	.910	.636	.688	.813	.813	.750	.889	.875	.941	.946

City of Victorville
 N/S: Mesa Linda Avenue
 E/W: Dos Palmas Road
 Weather: Clear

File Name : VICMLDOPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	04:15 PM				04:45 PM				05:00 PM				04:00 PM			
+0 mins.	1	2	4	7	13	16	3	32	11	3	7	21	4	23	8	35
+15 mins.	2	4	3	9	10	17	4	31	10	1	4	15	2	24	10	36
+30 mins.	0	2	5	7	11	18	4	33	4	2	12	18	2	27	9	38
+45 mins.	2	4	2	8	11	25	3	39	7	4	7	18	4	22	8	34
Total Volume	5	12	14	31	45	76	14	135	32	10	30	72	12	96	35	143
% App. Total	16.1	38.7	45.2		33.3	56.3	10.4		44.4	13.9	41.7		8.4	67.1	24.5	
PHF	.625	.750	.700	.861	.865	.760	.875	.865	.727	.625	.625	.857	.750	.889	.875	.941

City of Victorville
 N/S: El Evado Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICEL18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

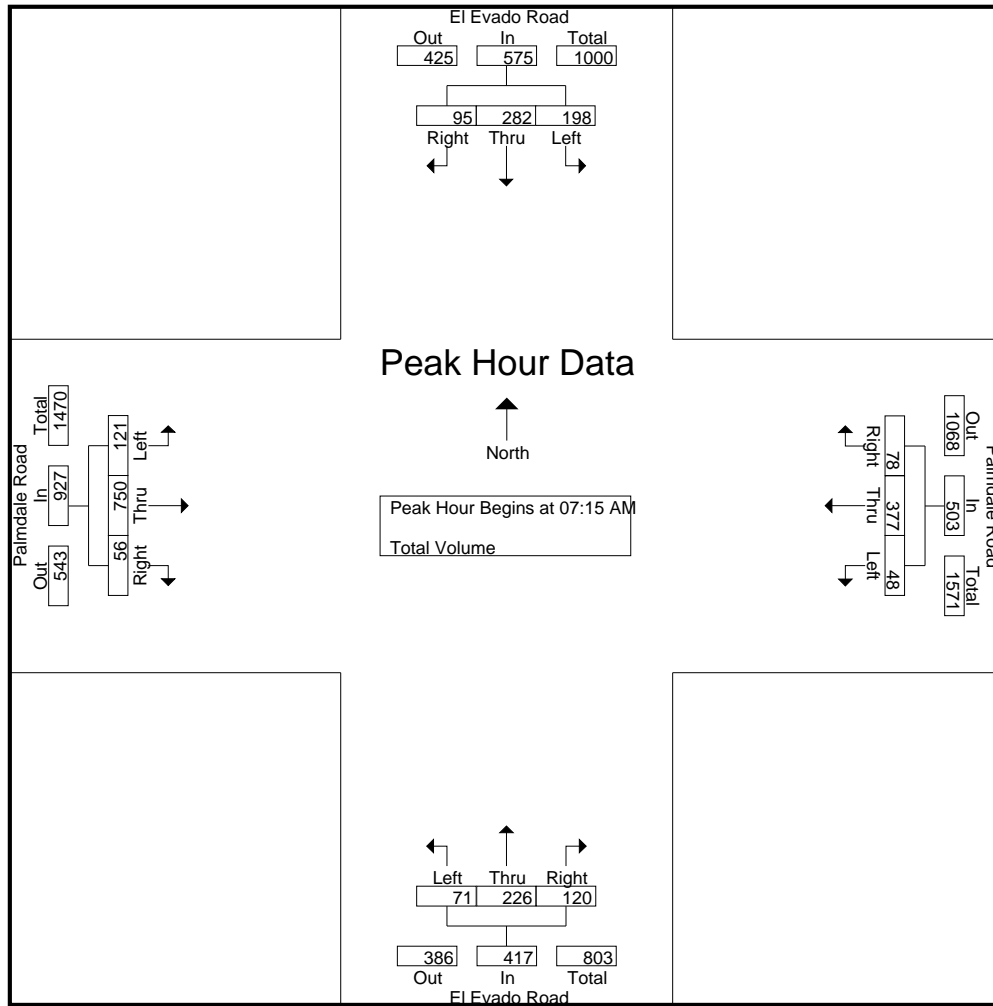
Groups Printed- Total Volume

Start Time	El Evado Road Southbound				Palmdale Road Westbound				El Evado Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	28	43	27	98	3	88	24	115	11	48	16	75	21	149	8	178	466
07:15 AM	48	56	20	124	14	99	10	123	14	61	30	105	35	162	8	205	557
07:30 AM	70	88	32	190	10	100	21	131	31	60	32	123	28	180	13	221	665
07:45 AM	41	72	22	135	14	91	20	125	15	50	30	95	32	241	19	292	647
Total	187	259	101	547	41	378	75	494	71	219	108	398	116	732	48	896	2335
08:00 AM	39	66	21	126	10	87	27	124	11	55	28	94	26	167	16	209	553
08:15 AM	50	46	17	113	8	86	10	104	12	60	24	96	15	205	12	232	545
08:30 AM	37	53	11	101	7	73	15	95	19	64	17	100	16	173	14	203	499
08:45 AM	37	54	15	106	16	96	20	132	14	55	17	86	21	171	13	205	529
Total	163	219	64	446	41	342	72	455	56	234	86	376	78	716	55	849	2126
Grand Total	350	478	165	993	82	720	147	949	127	453	194	774	194	1448	103	1745	4461
Apprch %	35.2	48.1	16.6		8.6	75.9	15.5		16.4	58.5	25.1		11.1	83	5.9		
Total %	7.8	10.7	3.7	22.3	1.8	16.1	3.3	21.3	2.8	10.2	4.3	17.4	4.3	32.5	2.3	39.1	

Start Time	El Evado Road Southbound				Palmdale Road Westbound				El Evado Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	48	56	20	124	14	99	10	123	14	61	30	105	35	162	8	205	557
07:30 AM	70	88	32	190	10	100	21	131	31	60	32	123	28	180	13	221	665
07:45 AM	41	72	22	135	14	91	20	125	15	50	30	95	32	241	19	292	647
08:00 AM	39	66	21	126	10	87	27	124	11	55	28	94	26	167	16	209	553
Total Volume	198	282	95	575	48	377	78	503	71	226	120	417	121	750	56	927	2422
% App. Total	34.4	49	16.5		9.5	75	15.5		17	54.2	28.8		13.1	80.9	6		
PHF	.707	.801	.742	.757	.857	.943	.722	.960	.573	.926	.938	.848	.864	.778	.737	.794	.911

City of Victorville
 N/S: El Evado Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICEL18AM
 Site Code : 99917016
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:30 AM			
+0 mins.	48	56	20	124	14	99	10	123	14	61	30	105	28	180	13	221
+15 mins.	70	88	32	190	10	100	21	131	31	60	32	123	32	241	19	292
+30 mins.	41	72	22	135	14	91	20	125	15	50	30	95	26	167	16	209
+45 mins.	39	66	21	126	10	87	27	124	11	55	28	94	15	205	12	232
Total Volume	198	282	95	575	48	377	78	503	71	226	120	417	101	793	60	954
% App. Total	34.4	49	16.5		9.5	75	15.5		17	54.2	28.8		10.6	83.1	6.3	
PHF	.707	.801	.742	.757	.857	.943	.722	.960	.573	.926	.938	.848	.789	.823	.789	.817

City of Victorville
 N/S: El Evado Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICEL18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

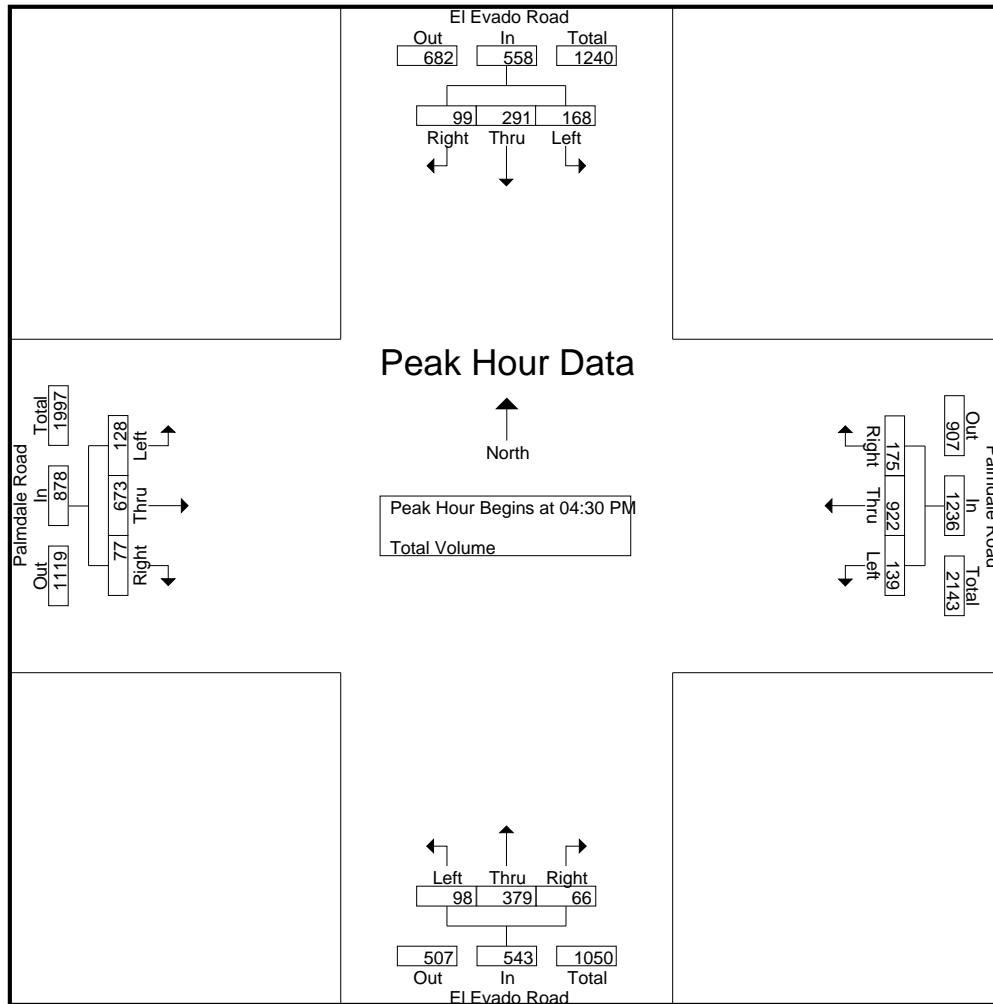
Groups Printed- Total Volume

Start Time	El Evado Road Southbound				Palmdale Road Westbound				El Evado Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	38	78	41	157	27	170	35	232	18	92	17	127	28	155	18	201	717
04:15 PM	32	72	20	124	30	168	33	231	28	70	20	118	39	191	25	255	728
04:30 PM	34	85	21	140	41	206	53	300	22	97	17	136	33	194	17	244	820
04:45 PM	42	72	28	142	31	203	40	274	25	88	18	131	42	182	21	245	792
Total	146	307	110	563	129	747	161	1037	93	347	72	512	142	722	81	945	3057
05:00 PM	58	72	25	155	30	251	35	316	23	107	14	144	27	137	23	187	802
05:15 PM	34	62	25	121	37	262	47	346	28	87	17	132	26	160	16	202	801
05:30 PM	32	76	29	137	22	190	39	251	23	79	15	117	33	153	16	202	707
05:45 PM	38	79	24	141	36	164	43	243	35	100	22	157	31	109	14	154	695
Total	162	289	103	554	125	867	164	1156	109	373	68	550	117	559	69	745	3005
Grand Total	308	596	213	1117	254	1614	325	2193	202	720	140	1062	259	1281	150	1690	6062
Apprch %	27.6	53.4	19.1		11.6	73.6	14.8		19	67.8	13.2		15.3	75.8	8.9		
Total %	5.1	9.8	3.5	18.4	4.2	26.6	5.4	36.2	3.3	11.9	2.3	17.5	4.3	21.1	2.5	27.9	

Start Time	El Evado Road Southbound				Palmdale Road Westbound				El Evado Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	34	85	21	140	41	206	53	300	22	97	17	136	33	194	17	244	820
04:45 PM	42	72	28	142	31	203	40	274	25	88	18	131	42	182	21	245	792
05:00 PM	58	72	25	155	30	251	35	316	23	107	14	144	27	137	23	187	802
05:15 PM	34	62	25	121	37	262	47	346	28	87	17	132	26	160	16	202	801
Total Volume	168	291	99	558	139	922	175	1236	98	379	66	543	128	673	77	878	3215
% App. Total	30.1	52.2	17.7		11.2	74.6	14.2		18	69.8	12.2		14.6	76.7	8.8		
PHF	.724	.856	.884	.900	.848	.880	.825	.893	.875	.886	.917	.943	.762	.867	.837	.896	.980

City of Victorville
 N/S: El Evado Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICEL18PM
 Site Code : 99917016
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM				04:30 PM				05:00 PM				04:00 PM			
+0 mins.	38	78	41	157	41	206	53	300	23	107	14	144	28	155	18	201
+15 mins.	32	72	20	124	31	203	40	274	28	87	17	132	39	191	25	255
+30 mins.	34	85	21	140	30	251	35	316	23	79	15	117	33	194	17	244
+45 mins.	42	72	28	142	37	262	47	346	35	100	22	157	42	182	21	245
Total Volume	146	307	110	563	139	922	175	1236	109	373	68	550	142	722	81	945
% App. Total	25.9	54.5	19.5		11.2	74.6	14.2		19.8	67.8	12.4		15	76.4	8.6	
PHF	.869	.903	.671	.896	.848	.880	.825	.893	.779	.871	.773	.876	.845	.930	.810	.926

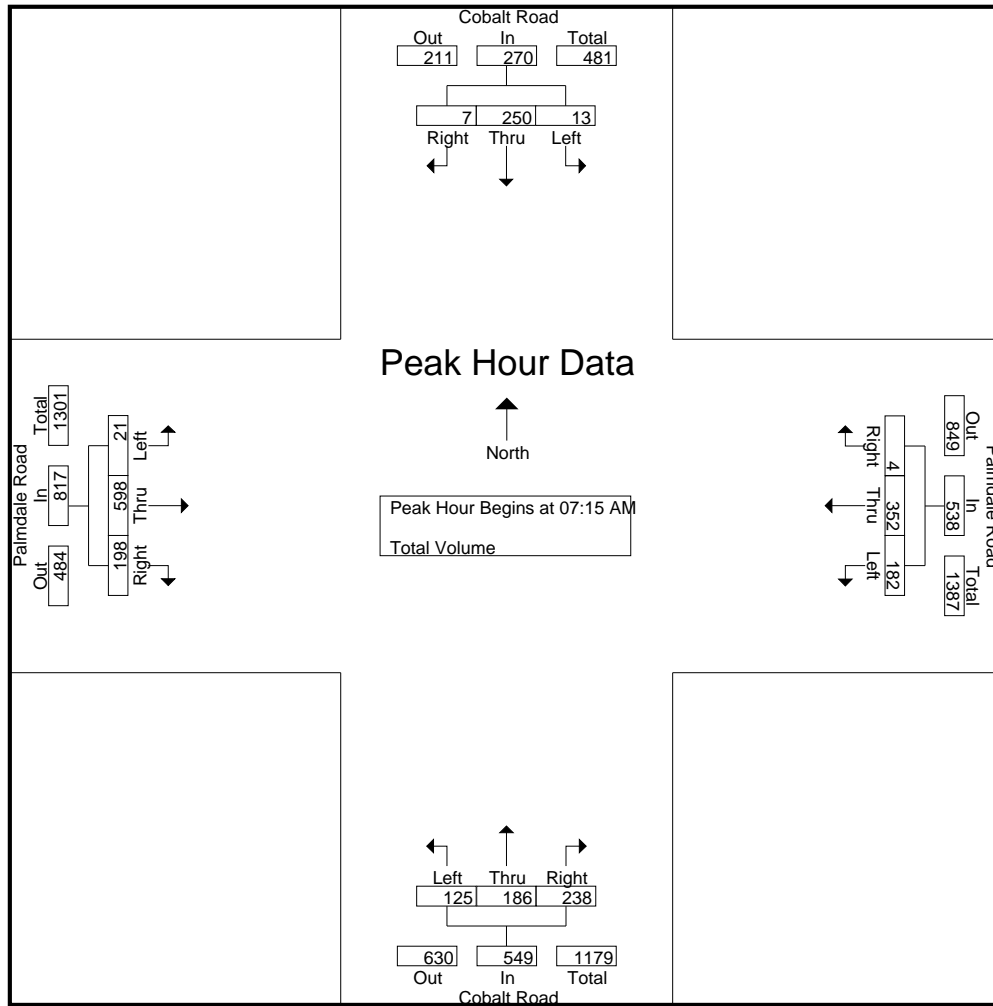
City of Victorville
 N/S: Cobalt Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICCO18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Cobalt Road Southbound				Palmdale Road Westbound				Cobalt Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	3	54	1	58	55	82	0	137	6	19	34	59	3	107	16	126	380
07:15 AM	3	90	0	93	55	59	0	114	13	40	57	110	7	116	21	144	461
07:30 AM	7	70	2	79	59	91	1	151	35	52	61	148	6	183	81	270	648
07:45 AM	2	69	4	75	47	110	2	159	37	54	75	166	5	150	68	223	623
Total	15	283	7	305	216	342	3	561	91	165	227	483	21	556	186	763	2112
08:00 AM	1	21	1	23	21	92	1	114	40	40	45	125	3	149	28	180	442
08:15 AM	1	14	6	21	11	121	1	133	10	8	27	45	2	190	13	205	404
08:30 AM	2	8	2	12	11	85	2	98	9	8	24	41	4	153	9	166	317
08:45 AM	2	7	3	12	16	103	1	120	3	4	22	29	4	149	10	163	324
Total	6	50	12	68	59	401	5	465	62	60	118	240	13	641	60	714	1487
Grand Total	21	333	19	373	275	743	8	1026	153	225	345	723	34	1197	246	1477	3599
Apprch %	5.6	89.3	5.1		26.8	72.4	0.8		21.2	31.1	47.7		2.3	81	16.7		
Total %	0.6	9.3	0.5	10.4	7.6	20.6	0.2	28.5	4.3	6.3	9.6	20.1	0.9	33.3	6.8	41	

Start Time	Cobalt Road Southbound				Palmdale Road Westbound				Cobalt Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	90	0	93	55	59	0	114	13	40	57	110	7	116	21	144	461
07:30 AM	7	70	2	79	59	91	1	151	35	52	61	148	6	183	81	270	648
07:45 AM	2	69	4	75	47	110	2	159	37	54	75	166	5	150	68	223	623
08:00 AM	1	21	1	23	21	92	1	114	40	40	45	125	3	149	28	180	442
Total Volume	13	250	7	270	182	352	4	538	125	186	238	549	21	598	198	817	2174
% App. Total	4.8	92.6	2.6		33.8	65.4	0.7		22.8	33.9	43.4		2.6	73.2	24.2		
PHF	.464	.694	.438	.726	.771	.800	.500	.846	.781	.861	.793	.827	.750	.817	.611	.756	.839



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

	07:00 AM				07:15 AM				07:30 AM							
+0 mins.	3	54	1	58	55	82	0	137	13	40	57	110	6	183	81	270
+15 mins.	3	90	0	93	55	59	0	114	35	52	61	148	5	150	68	223
+30 mins.	7	70	2	79	59	91	1	151	37	54	75	166	3	149	28	180
+45 mins.	2	69	4	75	47	110	2	159	40	40	45	125	2	190	13	205
Total Volume	15	283	7	305	216	342	3	561	125	186	238	549	16	672	190	878
% App. Total	4.9	92.8	2.3		38.5	61	0.5		22.8	33.9	43.4		1.8	76.5	21.6	
PHF	.536	.786	.438	.820	.915	.777	.375	.882	.781	.861	.793	.827	.667	.884	.586	.813

City of Victorville
 N/S: Cobalt Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICCO18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

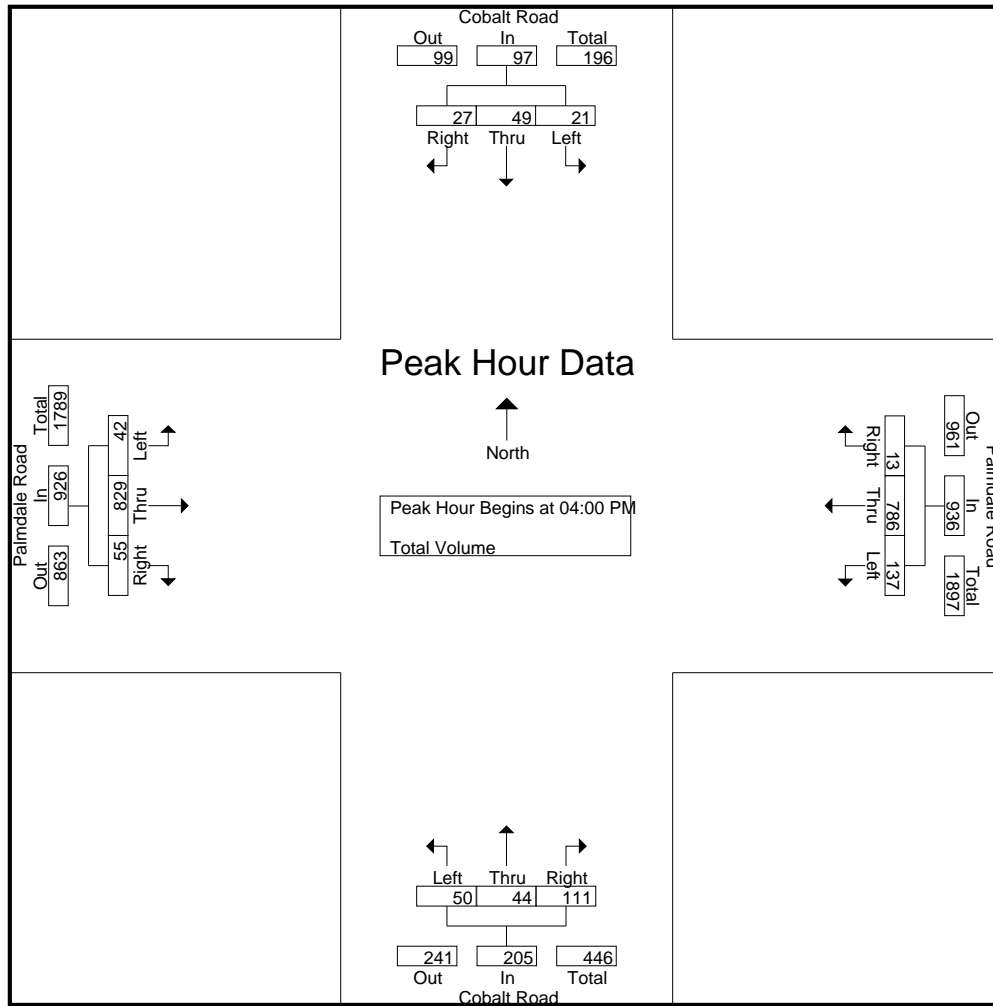
Groups Printed- Total Volume

Start Time	Cobalt Road Southbound				Palmdale Road Westbound				Cobalt Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	5	9	7	21	36	224	4	264	12	9	24	45	11	187	12	210	540
04:15 PM	10	16	4	30	27	179	4	210	14	10	31	55	9	205	12	226	521
04:30 PM	4	11	5	20	27	181	3	211	13	14	29	56	13	230	16	259	546
04:45 PM	2	13	11	26	47	202	2	251	11	11	27	49	9	207	15	231	557
Total	21	49	27	97	137	786	13	936	50	44	111	205	42	829	55	926	2164
05:00 PM	3	13	8	24	30	209	4	243	10	15	25	50	4	144	9	157	474
05:15 PM	1	14	8	23	38	276	4	318	11	9	20	40	12	161	18	191	572
05:30 PM	4	13	16	33	46	200	7	253	12	13	25	50	7	155	13	175	511
05:45 PM	2	15	7	24	44	195	5	244	8	12	25	45	11	161	14	186	499
Total	10	55	39	104	158	880	20	1058	41	49	95	185	34	621	54	709	2056
Grand Total	31	104	66	201	295	1666	33	1994	91	93	206	390	76	1450	109	1635	4220
Apprch %	15.4	51.7	32.8		14.8	83.6	1.7		23.3	23.8	52.8		4.6	88.7	6.7		
Total %	0.7	2.5	1.6	4.8	7	39.5	0.8	47.3	2.2	2.2	4.9	9.2	1.8	34.4	2.6	38.7	

Start Time	Cobalt Road Southbound				Palmdale Road Westbound				Cobalt Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	5	9	7	21	36	224	4	264	12	9	24	45	11	187	12	210	540
04:15 PM	10	16	4	30	27	179	4	210	14	10	31	55	9	205	12	226	521
04:30 PM	4	11	5	20	27	181	3	211	13	14	29	56	13	230	16	259	546
04:45 PM	2	13	11	26	47	202	2	251	11	11	27	49	9	207	15	231	557
Total Volume	21	49	27	97	137	786	13	936	50	44	111	205	42	829	55	926	2164
% App. Total	21.6	50.5	27.8		14.6	84	1.4		24.4	21.5	54.1		4.5	89.5	5.9		
PHF	.525	.766	.614	.808	.729	.877	.813	.886	.893	.786	.895	.915	.808	.901	.859	.894	.971

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

Peak Hour for Entire Intersection Begins at 04:00 PM



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

	04:45 PM				04:15 PM				04:00 PM							
+0 mins.	2	13	11	26	47	202	2	251	14	10	31	55	11	187	12	210
+15 mins.	3	13	8	24	30	209	4	243	13	14	29	56	9	205	12	226
+30 mins.	1	14	8	23	38	276	4	318	11	11	27	49	13	230	16	259
+45 mins.	4	13	16	33	46	200	7	253	10	15	25	50	9	207	15	231
Total Volume	10	53	43	106	161	887	17	1065	48	50	112	210	42	829	55	926
% App. Total	9.4	50	40.6		15.1	83.3	1.6		22.9	23.8	53.3		4.5	89.5	5.9	
PHF	.625	.946	.672	.803	.856	.803	.607	.837	.857	.833	.903	.938	.808	.901	.859	.894

City of Victorville
 N/S: Cobalt Road
 E/W: Luna Road
 Weather: Clear

File Name : VICCOLUAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

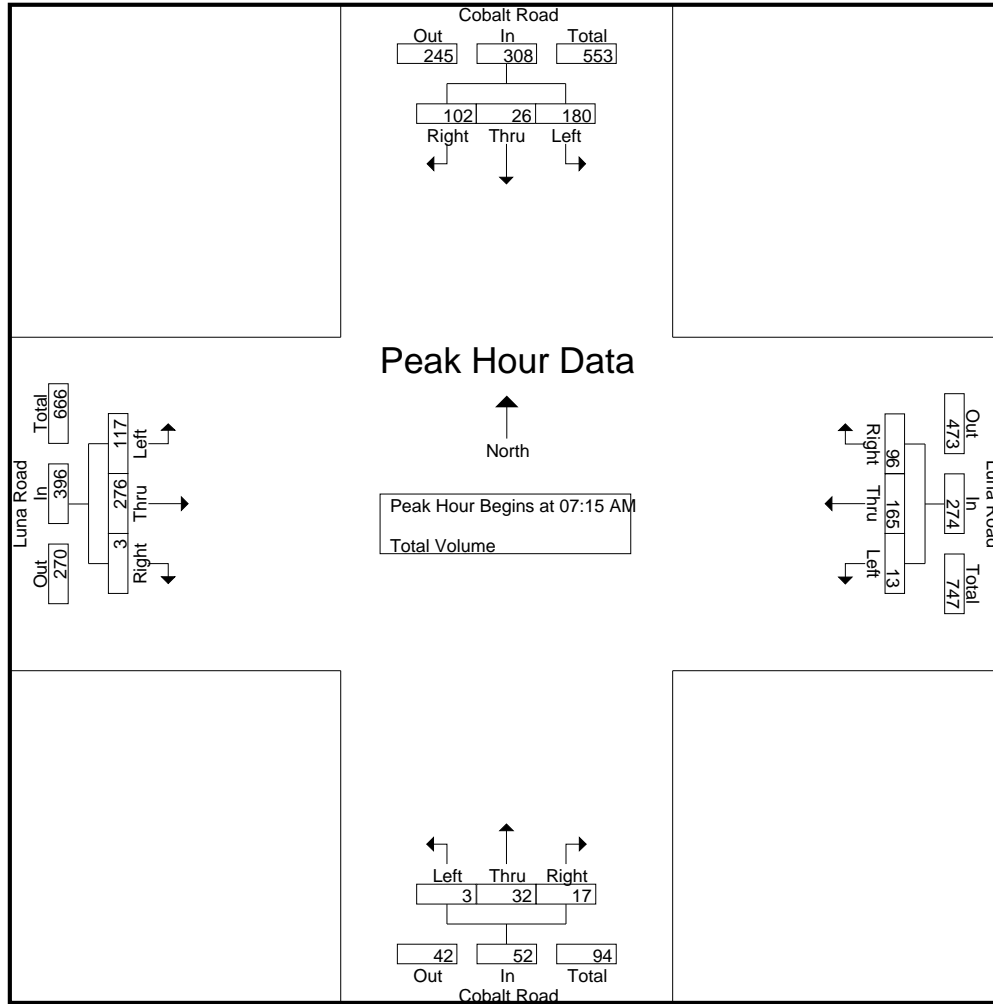
Groups Printed- Total Volume

Start Time	Cobalt Road Southbound				Luna Road Westbound				Cobalt Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	15	10	8	33	18	47	1	66	16	7	14	37	23	53	12	88	224
07:15 AM	30	10	25	65	8	48	20	76	0	7	5	12	38	65	1	104	257
07:30 AM	57	5	25	87	1	53	32	86	0	14	7	21	36	62	0	98	292
07:45 AM	49	5	31	85	3	25	25	53	1	8	4	13	25	65	0	90	241
Total	151	30	89	270	30	173	78	281	17	36	30	83	122	245	13	380	1014
08:00 AM	44	6	21	71	1	39	19	59	2	3	1	6	18	84	2	104	240
08:15 AM	22	4	7	33	1	57	23	81	0	1	6	7	10	40	0	50	171
08:30 AM	7	2	5	14	0	23	10	33	0	1	2	3	10	22	0	32	82
08:45 AM	8	0	4	12	1	9	8	18	0	0	2	2	4	31	0	35	67
Total	81	12	37	130	3	128	60	191	2	5	11	18	42	177	2	221	560
Grand Total	232	42	126	400	33	301	138	472	19	41	41	101	164	422	15	601	1574
Apprch %	58	10.5	31.5		7	63.8	29.2		18.8	40.6	40.6		27.3	70.2	2.5		
Total %	14.7	2.7	8	25.4	2.1	19.1	8.8	30	1.2	2.6	2.6	6.4	10.4	26.8	1	38.2	

Start Time	Cobalt Road Southbound				Luna Road Westbound				Cobalt Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	30	10	25	65	8	48	20	76	0	7	5	12	38	65	1	104	257
07:30 AM	57	5	25	87	1	53	32	86	0	14	7	21	36	62	0	98	292
07:45 AM	49	5	31	85	3	25	25	53	1	8	4	13	25	65	0	90	241
08:00 AM	44	6	21	71	1	39	19	59	2	3	1	6	18	84	2	104	240
Total Volume	180	26	102	308	13	165	96	274	3	32	17	52	117	276	3	396	1030
% App. Total	58.4	8.4	33.1		4.7	60.2	35		5.8	61.5	32.7		29.5	69.7	0.8		
PHF	.789	.650	.823	.885	.406	.778	.750	.797	.375	.571	.607	.619	.770	.821	.375	.952	.882

City of Victorville
 N/S: Cobalt Road
 E/W: Luna Road
 Weather: Clear

File Name : VICCOLUAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	07:15 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	30	10	25	65	18	47	1	66	16	7	14	37	38	65	1	104
+15 mins.	57	5	25	87	8	48	20	76	0	7	5	12	36	62	0	98
+30 mins.	49	5	31	85	1	53	32	86	0	14	7	21	25	65	0	90
+45 mins.	44	6	21	71	3	25	25	53	1	8	4	13	18	84	2	104
Total Volume	180	26	102	308	30	173	78	281	17	36	30	83	117	276	3	396
% App. Total	58.4	8.4	33.1		10.7	61.6	27.8		20.5	43.4	36.1		29.5	69.7	0.8	
PHF	.789	.650	.823	.885	.417	.816	.609	.817	.266	.643	.536	.561	.770	.821	.375	.952

City of Victorville
 N/S: Cobalt Road
 E/W: Luna Road
 Weather: Clear

File Name : VICCOLUPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

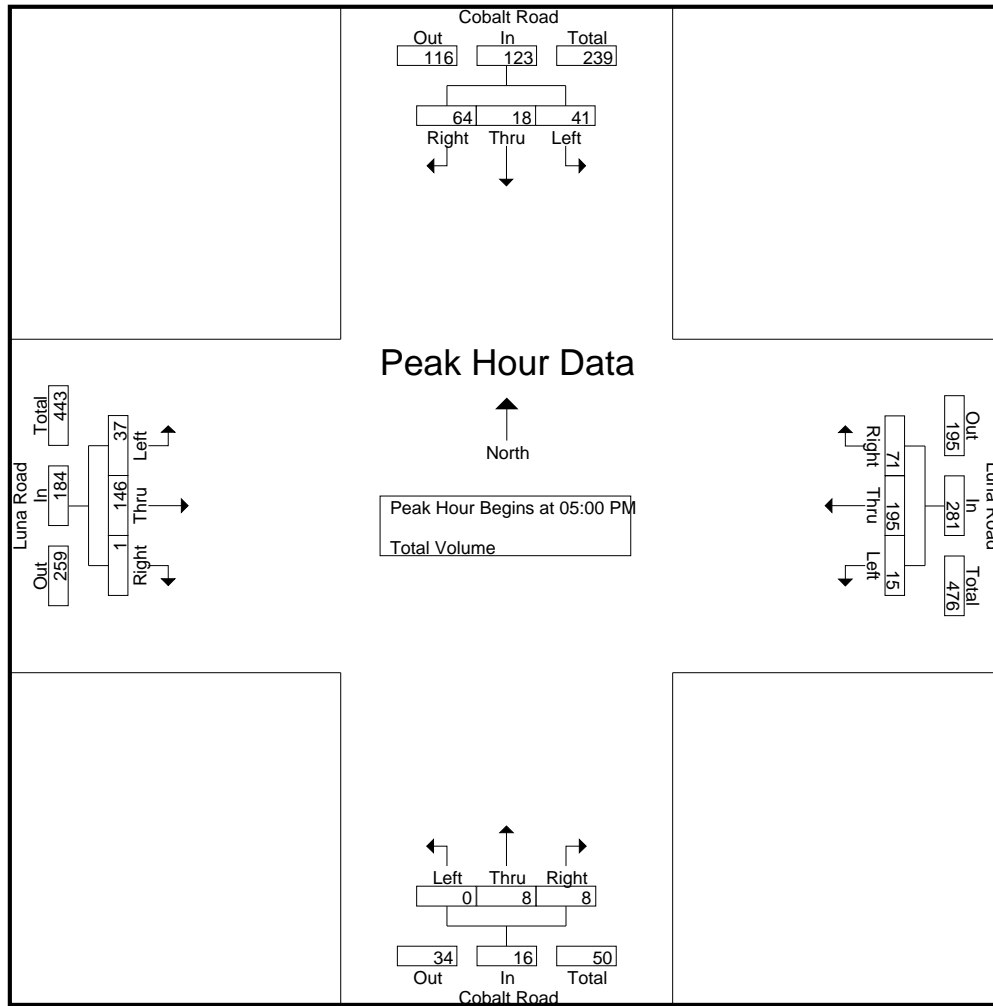
Groups Printed- Total Volume

Start Time	Cobalt Road Southbound				Luna Road Westbound				Cobalt Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	10	6	6	22	7	37	12	56	0	1	3	4	11	33	1	45	127
04:15 PM	15	2	18	35	0	32	16	48	0	1	4	5	11	38	1	50	138
04:30 PM	12	2	18	32	3	34	14	51	0	2	2	4	7	41	1	49	136
04:45 PM	17	2	20	39	3	31	16	50	0	2	4	6	7	38	0	45	140
Total	54	12	62	128	13	134	58	205	0	6	13	19	36	150	3	189	541
05:00 PM	17	4	13	34	4	41	11	56	0	2	3	5	14	30	0	44	139
05:15 PM	7	5	15	27	4	51	21	76	0	4	3	7	11	36	1	48	158
05:30 PM	11	6	20	37	3	48	23	74	0	1	1	2	6	40	0	46	159
05:45 PM	6	3	16	25	4	55	16	75	0	1	1	2	6	40	0	46	148
Total	41	18	64	123	15	195	71	281	0	8	8	16	37	146	1	184	604
Grand Total	95	30	126	251	28	329	129	486	0	14	21	35	73	296	4	373	1145
Apprch %	37.8	12	50.2		5.8	67.7	26.5		0	40	60		19.6	79.4	1.1		
Total %	8.3	2.6	11	21.9	2.4	28.7	11.3	42.4	0	1.2	1.8	3.1	6.4	25.9	0.3	32.6	

Start Time	Cobalt Road Southbound				Luna Road Westbound				Cobalt Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	17	4	13	34	4	41	11	56	0	2	3	5	14	30	0	44	139
05:15 PM	7	5	15	27	4	51	21	76	0	4	3	7	11	36	1	48	158
05:30 PM	11	6	20	37	3	48	23	74	0	1	1	2	6	40	0	46	159
05:45 PM	6	3	16	25	4	55	16	75	0	1	1	2	6	40	0	46	148
Total Volume	41	18	64	123	15	195	71	281	0	8	8	16	37	146	1	184	604
% App. Total	33.3	14.6	52		5.3	69.4	25.3		0	50	50		20.1	79.3	0.5		
PHF	.603	.750	.800	.831	.938	.886	.772	.924	.000	.500	.667	.571	.661	.913	.250	.958	.950

City of Victorville
 N/S: Cobalt Road
 E/W: Luna Road
 Weather: Clear

File Name : VICCOLUPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	04:15 PM				05:00 PM				04:30 PM				04:00 PM			
+0 mins.	15	2	18	35	4	41	11	56	0	2	2	4	11	33	1	45
+15 mins.	12	2	18	32	4	51	21	76	0	2	4	6	11	38	1	50
+30 mins.	17	2	20	39	3	48	23	74	0	2	3	5	7	41	1	49
+45 mins.	17	4	13	34	4	55	16	75	0	4	3	7	7	38	0	45
Total Volume	61	10	69	140	15	195	71	281	0	10	12	22	36	150	3	189
% App. Total	43.6	7.1	49.3		5.3	69.4	25.3		0	45.5	54.5		19	79.4	1.6	
PHF	.897	.625	.863	.897	.938	.886	.772	.924	.000	.625	.750	.786	.818	.915	.750	.945

City of Victorville
 N/S: Cantina Street
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICCA18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

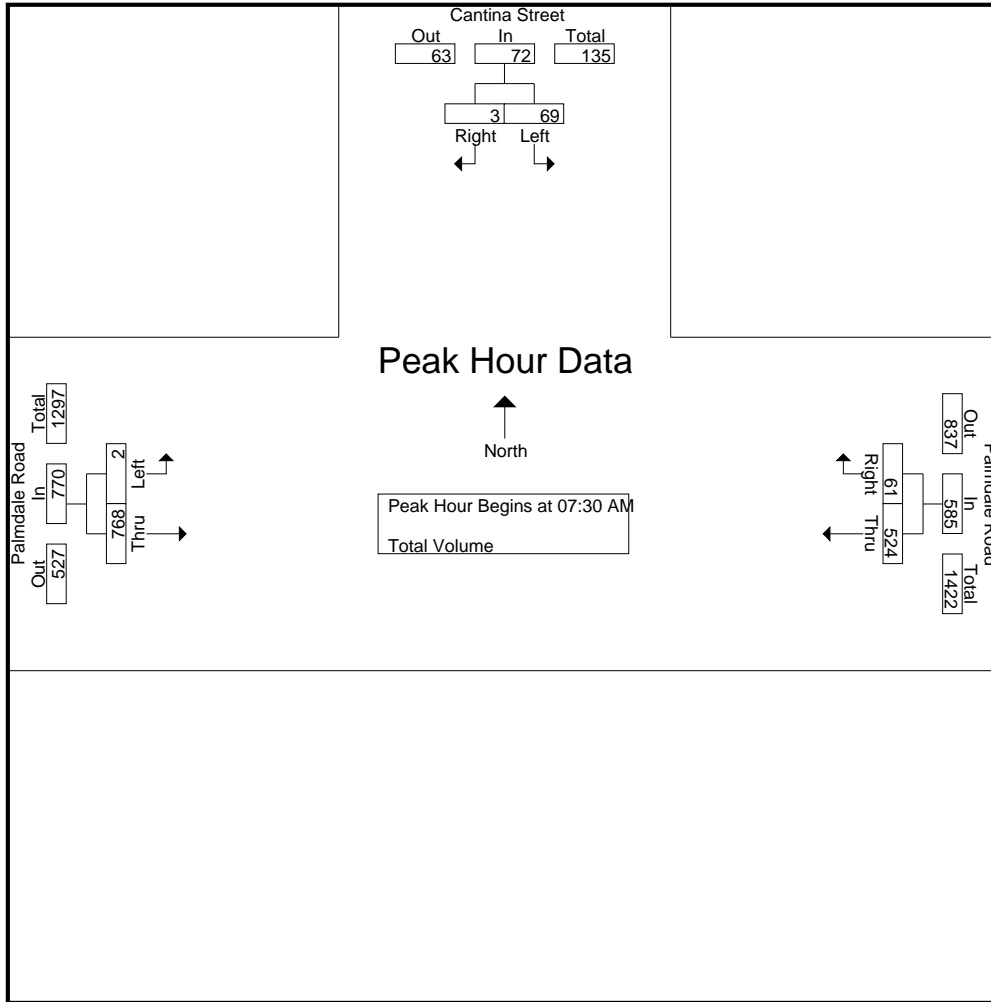
Start Time	Cantina Street Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	15	1	16	75	10	85	0	105	105	206
07:15 AM	18	2	20	90	7	97	0	168	168	285
07:30 AM	11	0	11	137	15	152	1	211	212	375
07:45 AM	25	2	27	146	16	162	1	201	202	391
Total	69	5	74	448	48	496	2	685	687	1257
08:00 AM	13	0	13	115	18	133	0	175	175	321
08:15 AM	20	1	21	126	12	138	0	181	181	340
08:30 AM	24	0	24	83	18	101	0	161	161	286
08:45 AM	24	2	26	102	16	118	0	137	137	281
Total	81	3	84	426	64	490	0	654	654	1228
Grand Total	150	8	158	874	112	986	2	1339	1341	2485
Apprch %	94.9	5.1		88.6	11.4		0.1	99.9		
Total %	6	0.3	6.4	35.2	4.5	39.7	0.1	53.9	54	

Start Time	Cantina Street Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:30 AM	11	0	11	137	15	152	1	211	212	375
07:45 AM	25	2	27	146	16	162	1	201	202	391
08:00 AM	13	0	13	115	18	133	0	175	175	321
08:15 AM	20	1	21	126	12	138	0	181	181	340
Total Volume	69	3	72	524	61	585	2	768	770	1427
% App. Total	95.8	4.2		89.6	10.4		0.3	99.7		
PHF	.690	.375	.667	.897	.847	.903	.500	.910	.908	.912

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
 Peak Hour for Entire Intersection Begins at 07:30 AM

City of Victorville
 N/S: Cantina Street
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICCA18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	07:45 AM			07:30 AM			07:30 AM		
+0 mins.	25	2	27	137	15	152	1	211	212
+15 mins.	13	0	13	146	16	162	1	201	202
+30 mins.	20	1	21	115	18	133	0	175	175
+45 mins.	24	0	24	126	12	138	0	181	181
Total Volume	82	3	85	524	61	585	2	768	770
% App. Total	96.5	3.5		89.6	10.4		0.3	99.7	
PHF	.820	.375	.787	.897	.847	.903	.500	.910	.908

City of Victorville
 N/S: Cantina Street
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICCA18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Cantina Street Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	40	4	44	195	43	238	0	175	175	457
04:15 PM	53	7	60	197	52	249	0	200	200	509
04:30 PM	44	6	50	173	34	207	0	216	216	473
04:45 PM	44	4	48	209	25	234	2	188	190	472
Total	181	21	202	774	154	928	2	779	781	1911
05:00 PM	38	4	42	237	34	271	2	147	149	462
05:15 PM	43	6	49	260	38	298	0	146	146	493
05:30 PM	31	3	34	247	38	285	2	159	161	480
05:45 PM	47	6	53	222	34	256	1	137	138	447
Total	159	19	178	966	144	1110	5	589	594	1882
Grand Total	340	40	380	1740	298	2038	7	1368	1375	3793
Apprch %	89.5	10.5		85.4	14.6		0.5	99.5		
Total %	9	1.1	10	45.9	7.9	53.7	0.2	36.1	36.3	

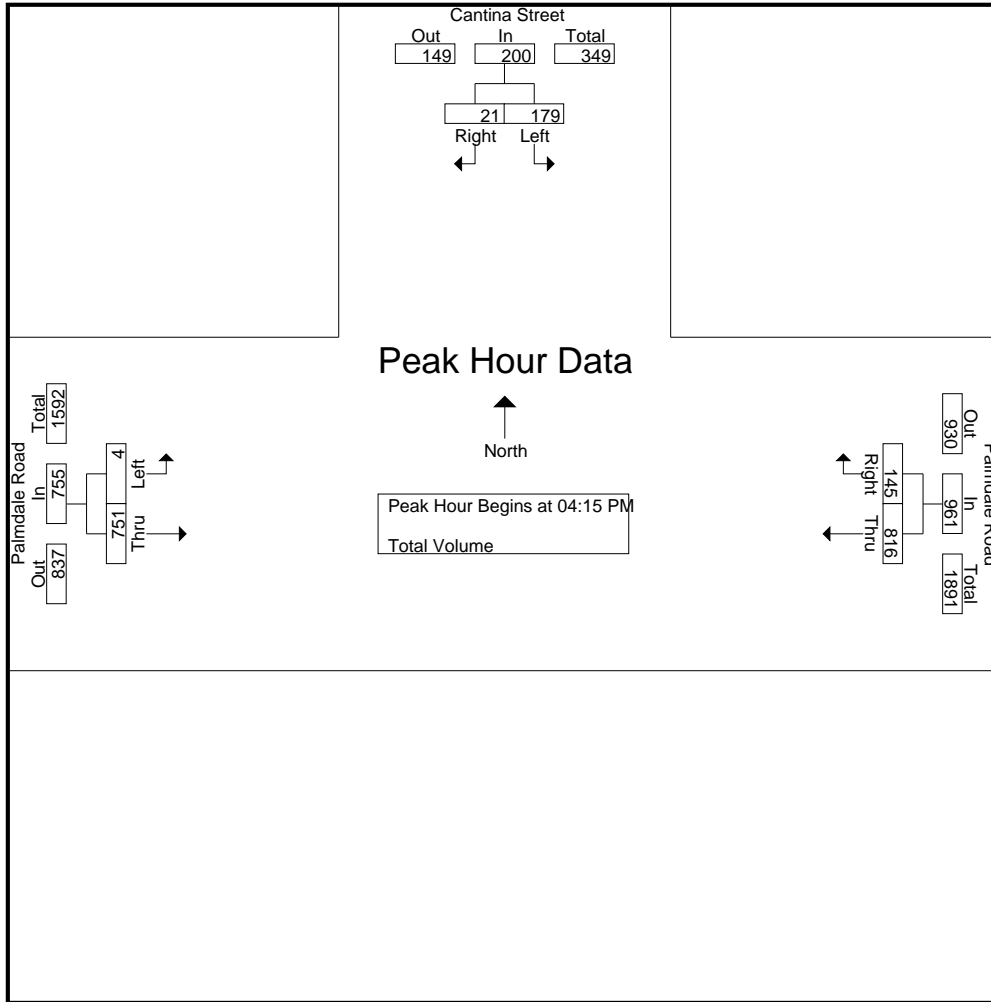
Start Time	Cantina Street Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:15 PM	53	7	60	197	52	249	0	200	200	509
04:30 PM	44	6	50	173	34	207	0	216	216	473
04:45 PM	44	4	48	209	25	234	2	188	190	472
05:00 PM	38	4	42	237	34	271	2	147	149	462
Total Volume	179	21	200	816	145	961	4	751	755	1916
% App. Total	89.5	10.5		84.9	15.1		0.5	99.5		
PHF	.844	.750	.833	.861	.697	.887	.500	.869	.874	.941

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

Peak Hour for Entire Intersection Begins at 04:15 PM

City of Victorville
 N/S: Cantina Street
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICCA18PM
 Site Code : 99917016
 Start Date : 1/18/2017
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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
 Peak Hour for Each Approach Begins at:

	04:00 PM			05:00 PM			04:00 PM		
+0 mins.	40	4	44	237	34	271	0	175	175
+15 mins.	53	7	60	260	38	298	0	200	200
+30 mins.	44	6	50	247	38	285	0	216	216
+45 mins.	44	4	48	222	34	256	2	188	190
Total Volume	181	21	202	966	144	1110	2	779	781
% App. Total	89.6	10.4		87	13		0.3	99.7	
PHF	.854	.750	.842	.929	.947	.931	.250	.902	.904

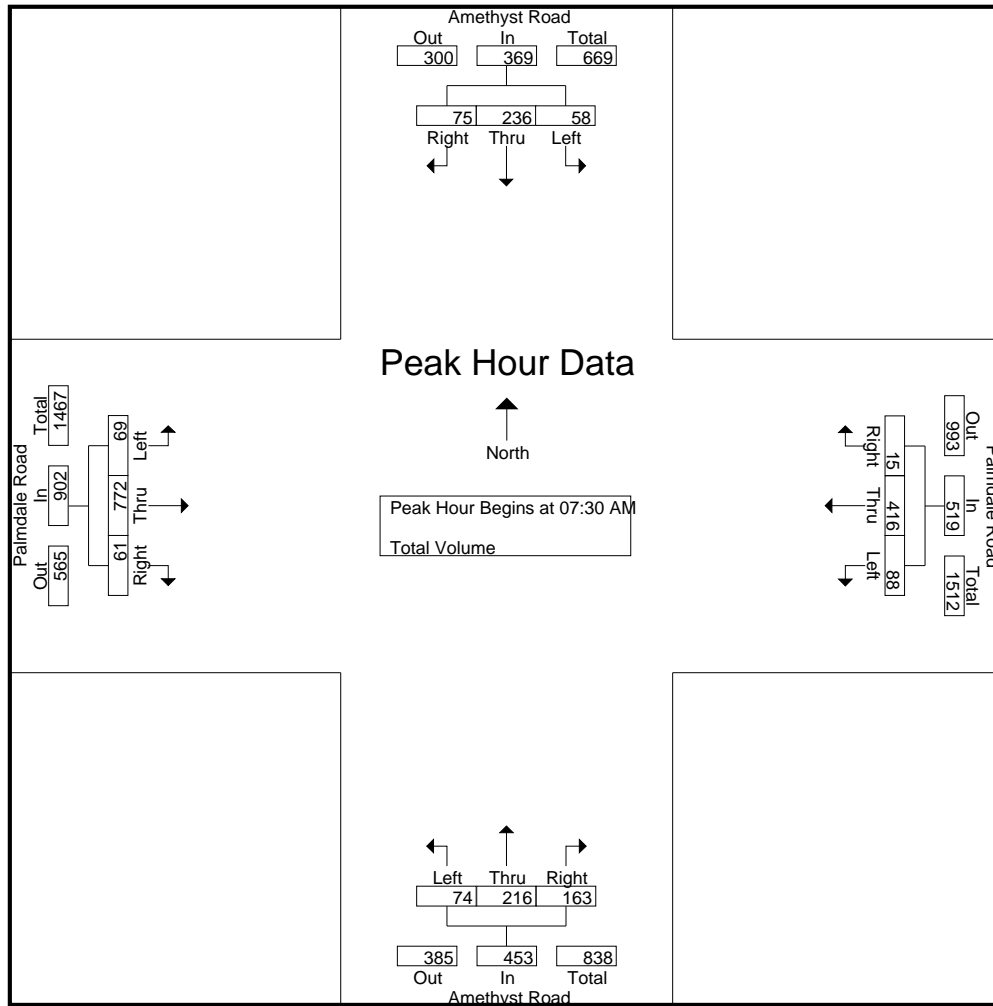
City of Victorville
 N/S: Amethyst Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICAM18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Amethyst Road Southbound				Palmdale Road Westbound				Amethyst Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	13	49	19	81	17	101	4	122	10	40	23	73	10	129	6	145	421
07:15 AM	5	65	17	87	19	101	6	126	19	43	37	99	16	163	6	185	497
07:30 AM	15	51	28	94	31	125	5	161	16	50	39	105	19	201	9	229	589
07:45 AM	19	59	26	104	23	107	3	133	16	53	54	123	22	211	21	254	614
Total	52	224	90	366	90	434	18	542	61	186	153	400	67	704	42	813	2121
08:00 AM	15	75	11	101	18	93	4	115	16	53	31	100	16	175	19	210	526
08:15 AM	9	51	10	70	16	91	3	110	26	60	39	125	12	185	12	209	514
08:30 AM	13	29	12	54	12	80	5	97	12	36	32	80	16	170	10	196	427
08:45 AM	14	28	8	50	15	93	7	115	13	25	17	55	11	142	9	162	382
Total	51	183	41	275	61	357	19	437	67	174	119	360	55	672	50	777	1849
Grand Total	103	407	131	641	151	791	37	979	128	360	272	760	122	1376	92	1590	3970
Apprch %	16.1	63.5	20.4		15.4	80.8	3.8		16.8	47.4	35.8		7.7	86.5	5.8		
Total %	2.6	10.3	3.3	16.1	3.8	19.9	0.9	24.7	3.2	9.1	6.9	19.1	3.1	34.7	2.3	40.1	

Start Time	Amethyst Road Southbound				Palmdale Road Westbound				Amethyst Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	15	51	28	94	31	125	5	161	16	50	39	105	19	201	9	229	589
07:45 AM	19	59	26	104	23	107	3	133	16	53	54	123	22	211	21	254	614
08:00 AM	15	75	11	101	18	93	4	115	16	53	31	100	16	175	19	210	526
08:15 AM	9	51	10	70	16	91	3	110	26	60	39	125	12	185	12	209	514
Total Volume	58	236	75	369	88	416	15	519	74	216	163	453	69	772	61	902	2243
% App. Total	15.7	64	20.3		17	80.2	2.9		16.3	47.7	36		7.6	85.6	6.8		
PHF	.763	.787	.670	.887	.710	.832	.750	.806	.712	.900	.755	.906	.784	.915	.726	.888	.913



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

	07:15 AM				07:00 AM				07:30 AM				07:30 AM			
+0 mins.	5	65	17	87	17	101	4	122	16	50	39	105	19	201	9	229
+15 mins.	15	51	28	94	19	101	6	126	16	53	54	123	22	211	21	254
+30 mins.	19	59	26	104	31	125	5	161	16	53	31	100	16	175	19	210
+45 mins.	15	75	11	101	23	107	3	133	26	60	39	125	12	185	12	209
Total Volume	54	250	82	386	90	434	18	542	74	216	163	453	69	772	61	902
% App. Total	14	64.8	21.2		16.6	80.1	3.3		16.3	47.7	36		7.6	85.6	6.8	
PHF	.711	.833	.732	.928	.726	.868	.750	.842	.712	.900	.755	.906	.784	.915	.726	.888

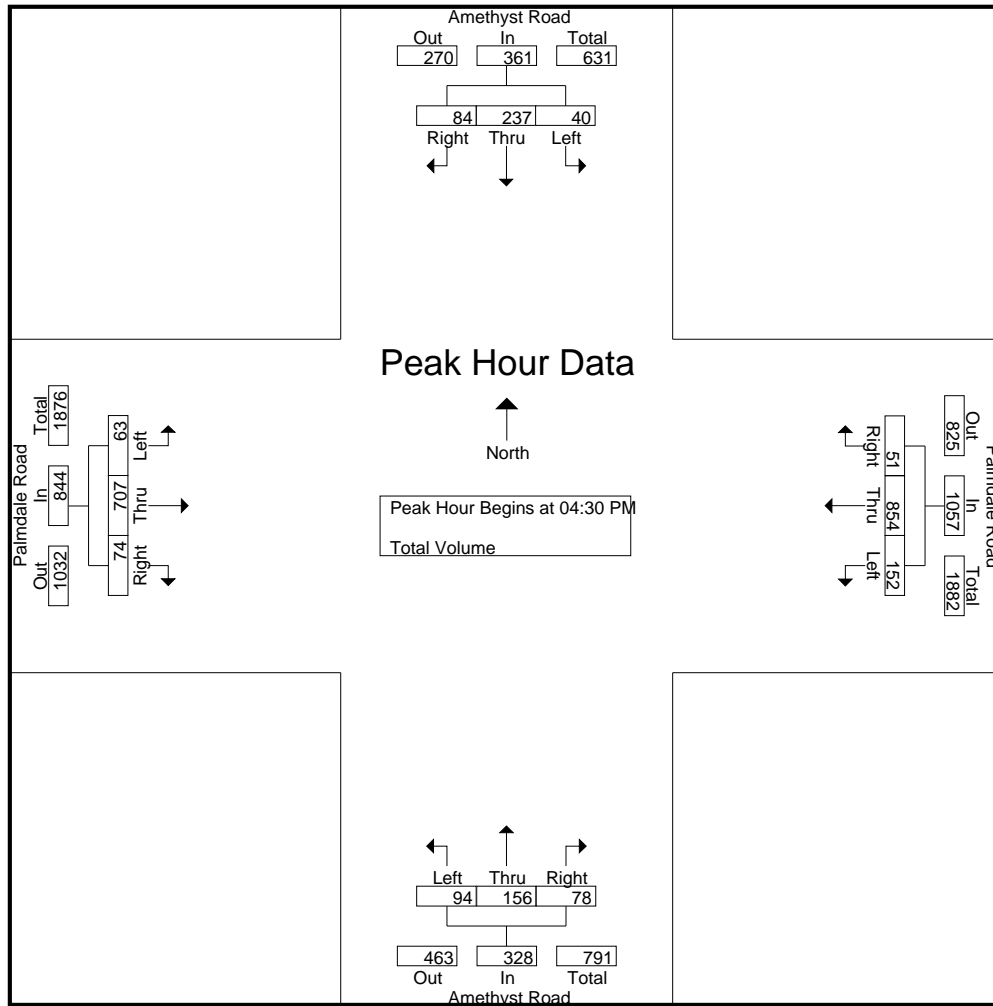
City of Victorville
 N/S: Amethyst Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICAM18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Amethyst Road Southbound				Palmdale Road Westbound				Amethyst Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	5	47	32	84	29	191	10	230	35	36	15	86	12	173	20	205	605
04:15 PM	7	42	18	67	26	185	13	224	21	54	29	104	20	225	22	267	662
04:30 PM	5	63	16	84	33	170	8	211	20	44	25	89	18	209	16	243	627
04:45 PM	8	44	21	73	32	220	14	266	26	40	13	79	11	205	18	234	652
Total	25	196	87	308	120	766	45	931	102	174	82	358	61	812	76	949	2546
05:00 PM	11	62	20	93	38	229	14	281	17	35	17	69	19	146	26	191	634
05:15 PM	16	68	27	111	49	235	15	299	31	37	23	91	15	147	14	176	677
05:30 PM	10	51	20	81	26	222	13	261	27	46	20	93	8	164	19	191	626
05:45 PM	9	43	11	63	23	199	12	234	26	47	20	93	17	156	11	184	574
Total	46	224	78	348	136	885	54	1075	101	165	80	346	59	613	70	742	2511
Grand Total	71	420	165	656	256	1651	99	2006	203	339	162	704	120	1425	146	1691	5057
Apprch %	10.8	64	25.2		12.8	82.3	4.9		28.8	48.2	23		7.1	84.3	8.6		
Total %	1.4	8.3	3.3	13	5.1	32.6	2	39.7	4	6.7	3.2	13.9	2.4	28.2	2.9	33.4	

Start Time	Amethyst Road Southbound				Palmdale Road Westbound				Amethyst Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	5	63	16	84	33	170	8	211	20	44	25	89	18	209	16	243	627
04:45 PM	8	44	21	73	32	220	14	266	26	40	13	79	11	205	18	234	652
05:00 PM	11	62	20	93	38	229	14	281	17	35	17	69	19	146	26	191	634
05:15 PM	16	68	27	111	49	235	15	299	31	37	23	91	15	147	14	176	677
Total Volume	40	237	84	361	152	854	51	1057	94	156	78	328	63	707	74	844	2590
% App. Total	11.1	65.7	23.3		14.4	80.8	4.8		28.7	47.6	23.8		7.5	83.8	8.8		
PHF	.625	.871	.778	.813	.776	.909	.850	.884	.758	.886	.780	.901	.829	.846	.712	.868	.956



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

	04:30 PM				04:45 PM				04:00 PM				04:00 PM			
+0 mins.	5	63	16	84	32	220	14	266	35	36	15	86	12	173	20	205
+15 mins.	8	44	21	73	38	229	14	281	21	54	29	104	20	225	22	267
+30 mins.	11	62	20	93	49	235	15	299	20	44	25	89	18	209	16	243
+45 mins.	16	68	27	111	26	222	13	261	26	40	13	79	11	205	18	234
Total Volume	40	237	84	361	145	906	56	1107	102	174	82	358	61	812	76	949
% App. Total	11.1	65.7	23.3		13.1	81.8	5.1		28.5	48.6	22.9		6.4	85.6	8	
PHF	.625	.871	.778	.813	.740	.964	.933	.926	.729	.806	.707	.861	.763	.902	.864	.889

City of Victorville
 N/S: Amethyst Road
 E/W: Luna Road
 Weather: Clear

File Name : VICAMLUAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

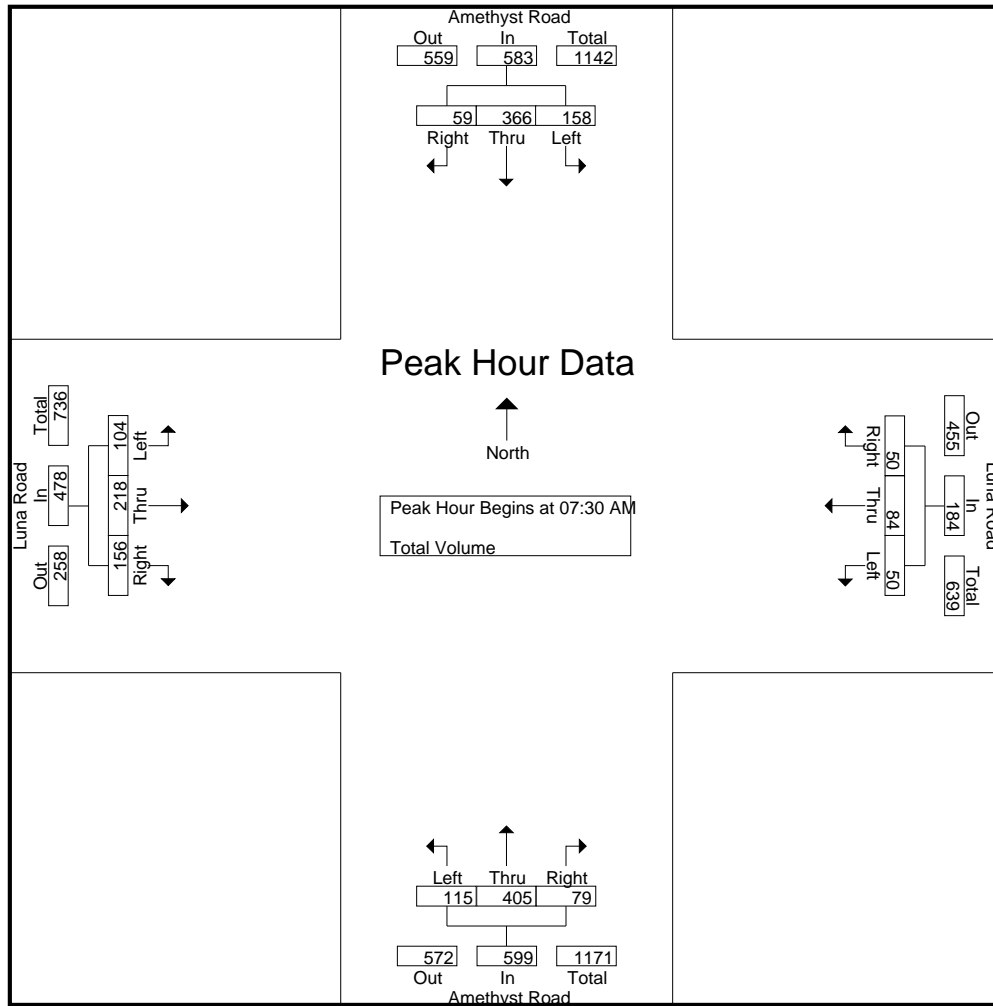
Groups Printed- Total Volume

Start Time	Amethyst Road Southbound				Luna Road Westbound				Amethyst Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	9	48	27	84	2	18	6	26	8	58	3	69	21	19	25	65	244
07:15 AM	8	74	9	91	2	48	15	65	18	65	7	90	22	53	39	114	360
07:30 AM	26	78	24	128	7	28	24	59	23	94	8	125	29	60	53	142	454
07:45 AM	35	112	11	158	9	19	14	42	23	93	13	129	30	57	38	125	454
Total	78	312	71	461	20	113	59	192	72	310	31	413	102	189	155	446	1512
08:00 AM	60	92	11	163	16	22	8	46	26	81	26	133	17	65	39	121	463
08:15 AM	37	84	13	134	18	15	4	37	43	137	32	212	28	36	26	90	473
08:30 AM	9	52	2	63	5	11	2	18	15	64	9	88	9	9	16	34	203
08:45 AM	1	49	3	53	5	4	6	15	10	35	3	48	16	12	13	41	157
Total	107	277	29	413	44	52	20	116	94	317	70	481	70	122	94	286	1296
Grand Total	185	589	100	874	64	165	79	308	166	627	101	894	172	311	249	732	2808
Apprch %	21.2	67.4	11.4		20.8	53.6	25.6		18.6	70.1	11.3		23.5	42.5	34		
Total %	6.6	21	3.6	31.1	2.3	5.9	2.8	11	5.9	22.3	3.6	31.8	6.1	11.1	8.9	26.1	

Start Time	Amethyst Road Southbound				Luna Road Westbound				Amethyst Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	26	78	24	128	7	28	24	59	23	94	8	125	29	60	53	142	454
07:45 AM	35	112	11	158	9	19	14	42	23	93	13	129	30	57	38	125	454
08:00 AM	60	92	11	163	16	22	8	46	26	81	26	133	17	65	39	121	463
08:15 AM	37	84	13	134	18	15	4	37	43	137	32	212	28	36	26	90	473
Total Volume	158	366	59	583	50	84	50	184	115	405	79	599	104	218	156	478	1844
% App. Total	27.1	62.8	10.1		27.2	45.7	27.2		19.2	67.6	13.2		21.8	45.6	32.6		
PHF	.658	.817	.615	.894	.694	.750	.521	.780	.669	.739	.617	.706	.867	.838	.736	.842	.975

City of Victorville
 N/S: Amethyst Road
 E/W: Luna Road
 Weather: Clear

File Name : VICAMLUAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	07:30 AM				07:15 AM				07:30 AM				07:15 AM			
+0 mins.	26	78	24	128	2	48	15	65	23	94	8	125	22	53	39	114
+15 mins.	35	112	11	158	7	28	24	59	23	93	13	129	29	60	53	142
+30 mins.	60	92	11	163	9	19	14	42	26	81	26	133	30	57	38	125
+45 mins.	37	84	13	134	16	22	8	46	43	137	32	212	17	65	39	121
Total Volume	158	366	59	583	34	117	61	212	115	405	79	599	98	235	169	502
% App. Total	27.1	62.8	10.1		16	55.2	28.8		19.2	67.6	13.2		19.5	46.8	33.7	
PHF	.658	.817	.615	.894	.531	.609	.635	.815	.669	.739	.617	.706	.817	.904	.797	.884

City of Victorville
 N/S: Amethyst Road
 E/W: Luna Road
 Weather: Clear

File Name : VICAMLUPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

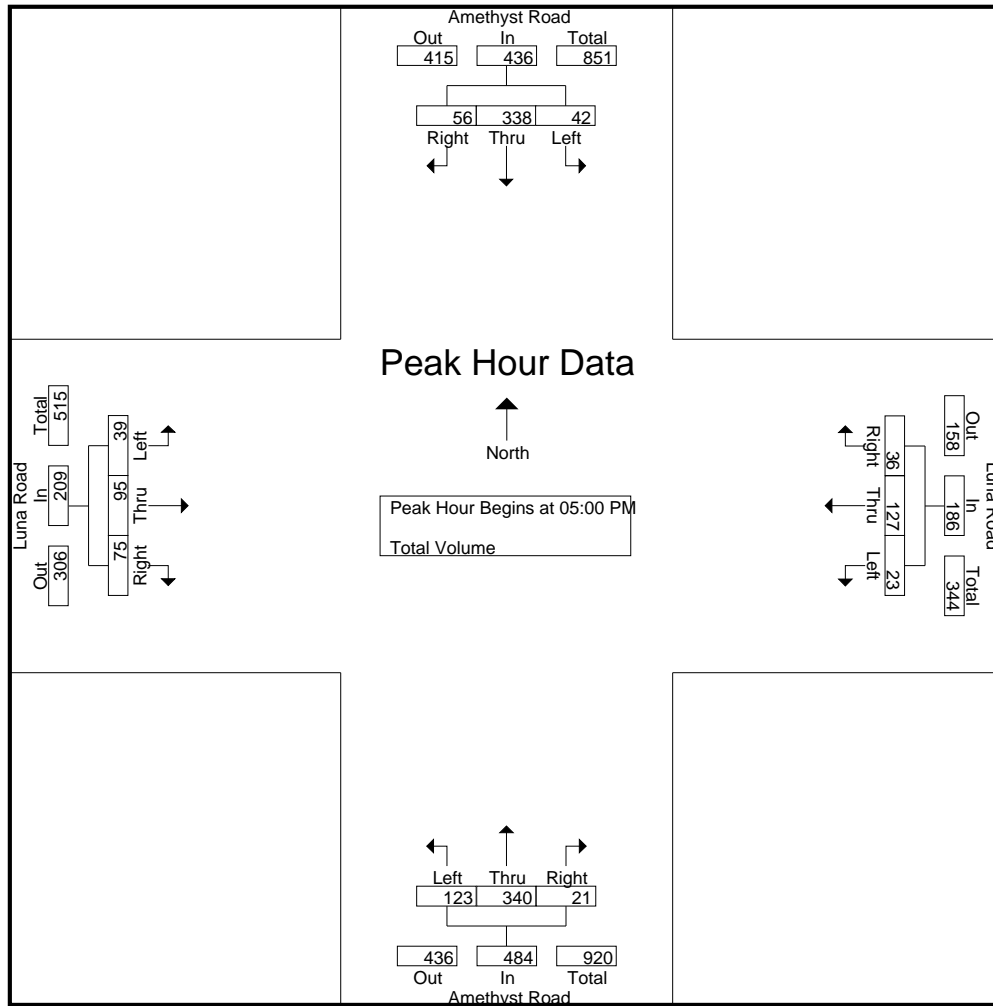
Groups Printed- Total Volume

Start Time	Amethyst Road Southbound				Luna Road Westbound				Amethyst Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	6	74	17	97	5	31	9	45	13	83	5	101	9	18	18	45	288
04:15 PM	8	84	9	101	2	23	6	31	23	81	9	113	5	31	19	55	300
04:30 PM	11	85	17	113	3	17	6	26	20	73	4	97	16	19	22	57	293
04:45 PM	3	81	15	99	6	17	4	27	28	84	1	113	14	25	25	64	303
Total	28	324	58	410	16	88	25	129	84	321	19	424	44	93	84	221	1184
05:00 PM	6	100	15	121	4	26	9	39	26	76	7	109	12	18	19	49	318
05:15 PM	18	91	19	128	6	31	12	49	38	95	1	134	9	30	11	50	361
05:30 PM	7	87	14	108	9	32	9	50	32	70	3	105	11	18	29	58	321
05:45 PM	11	60	8	79	4	38	6	48	27	99	10	136	7	29	16	52	315
Total	42	338	56	436	23	127	36	186	123	340	21	484	39	95	75	209	1315
Grand Total	70	662	114	846	39	215	61	315	207	661	40	908	83	188	159	430	2499
Apprch %	8.3	78.3	13.5		12.4	68.3	19.4		22.8	72.8	4.4		19.3	43.7	37		
Total %	2.8	26.5	4.6	33.9	1.6	8.6	2.4	12.6	8.3	26.5	1.6	36.3	3.3	7.5	6.4	17.2	

Start Time	Amethyst Road Southbound				Luna Road Westbound				Amethyst Road Northbound				Luna Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	6	100	15	121	4	26	9	39	26	76	7	109	12	18	19	49	318
05:15 PM	18	91	19	128	6	31	12	49	38	95	1	134	9	30	11	50	361
05:30 PM	7	87	14	108	9	32	9	50	32	70	3	105	11	18	29	58	321
05:45 PM	11	60	8	79	4	38	6	48	27	99	10	136	7	29	16	52	315
Total Volume	42	338	56	436	23	127	36	186	123	340	21	484	39	95	75	209	1315
% App. Total	9.6	77.5	12.8		12.4	68.3	19.4		25.4	70.2	4.3		18.7	45.5	35.9		
PHF	.583	.845	.737	.852	.639	.836	.750	.930	.809	.859	.525	.890	.813	.792	.647	.901	.911

City of Victorville
 N/S: Amethyst Road
 E/W: Luna Road
 Weather: Clear

File Name : VICAMLUPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	04:30 PM				05:00 PM				05:00 PM				04:15 PM			
+0 mins.	11	85	17	113	4	26	9	39	26	76	7	109	5	31	19	55
+15 mins.	3	81	15	99	6	31	12	49	38	95	1	134	16	19	22	57
+30 mins.	6	100	15	121	9	32	9	50	32	70	3	105	14	25	25	64
+45 mins.	18	91	19	128	4	38	6	48	27	99	10	136	12	18	19	49
Total Volume	38	357	66	461	23	127	36	186	123	340	21	484	47	93	85	225
% App. Total	8.2	77.4	14.3		12.4	68.3	19.4		25.4	70.2	4.3		20.9	41.3	37.8	
PHF	.528	.893	.868	.900	.639	.836	.750	.930	.809	.859	.525	.890	.734	.750	.850	.879

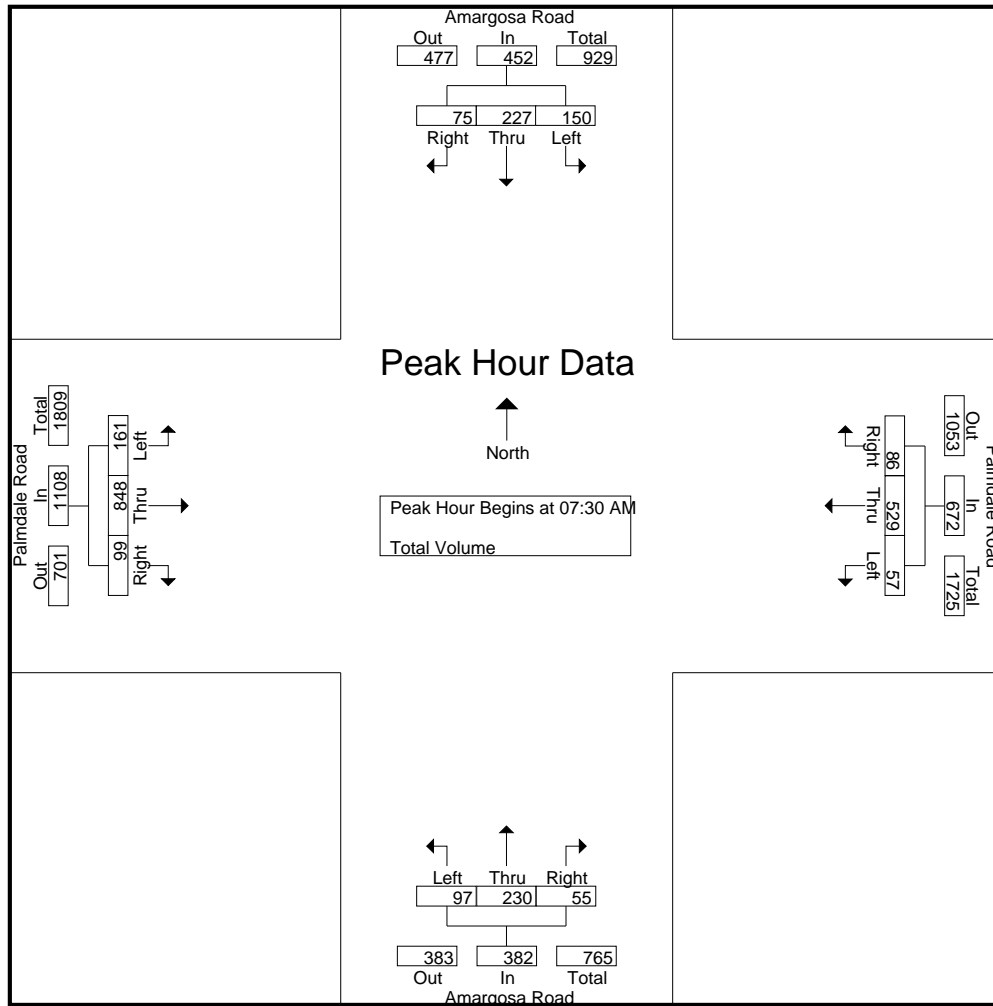
City of Victorville
 N/S: Amargosa Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICAG18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Amargosa Road Southbound				Palmdale Road Westbound				Amargosa Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	31	41	18	90	8	104	17	129	22	33	4	59	26	128	15	169	447
07:15 AM	32	31	13	76	4	148	18	170	13	39	9	61	28	173	13	214	521
07:30 AM	37	41	21	99	20	153	25	198	22	52	18	92	42	203	12	257	646
07:45 AM	48	85	19	152	14	124	23	161	22	69	14	105	55	234	39	328	746
Total	148	198	71	417	46	529	83	658	79	193	45	317	151	738	79	968	2360
08:00 AM	36	49	15	100	14	124	22	160	35	49	14	98	32	191	25	248	606
08:15 AM	29	52	20	101	9	128	16	153	18	60	9	87	32	220	23	275	616
08:30 AM	33	50	16	99	15	109	11	135	15	56	14	85	29	204	19	252	571
08:45 AM	30	47	27	104	22	130	29	181	24	46	20	90	27	184	36	247	622
Total	128	198	78	404	60	491	78	629	92	211	57	360	120	799	103	1022	2415
Grand Total	276	396	149	821	106	1020	161	1287	171	404	102	677	271	1537	182	1990	4775
Apprch %	33.6	48.2	18.1		8.2	79.3	12.5		25.3	59.7	15.1		13.6	77.2	9.1		
Total %	5.8	8.3	3.1	17.2	2.2	21.4	3.4	27	3.6	8.5	2.1	14.2	5.7	32.2	3.8	41.7	

Start Time	Amargosa Road Southbound				Palmdale Road Westbound				Amargosa Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	37	41	21	99	20	153	25	198	22	52	18	92	42	203	12	257	646
07:45 AM	48	85	19	152	14	124	23	161	22	69	14	105	55	234	39	328	746
08:00 AM	36	49	15	100	14	124	22	160	35	49	14	98	32	191	25	248	606
08:15 AM	29	52	20	101	9	128	16	153	18	60	9	87	32	220	23	275	616
Total Volume	150	227	75	452	57	529	86	672	97	230	55	382	161	848	99	1108	2614
% App. Total	33.2	50.2	16.6		8.5	78.7	12.8		25.4	60.2	14.4		14.5	76.5	8.9		
PHF	.781	.668	.893	.743	.713	.864	.860	.848	.693	.833	.764	.910	.732	.906	.635	.845	.876



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

	07:30 AM				07:15 AM				07:30 AM				07:30 AM			
+0 mins.	37	41	21	99	4	148	18	170	22	52	18	92	42	203	12	257
+15 mins.	48	85	19	152	20	153	25	198	22	69	14	105	55	234	39	328
+30 mins.	36	49	15	100	14	124	23	161	35	49	14	98	32	191	25	248
+45 mins.	29	52	20	101	14	124	22	160	18	60	9	87	32	220	23	275
Total Volume	150	227	75	452	52	549	88	689	97	230	55	382	161	848	99	1108
% App. Total	33.2	50.2	16.6		7.5	79.7	12.8		25.4	60.2	14.4		14.5	76.5	8.9	
PHF	.781	.668	.893	.743	.650	.897	.880	.870	.693	.833	.764	.910	.732	.906	.635	.845

City of Victorville
 N/S: Amargosa Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICAG18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

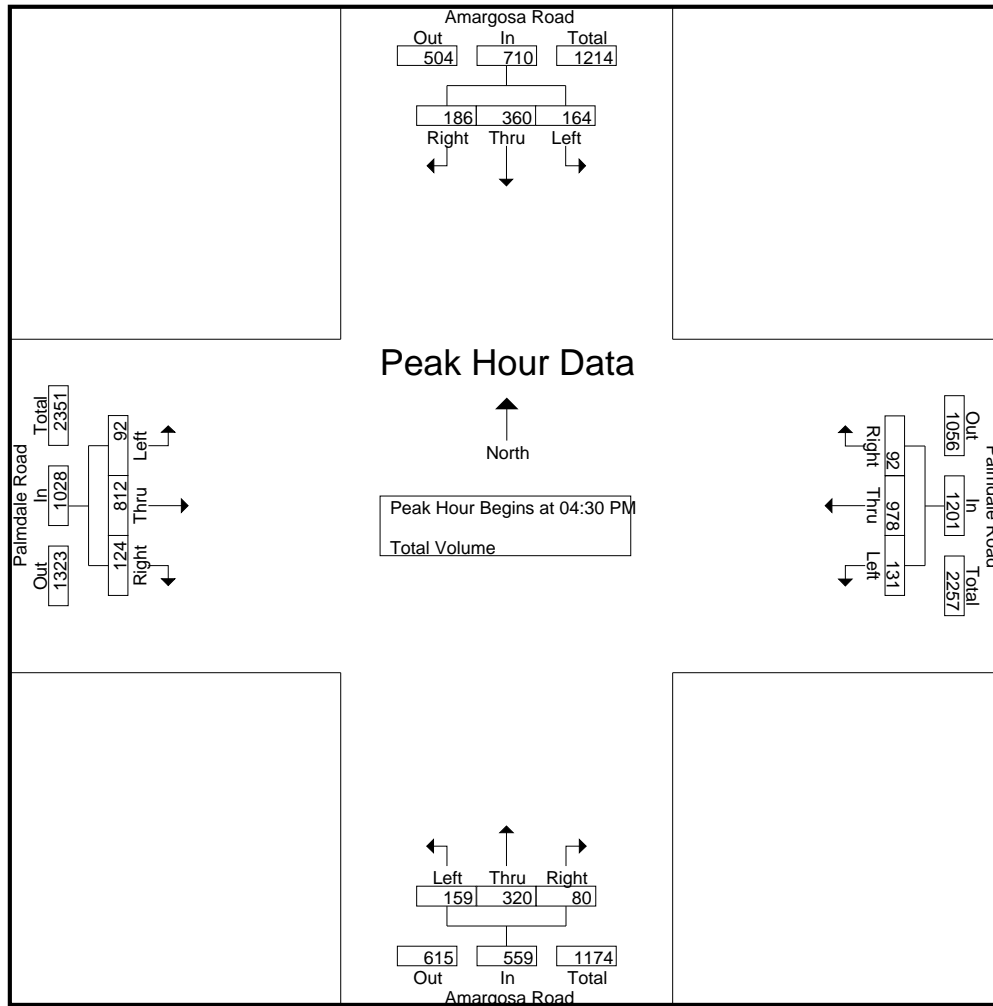
Groups Printed- Total Volume

Start Time	Amargosa Road Southbound				Palmdale Road Westbound				Amargosa Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	37	66	37	140	36	214	37	287	30	78	15	123	23	183	33	239	789
04:15 PM	55	76	33	164	21	193	24	238	25	88	27	140	23	181	20	224	766
04:30 PM	44	75	40	159	35	247	24	306	32	90	22	144	25	234	41	300	909
04:45 PM	32	90	45	167	26	215	19	260	39	83	22	144	16	205	23	244	815
Total	168	307	155	630	118	869	104	1091	126	339	86	551	87	803	117	1007	3279
05:00 PM	47	105	48	200	40	262	24	326	37	66	24	127	29	213	34	276	929
05:15 PM	41	90	53	184	30	254	25	309	51	81	12	144	22	160	26	208	845
05:30 PM	35	68	42	145	29	215	31	275	35	54	20	109	32	177	13	222	751
05:45 PM	29	67	45	141	21	181	22	224	41	85	17	143	26	150	24	200	708
Total	152	330	188	670	120	912	102	1134	164	286	73	523	109	700	97	906	3233
Grand Total	320	637	343	1300	238	1781	206	2225	290	625	159	1074	196	1503	214	1913	6512
Apprch %	24.6	49	26.4		10.7	80	9.3		27	58.2	14.8		10.2	78.6	11.2		
Total %	4.9	9.8	5.3	20	3.7	27.3	3.2	34.2	4.5	9.6	2.4	16.5	3	23.1	3.3	29.4	

Start Time	Amargosa Road Southbound				Palmdale Road Westbound				Amargosa Road Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	44	75	40	159	35	247	24	306	32	90	22	144	25	234	41	300	909
04:45 PM	32	90	45	167	26	215	19	260	39	83	22	144	16	205	23	244	815
05:00 PM	47	105	48	200	40	262	24	326	37	66	24	127	29	213	34	276	929
05:15 PM	41	90	53	184	30	254	25	309	51	81	12	144	22	160	26	208	845
Total Volume	164	360	186	710	131	978	92	1201	159	320	80	559	92	812	124	1028	3498
% App. Total	23.1	50.7	26.2		10.9	81.4	7.7		28.4	57.2	14.3		8.9	79	12.1		
PHF	.872	.857	.877	.888	.819	.933	.920	.921	.779	.889	.833	.970	.793	.868	.756	.857	.941

City of Victorville
 N/S: Amargosa Road
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : VICAG18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	04:30 PM				04:30 PM				04:30 PM				04:15 PM			
+0 mins.	44	75	40	159	35	247	24	306	32	90	22	144	23	181	20	224
+15 mins.	32	90	45	167	26	215	19	260	39	83	22	144	25	234	41	300
+30 mins.	47	105	48	200	40	262	24	326	37	66	24	127	16	205	23	244
+45 mins.	41	90	53	184	30	254	25	309	51	81	12	144	29	213	34	276
Total Volume	164	360	186	710	131	978	92	1201	159	320	80	559	93	833	118	1044
% App. Total	23.1	50.7	26.2		10.9	81.4	7.7		28.4	57.2	14.3		8.9	79.8	11.3	
PHF	.872	.857	.877	.888	.819	.933	.920	.921	.779	.889	.833	.970	.802	.890	.720	.870

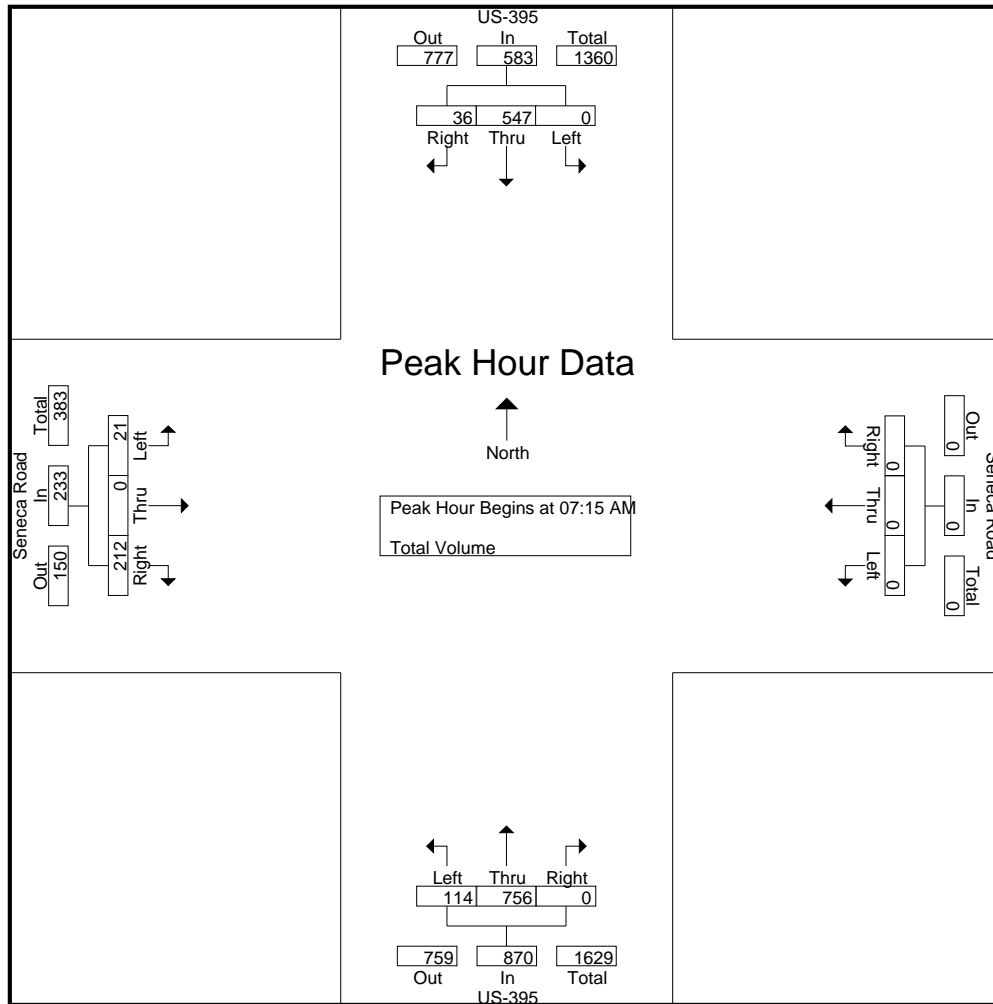
City of Adelanto
 N/S: US-395
 E/W: Seneca Road
 Weather: Clear

File Name : ADL395SEAM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				Seneca Road Westbound				US-395 Northbound				Seneca Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	0	116	3	119	0	0	0	0	20	179	0	199	3	0	50	53	371
07:15 AM	0	138	6	144	0	0	0	0	28	187	0	215	4	0	49	53	412
07:30 AM	0	155	7	162	0	0	0	0	31	205	0	236	6	0	53	59	457
07:45 AM	0	134	15	149	0	0	0	0	28	192	0	220	6	0	55	61	430
Total	0	543	31	574	0	0	0	0	107	763	0	870	19	0	207	226	1670
08:00 AM	0	120	8	128	0	0	0	0	27	172	0	199	5	0	55	60	387
08:15 AM	0	131	2	133	0	0	0	0	36	169	0	205	0	0	52	52	390
08:30 AM	0	102	5	107	0	0	0	0	25	171	0	196	2	0	48	50	353
08:45 AM	0	131	3	134	0	0	0	0	26	151	0	177	1	0	34	35	346
Total	0	484	18	502	0	0	0	0	114	663	0	777	8	0	189	197	1476
Grand Total	0	1027	49	1076	0	0	0	0	221	1426	0	1647	27	0	396	423	3146
Apprch %	0	95.4	4.6		0	0	0		13.4	86.6	0		6.4	0	93.6		
Total %	0	32.6	1.6	34.2	0	0	0	0	7	45.3	0	52.4	0.9	0	12.6	13.4	

Start Time	US-395 Southbound				Seneca Road Westbound				US-395 Northbound				Seneca Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	138	6	144	0	0	0	0	28	187	0	215	4	0	49	53	412
07:30 AM	0	155	7	162	0	0	0	0	31	205	0	236	6	0	53	59	457
07:45 AM	0	134	15	149	0	0	0	0	28	192	0	220	6	0	55	61	430
08:00 AM	0	120	8	128	0	0	0	0	27	172	0	199	5	0	55	60	387
Total Volume	0	547	36	583	0	0	0	0	114	756	0	870	21	0	212	233	1686
% App. Total	0	93.8	6.2		0	0	0		13.1	86.9	0		9	0	91		
PHF	.000	.882	.600	.900	.000	.000	.000	.000	.919	.922	.000	.922	.875	.000	.964	.955	.922



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

	07:15 AM				07:00 AM				07:00 AM				07:15 AM			
+0 mins.	0	138	6	144	0	0	0	0	20	179	0	199	4	0	49	53
+15 mins.	0	155	7	162	0	0	0	0	28	187	0	215	6	0	53	59
+30 mins.	0	134	15	149	0	0	0	0	31	205	0	236	6	0	55	61
+45 mins.	0	120	8	128	0	0	0	0	28	192	0	220	5	0	55	60
Total Volume	0	547	36	583	0	0	0	0	107	763	0	870	21	0	212	233
% App. Total	0	93.8	6.2		0	0	0	0	12.3	87.7	0		9	0	91	
PHF	.000	.882	.600	.900	.000	.000	.000	.000	.863	.930	.000	.922	.875	.000	.964	.955

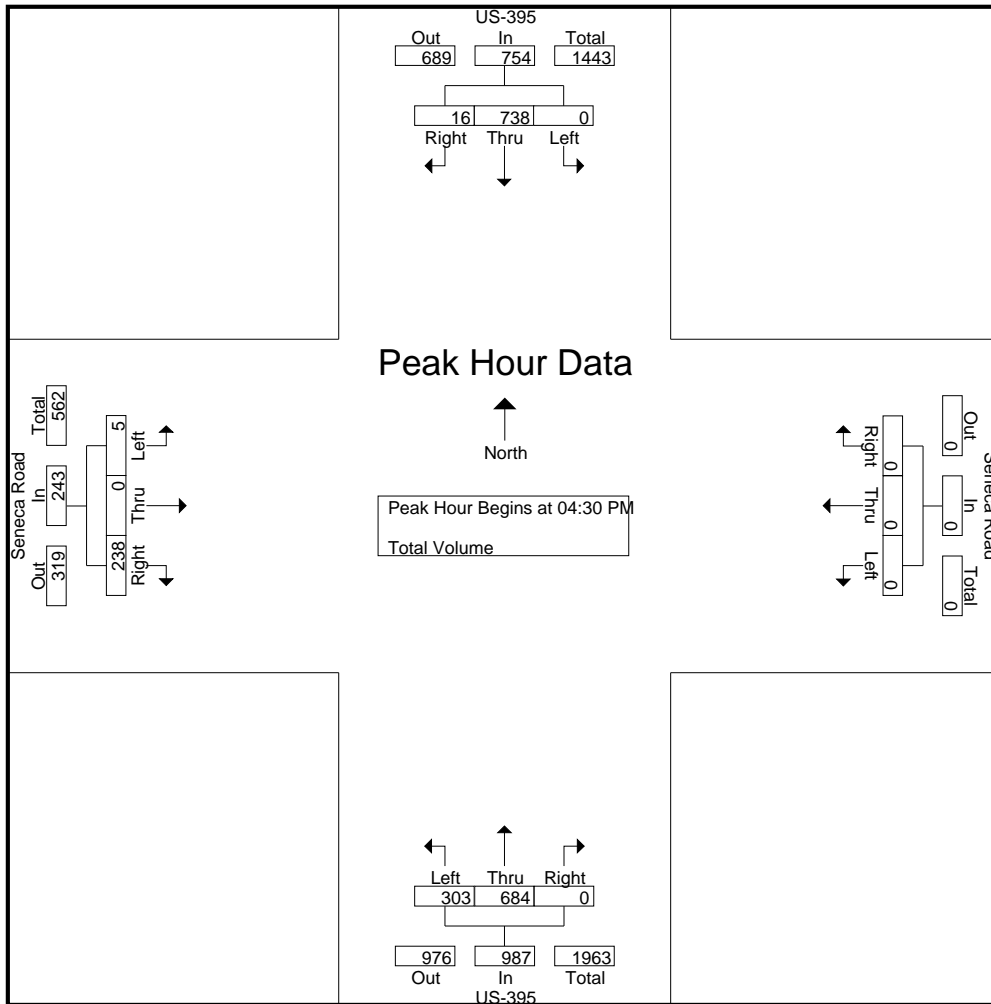
City of Adelanto
 N/S: US-395
 E/W: Seneca Road
 Weather: Clear

File Name : ADL395SEPM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				Seneca Road Westbound				US-395 Northbound				Seneca Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	0	183	4	187	0	0	0	0	58	163	0	221	2	1	60	63	471
04:15 PM	0	180	5	185	0	0	0	0	66	161	0	227	1	0	49	50	462
04:30 PM	0	180	5	185	0	0	0	0	80	175	0	255	1	0	69	70	510
04:45 PM	0	181	5	186	0	0	0	0	85	153	0	238	1	0	57	58	482
Total	0	724	19	743	0	0	0	0	289	652	0	941	5	1	235	241	1925
05:00 PM	0	167	2	169	0	0	0	0	67	190	0	257	1	0	58	59	485
05:15 PM	0	210	4	214	0	0	0	0	71	166	0	237	2	0	54	56	507
05:30 PM	0	183	0	183	0	0	0	0	71	169	0	240	3	0	60	63	486
05:45 PM	0	164	3	167	0	0	0	0	78	201	0	279	1	0	53	54	500
Total	0	724	9	733	0	0	0	0	287	726	0	1013	7	0	225	232	1978
Grand Total	0	1448	28	1476	0	0	0	0	576	1378	0	1954	12	1	460	473	3903
Apprch %	0	98.1	1.9		0	0	0		29.5	70.5	0		2.5	0.2	97.3		
Total %	0	37.1	0.7	37.8	0	0	0		14.8	35.3	0	50.1	0.3	0	11.8	12.1	

Start Time	US-395 Southbound				Seneca Road Westbound				US-395 Northbound				Seneca Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	180	5	185	0	0	0	0	80	175	0	255	1	0	69	70	510
04:45 PM	0	181	5	186	0	0	0	0	85	153	0	238	1	0	57	58	482
05:00 PM	0	167	2	169	0	0	0	0	67	190	0	257	1	0	58	59	485
05:15 PM	0	210	4	214	0	0	0	0	71	166	0	237	2	0	54	56	507
Total Volume	0	738	16	754	0	0	0	0	303	684	0	987	5	0	238	243	1984
% App. Total	0	97.9	2.1		0	0	0		30.7	69.3	0		2.1	0	97.9		
PHF	.000	.879	.800	.881	.000	.000	.000	.000	.891	.900	.000	.960	.625	.000	.862	.868	.973



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

	04:30 PM				04:00 PM				05:00 PM				04:30 PM			
+0 mins.	0	180	5	185	0	0	0	0	67	190	0	257	1	0	69	70
+15 mins.	0	181	5	186	0	0	0	0	71	166	0	237	1	0	57	58
+30 mins.	0	167	2	169	0	0	0	0	71	169	0	240	1	0	58	59
+45 mins.	0	210	4	214	0	0	0	0	78	201	0	279	2	0	54	56
Total Volume	0	738	16	754	0	0	0	0	287	726	0	1013	5	0	238	243
% App. Total	0	97.9	2.1		0	0	0		28.3	71.7	0		2.1	0	97.9	
PHF	.000	.879	.800	.881	.000	.000	.000	.000	.920	.903	.000	.908	.625	.000	.862	.868

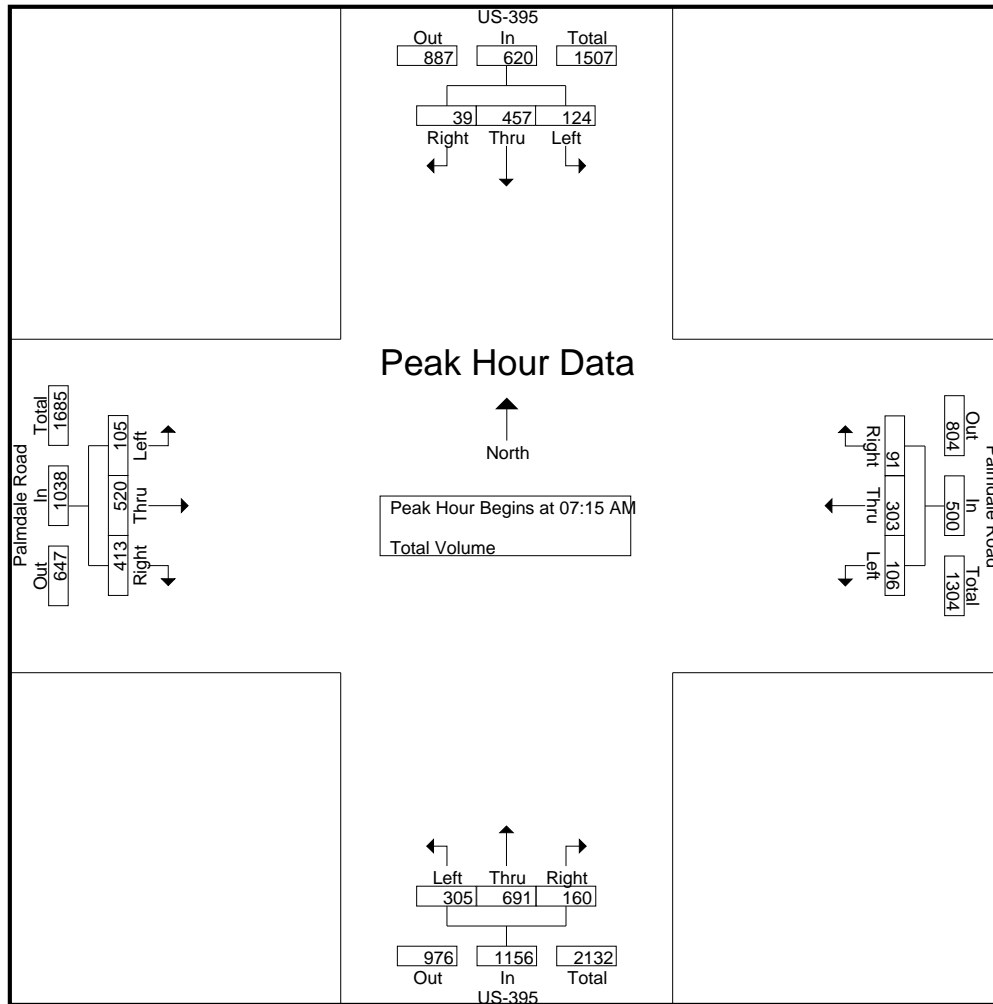
City of Adelanto
 N/S: US-395
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADL395-18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				Palmdale Road Westbound				US-395 Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	20	109	13	142	22	41	18	81	63	143	18	224	27	83	133	243	690
07:15 AM	20	134	4	158	13	53	17	83	86	200	39	325	26	104	108	238	804
07:30 AM	41	113	15	169	28	75	29	132	89	188	45	322	31	151	108	290	913
07:45 AM	39	128	9	176	29	106	18	153	77	171	44	292	19	135	110	264	885
Total	120	484	41	645	92	275	82	449	315	702	146	1163	103	473	459	1035	3292
08:00 AM	24	82	11	117	36	69	27	132	53	132	32	217	29	130	87	246	712
08:15 AM	32	107	6	145	31	71	20	122	52	122	43	217	19	122	78	219	703
08:30 AM	33	104	8	145	31	47	21	99	55	164	33	252	21	114	58	193	689
08:45 AM	22	81	9	112	31	51	24	106	54	125	17	196	17	107	44	168	582
Total	111	374	34	519	129	238	92	459	214	543	125	882	86	473	267	826	2686
Grand Total	231	858	75	1164	221	513	174	908	529	1245	271	2045	189	946	726	1861	5978
Apprch %	19.8	73.7	6.4		24.3	56.5	19.2		25.9	60.9	13.3		10.2	50.8	39		
Total %	3.9	14.4	1.3	19.5	3.7	8.6	2.9	15.2	8.8	20.8	4.5	34.2	3.2	15.8	12.1	31.1	

Start Time	US-395 Southbound				Palmdale Road Westbound				US-395 Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	20	134	4	158	13	53	17	83	86	200	39	325	26	104	108	238	804
07:30 AM	41	113	15	169	28	75	29	132	89	188	45	322	31	151	108	290	913
07:45 AM	39	128	9	176	29	106	18	153	77	171	44	292	19	135	110	264	885
08:00 AM	24	82	11	117	36	69	27	132	53	132	32	217	29	130	87	246	712
Total Volume	124	457	39	620	106	303	91	500	305	691	160	1156	105	520	413	1038	3314
% App. Total	20	73.7	6.3		21.2	60.6	18.2		26.4	59.8	13.8		10.1	50.1	39.8		
PHF	.756	.853	.650	.881	.736	.715	.784	.817	.857	.864	.889	.889	.847	.861	.939	.895	.907



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

	07:00 AM				07:30 AM				07:00 AM				07:15 AM			
+0 mins.	20	109	13	142	28	75	29	132	63	143	18	224	26	104	108	238
+15 mins.	20	134	4	158	29	106	18	153	86	200	39	325	31	151	108	290
+30 mins.	41	113	15	169	36	69	27	132	89	188	45	322	19	135	110	264
+45 mins.	39	128	9	176	31	71	20	122	77	171	44	292	29	130	87	246
Total Volume	120	484	41	645	124	321	94	539	315	702	146	1163	105	520	413	1038
% App. Total	18.6	75	6.4		23	59.6	17.4		27.1	60.4	12.6		10.1	50.1	39.8	
PHF	.732	.903	.683	.916	.861	.757	.810	.881	.885	.878	.811	.895	.847	.861	.939	.895

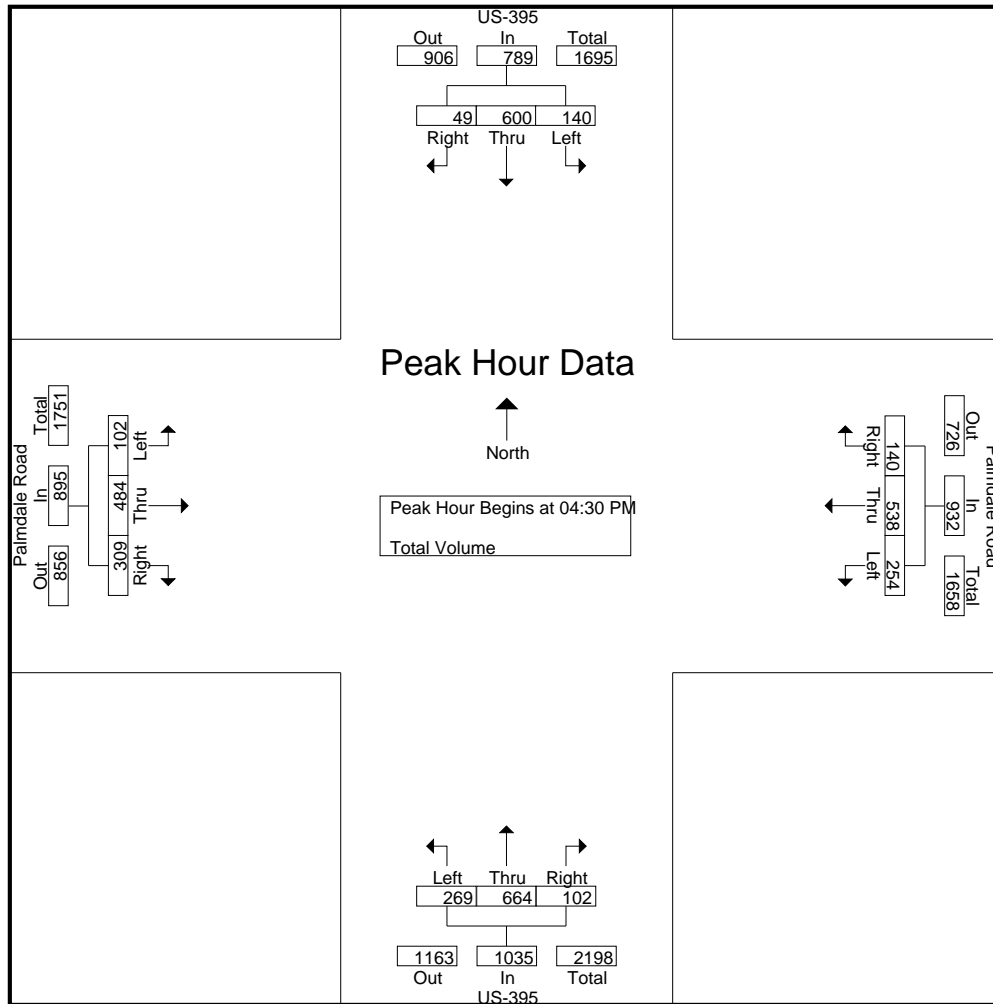
City of Adelanto
 N/S: US-395
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADL395-18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				Palmdale Road Westbound				US-395 Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	41	149	7	197	60	101	37	198	84	162	21	267	21	120	88	229	891
04:15 PM	37	142	11	190	53	109	29	191	82	154	23	259	21	159	73	253	893
04:30 PM	31	153	8	192	50	110	36	196	65	168	31	264	33	166	89	288	940
04:45 PM	38	145	15	198	69	121	33	223	78	179	22	279	22	133	70	225	925
Total	147	589	41	777	232	441	135	808	309	663	97	1069	97	578	320	995	3649
05:00 PM	35	133	10	178	70	149	33	252	62	158	22	242	23	93	80	196	868
05:15 PM	36	169	16	221	65	158	38	261	64	159	27	250	24	92	70	186	918
05:30 PM	32	158	13	203	57	149	31	237	60	164	23	247	31	120	66	217	904
05:45 PM	33	106	15	154	71	136	35	242	66	163	22	251	18	101	58	177	824
Total	136	566	54	756	263	592	137	992	252	644	94	990	96	406	274	776	3514
Grand Total	283	1155	95	1533	495	1033	272	1800	561	1307	191	2059	193	984	594	1771	7163
Apprch %	18.5	75.3	6.2		27.5	57.4	15.1		27.2	63.5	9.3		10.9	55.6	33.5		
Total %	4	16.1	1.3	21.4	6.9	14.4	3.8	25.1	7.8	18.2	2.7	28.7	2.7	13.7	8.3	24.7	

Start Time	US-395 Southbound				Palmdale Road Westbound				US-395 Northbound				Palmdale Road Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	31	153	8	192	50	110	36	196	65	168	31	264	33	166	89	288	940
04:45 PM	38	145	15	198	69	121	33	223	78	179	22	279	22	133	70	225	925
05:00 PM	35	133	10	178	70	149	33	252	62	158	22	242	23	93	80	196	868
05:15 PM	36	169	16	221	65	158	38	261	64	159	27	250	24	92	70	186	918
Total Volume	140	600	49	789	254	538	140	932	269	664	102	1035	102	484	309	895	3651
% App. Total	17.7	76	6.2		27.3	57.7	15		26	64.2	9.9		11.4	54.1	34.5		
PHF	.921	.888	.766	.893	.907	.851	.921	.893	.862	.927	.823	.927	.773	.729	.868	.777	.971



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

	04:45 PM				05:00 PM				04:00 PM				04:00 PM			
+0 mins.	38	145	15	198	70	149	33	252	84	162	21	267	21	120	88	229
+15 mins.	35	133	10	178	65	158	38	261	82	154	23	259	21	159	73	253
+30 mins.	36	169	16	221	57	149	31	237	65	168	31	264	33	166	89	288
+45 mins.	32	158	13	203	71	136	35	242	78	179	22	279	22	133	70	225
Total Volume	141	605	54	800	263	592	137	992	309	663	97	1069	97	578	320	995
% App. Total	17.6	75.6	6.8		26.5	59.7	13.8		28.9	62	9.1		9.7	58.1	32.2	
PHF	.928	.895	.844	.905	.926	.937	.901	.950	.920	.926	.782	.958	.735	.870	.899	.864

City of Adelanto
 N/S: Stater Brothers Shopping Center DW
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADLSC18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Shopping Center Driveway Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	14	13	27	105	2	107	6	231	237	371
07:15 AM	11	18	29	133	0	133	8	229	237	399
07:30 AM	13	18	31	168	1	169	15	272	287	487
07:45 AM	10	29	39	185	2	187	15	254	269	495
Total	48	78	126	591	5	596	44	986	1030	1752
08:00 AM	12	27	39	113	4	117	16	231	247	403
08:15 AM	14	24	38	114	1	115	18	208	226	379
08:30 AM	16	21	37	91	3	94	14	177	191	322
08:45 AM	19	13	32	99	2	101	18	150	168	301
Total	61	85	146	417	10	427	66	766	832	1405
Grand Total	109	163	272	1008	15	1023	110	1752	1862	3157
Apprch %	40.1	59.9		98.5	1.5		5.9	94.1		
Total %	3.5	5.2	8.6	31.9	0.5	32.4	3.5	55.5	59	

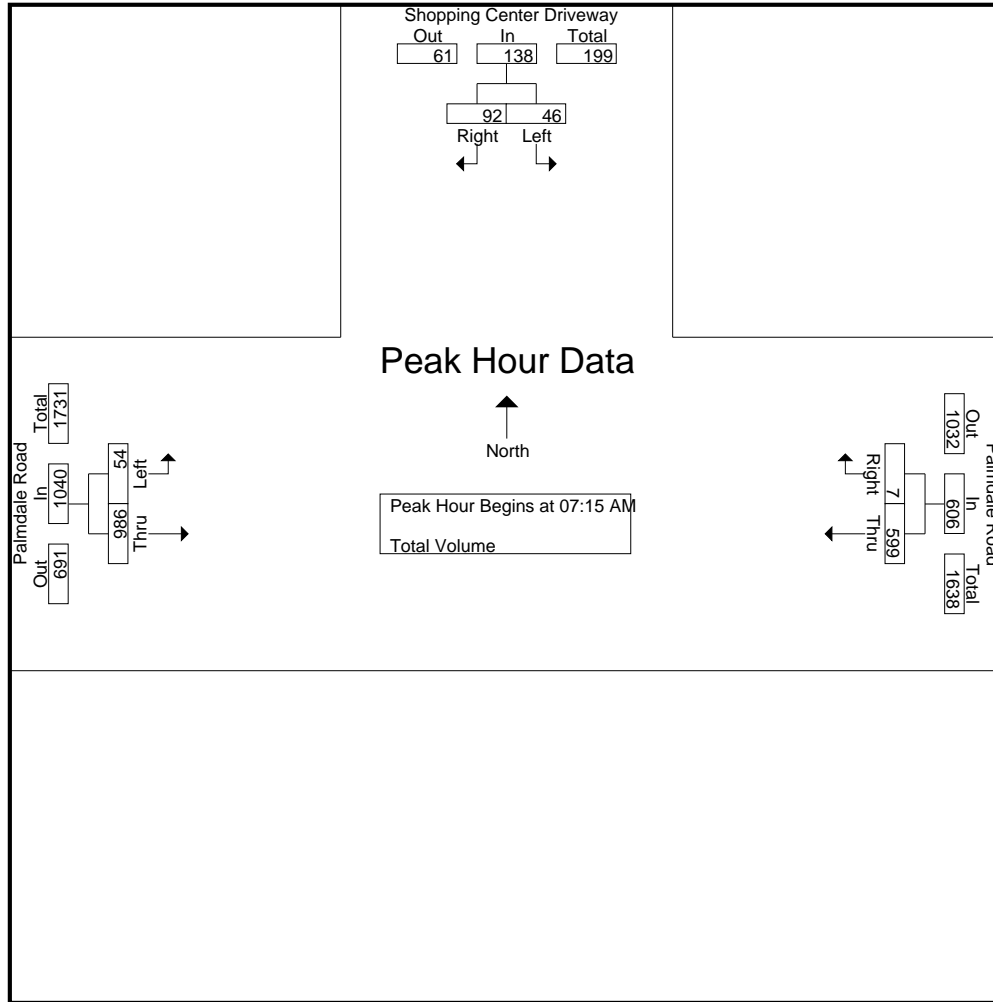
Start Time	Shopping Center Driveway Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:15 AM	11	18	29	133	0	133	8	229	237	399
07:30 AM	13	18	31	168	1	169	15	272	287	487
07:45 AM	10	29	39	185	2	187	15	254	269	495
08:00 AM	12	27	39	113	4	117	16	231	247	403
Total Volume	46	92	138	599	7	606	54	986	1040	1784
% App. Total	33.3	66.7		98.8	1.2		5.2	94.8		
PHF	.885	.793	.885	.809	.438	.810	.844	.906	.906	.901

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

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Adelanto
 N/S: Stater Brothers Shopping Center DW
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADLSC18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	07:45 AM			07:15 AM			07:15 AM		
+0 mins.	10	29	39	133	0	133	8	229	237
+15 mins.	12	27	39	168	1	169	15	272	287
+30 mins.	14	24	38	185	2	187	15	254	269
+45 mins.	16	21	37	113	4	117	16	231	247
Total Volume	52	101	153	599	7	606	54	986	1040
% App. Total	34	66		98.8	1.2		5.2	94.8	
PHF	.813	.871	.981	.809	.438	.810	.844	.906	.906

City of Adelanto
 N/S: Stater Brothers Shopping Center DW
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADLSC18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

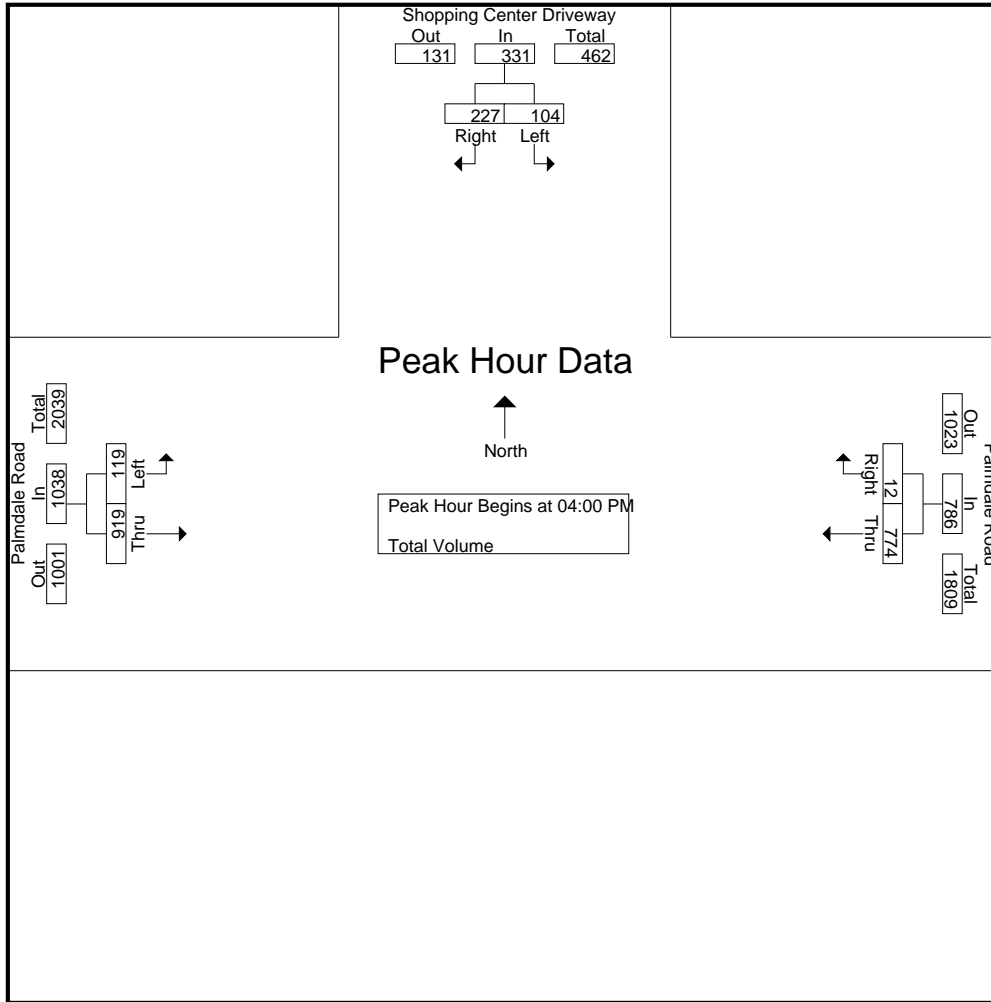
Start Time	Shopping Center Driveway Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	22	67	89	184	5	189	33	220	253	531
04:15 PM	26	54	80	199	2	201	25	238	263	544
04:30 PM	27	46	73	179	3	182	38	257	295	550
04:45 PM	29	60	89	212	2	214	23	204	227	530
Total	104	227	331	774	12	786	119	919	1038	2155
05:00 PM	38	52	90	214	5	219	25	160	185	494
05:15 PM	30	49	79	233	6	239	34	169	203	521
05:30 PM	26	64	90	214	3	217	35	198	233	540
05:45 PM	27	63	90	210	0	210	22	147	169	469
Total	121	228	349	871	14	885	116	674	790	2024
Grand Total	225	455	680	1645	26	1671	235	1593	1828	4179
Apprch %	33.1	66.9		98.4	1.6		12.9	87.1		
Total %	5.4	10.9	16.3	39.4	0.6	40	5.6	38.1	43.7	

Start Time	Shopping Center Driveway Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	22	67	89	184	5	189	33	220	253	531
04:15 PM	26	54	80	199	2	201	25	238	263	544
04:30 PM	27	46	73	179	3	182	38	257	295	550
04:45 PM	29	60	89	212	2	214	23	204	227	530
Total Volume	104	227	331	774	12	786	119	919	1038	2155
% App. Total	31.4	68.6		98.5	1.5		11.5	88.5		
PHF	.897	.847	.930	.913	.600	.918	.783	.894	.880	.980

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

City of Adelanto
 N/S: Stater Brothers Shopping Center DW
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADLSC18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	05:00 PM			04:45 PM			04:00 PM		
+0 mins.	38	52	90	212	2	214	33	220	253
+15 mins.	30	49	79	214	5	219	25	238	263
+30 mins.	26	64	90	233	6	239	38	257	295
+45 mins.	27	63	90	214	3	217	23	204	227
Total Volume	121	228	349	873	16	889	119	919	1038
% App. Total	34.7	65.3		98.2	1.8		11.5	88.5	
PHF	.796	.891	.969	.937	.667	.930	.783	.894	.880

City of Adelanto
 N/S: Pearmain Street
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADLPE18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Pearmain Street Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:00 AM	33	1	34	99	15	114	0	204	204	352
07:15 AM	38	1	39	143	15	158	0	204	204	401
07:30 AM	40	1	41	161	18	179	0	247	247	467
07:45 AM	40	2	42	191	28	219	1	229	230	491
Total	151	5	156	594	76	670	1	884	885	1711
08:00 AM	27	1	28	124	15	139	2	218	220	387
08:15 AM	25	1	26	112	24	136	2	205	207	369
08:30 AM	29	2	31	91	17	108	2	167	169	308
08:45 AM	24	0	24	99	11	110	0	147	147	281
Total	105	4	109	426	67	493	6	737	743	1345
Grand Total	256	9	265	1020	143	1163	7	1621	1628	3056
Apprch %	96.6	3.4		87.7	12.3		0.4	99.6		
Total %	8.4	0.3	8.7	33.4	4.7	38.1	0.2	53	53.3	

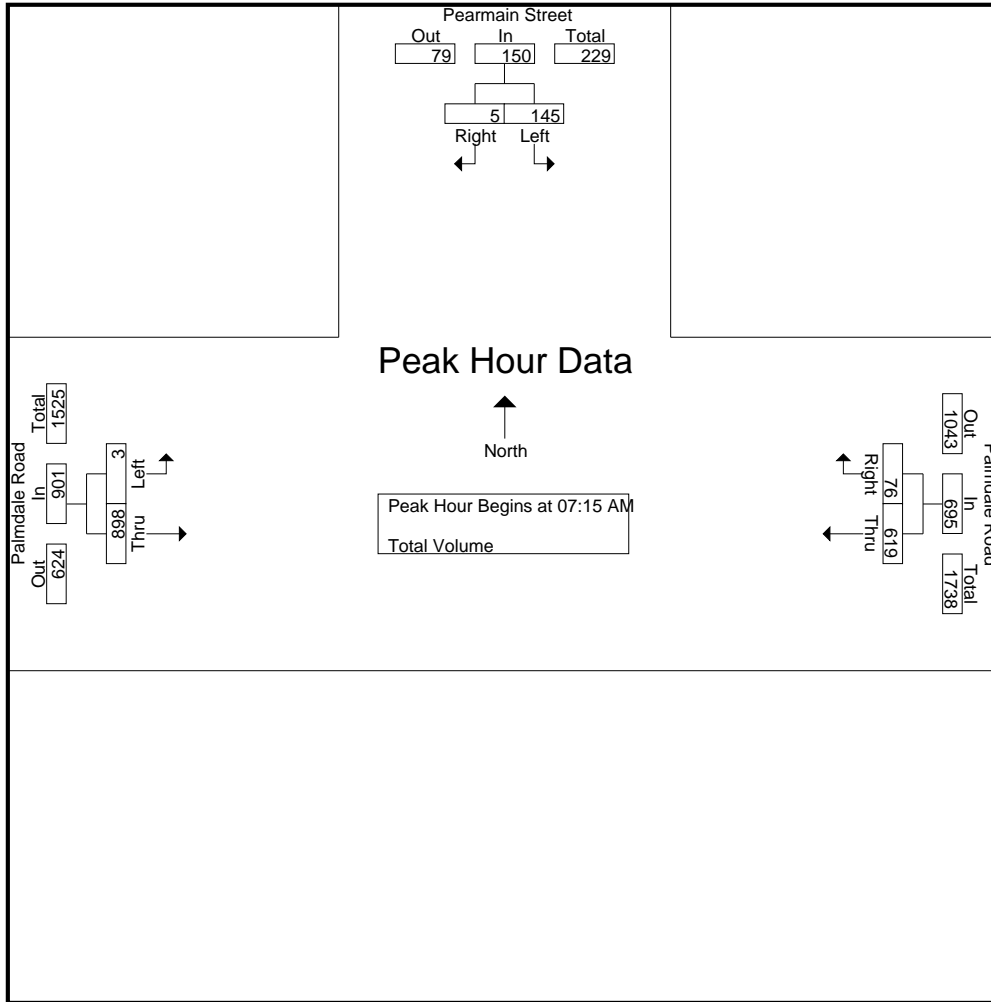
Start Time	Pearmain Street Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
07:15 AM	38	1	39	143	15	158	0	204	204	401
07:30 AM	40	1	41	161	18	179	0	247	247	467
07:45 AM	40	2	42	191	28	219	1	229	230	491
08:00 AM	27	1	28	124	15	139	2	218	220	387
Total Volume	145	5	150	619	76	695	3	898	901	1746
% App. Total	96.7	3.3		89.1	10.9		0.3	99.7		
PHF	.906	.625	.893	.810	.679	.793	.375	.909	.912	.889

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

Peak Hour for Entire Intersection Begins at 07:15 AM

City of Adelanto
 N/S: Pearmain Street
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADLPE18AM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	07:00 AM			07:15 AM			07:30 AM		
+0 mins.	33	1	34	143	15	158	0	247	247
+15 mins.	38	1	39	161	18	179	1	229	230
+30 mins.	40	1	41	191	28	219	2	218	220
+45 mins.	40	2	42	124	15	139	2	205	207
Total Volume	151	5	156	619	76	695	5	899	904
% App. Total	96.8	3.2		89.1	10.9		0.6	99.4	
PHF	.944	.625	.929	.810	.679	.793	.625	.910	.915

City of Adelanto
 N/S: Pearmain Street
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADLPE18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 1

Groups Printed- Total Volume

Start Time	Pearmain Street Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	17	0	17	192	50	242	2	240	242	501
04:15 PM	30	2	32	211	41	252	1	240	241	525
04:30 PM	25	0	25	188	42	230	2	271	273	528
04:45 PM	26	0	26	221	49	270	1	200	201	497
Total	98	2	100	812	182	994	6	951	957	2051
05:00 PM	33	0	33	203	60	263	1	156	157	453
05:15 PM	13	1	14	223	59	282	6	196	202	498
05:30 PM	23	3	26	218	58	276	0	213	213	515
05:45 PM	17	1	18	207	62	269	0	153	153	440
Total	86	5	91	851	239	1090	7	718	725	1906
Grand Total	184	7	191	1663	421	2084	13	1669	1682	3957
Apprch %	96.3	3.7		79.8	20.2		0.8	99.2		
Total %	4.6	0.2	4.8	42	10.6	52.7	0.3	42.2	42.5	

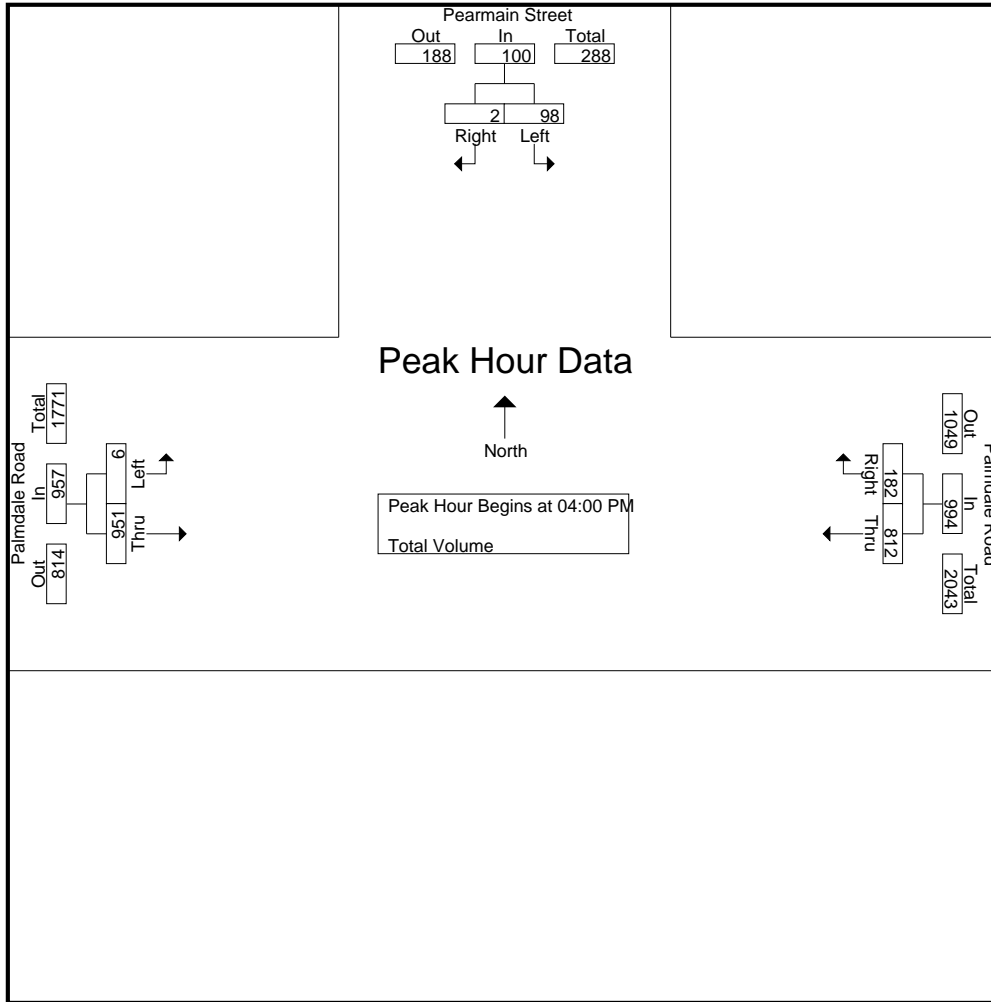
Start Time	Pearmain Street Southbound			Palmdale Road Westbound			Palmdale Road Eastbound			Int. Total
	Left	Right	App. Total	Thru	Right	App. Total	Left	Thru	App. Total	
04:00 PM	17	0	17	192	50	242	2	240	242	501
04:15 PM	30	2	32	211	41	252	1	240	241	525
04:30 PM	25	0	25	188	42	230	2	271	273	528
04:45 PM	26	0	26	221	49	270	1	200	201	497
Total Volume	98	2	100	812	182	994	6	951	957	2051
% App. Total	98	2		81.7	18.3		0.6	99.4		
PHF	.817	.250	.781	.919	.910	.920	.750	.877	.876	.971

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

Peak Hour for Entire Intersection Begins at 04:00 PM

City of Adelanto
 N/S: Pearmain Street
 E/W: Palmdale Road (SR-18)
 Weather: Clear

File Name : ADLPE18PM
 Site Code : 99917016
 Start Date : 1/18/2017
 Page No : 2



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

	04:15 PM			04:45 PM			04:00 PM		
+0 mins.	30	2	32	221	49	270	2	240	242
+15 mins.	25	0	25	203	60	263	1	240	241
+30 mins.	26	0	26	223	59	282	2	271	273
+45 mins.	33	0	33	218	58	276	1	200	201
Total Volume	114	2	116	865	226	1091	6	951	957
% App. Total	98.3	1.7		79.3	20.7		0.6	99.4	
PHF	.864	.250	.879	.970	.942	.967	.750	.877	.876

Counts Unlimited, Inc.

City of Victorville
 United States 395
 B/ Seneca Road - Palmdale Road
 24 Hour Directional Volume Count

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

VIC005RD
 Site Code: 999-17016

Start Time	18-Jan-17 Wed	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		62	218			39	238				
12:15		46	232			40	231				
12:30		44	259			30	227				
12:45		35	246	187	955	43	208	152	904	339	1859
01:00		21	206			26	225				
01:15		35	236			26	235				
01:30		36	244			33	254				
01:45		32	250	124	936	24	250	109	964	233	1900
02:00		37	260			38	276				
02:15		27	246			27	246				
02:30		23	271			30	265				
02:45		25	274	112	1051	40	305	135	1092	247	2143
03:00		45	268			44	255				
03:15		28	246			56	270				
03:30		40	226			58	264				
03:45		32	250	145	990	63	296	221	1085	366	2075
04:00		51	250			68	256				
04:15		78	235			65	241				
04:30		115	266			75	261				
04:45		115	256	359	1007	94	256	302	1014	661	2021
05:00		72	250			83	241				
05:15		121	251			64	279				
05:30		140	239			120	266				
05:45		140	284	473	1024	113	242	380	1028	853	2052
06:00		127	253			138	246				
06:15		140	297			140	203				
06:30		169	208			155	193				
06:45		200	207	636	965	172	155	605	797	1241	1762
07:00		183	189			176	185				
07:15		245	185			196	170				
07:30		246	177			220	171				
07:45		225	152	899	703	206	121	798	647	1697	1350
08:00		191	172			184	137				
08:15		212	152			204	138				
08:30		206	133			164	94				
08:45		199	116	808	573	181	104	733	473	1541	1046
09:00		161	129			221	99				
09:15		151	117			198	99				
09:30		168	133			199	112				
09:45		189	133	669	512	180	97	798	407	1467	919
10:00		208	99			218	78				
10:15		175	94			189	84				
10:30		196	83			230	91				
10:45		156	90	735	366	184	81	821	334	1556	700
11:00		175	81			205	64				
11:15		218	73			234	37				
11:30		220	86			227	40				
11:45		187	64	800	304	218	50	884	191	1684	495
Total		5947	9386	5947	9386	5938	8936	5938	8936	11885	18322
Combined Total		15333		15333		14874		14874		30207	
AM Peak	-	07:15	-	-	-	11:00	-	-	-	-	-
Vol.	-	907	-	-	-	884	-	-	-	-	-
P.H.F.		0.922				0.944					
PM Peak	-	-	05:30	-	-	-	02:30	-	-	-	-
Vol.	-	-	1073	-	-	-	1095	-	-	-	-
P.H.F.			0.903				0.898				
Percentage		38.8%	61.2%			39.9%	60.1%				
ADT/AADT		ADT 30,207		AADT 30,207							

Counts Unlimited, Inc.

City of Victorville
 United States 395
 B/ Palmdale Road - Dos Palmas Road
 24 Hour Directional Volume Count

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

VIC006
 Site Code: 999-17016

Start Time	18-Jan-17 Wed	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		70	258			48	208				
12:15		50	237			52	224				
12:30		50	230			39	240				
12:45		43	223	213	948	50	227	189	899	402	1847
01:00		33	212			35	287				
01:15		34	223			45	222				
01:30		36	302			40	288				
01:45		35	299	138	1036	35	253	155	1050	293	2086
02:00		34	304			49	266				
02:15		25	246			44	314				
02:30		24	268			42	303				
02:45		31	275	114	1093	58	305	193	1188	307	2281
03:00		44	307			74	287				
03:15		41	280			72	290				
03:30		49	246			85	303				
03:45		43	240	177	1073	76	314	307	1194	484	2267
04:00		65	292			102	316				
04:15		84	262			93	286				
04:30		121	254			108	291				
04:45		122	282	392	1090	142	292	445	1185	837	2275
05:00		89	248			136	290				
05:15		132	276			101	308				
05:30		142	248			162	295				
05:45		170	282	533	1054	167	273	566	1166	1099	2220
06:00		153	268			202	258				
06:15		189	276			180	236				
06:30		193	246			206	224				
06:45		219	253	754	1043	244	207	832	925	1586	1968
07:00		259	228			265	198				
07:15		297	185			268	156				
07:30		324	190			254	183				
07:45		308	147	1188	750	268	169	1055	706	2243	1456
08:00		231	180			217	164				
08:15		230	159			230	166				
08:30		240	157			194	142				
08:45		213	152	914	648	184	135	825	607	1739	1255
09:00		186	130			209	118				
09:15		145	155			213	123				
09:30		208	140			197	128				
09:45		216	141	755	566	186	97	805	466	1560	1032
10:00		206	99			192	97				
10:15		181	109			171	92				
10:30		183	96			222	89				
10:45		159	108	729	412	185	83	770	361	1499	773
11:00		193	87			228	91				
11:15		203	86			207	46				
11:30		249	93			205	55				
11:45		199	77	844	343	245	65	885	257	1729	600
Total		6751	10056	6751	10056	7027	10004	7027	10004	13778	20060
Combined Total		16807		16807		17031		17031		33838	
AM Peak	-	07:00	-	-	-	07:00	-	-	-	-	-
Vol.	-	1188	-	-	-	1055	-	-	-	-	-
P.H.F.	-	0.917	-	-	-	0.984	-	-	-	-	-
PM Peak	-	-	01:30	-	-	-	03:15	-	-	-	-
Vol.	-	-	1151	-	-	-	1223	-	-	-	-
P.H.F.	-	-	0.947	-	-	-	0.968	-	-	-	-
Percentage		40.2%	59.8%			41.3%	58.7%				
ADT/AADT		ADT 33,838		AADT 33,838							

Counts Unlimited, Inc.

City of Victorville
 United States 395
 B/ Luna Road - La Mesa Road
 24 Hour Directional Volume Count

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

VIC008
 Site Code: 999-17016

Start Time	18-Jan-17 Wed	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		51	155			45	171				
12:15		52	168			36	202				
12:30		37	157			52	190				
12:45		33	170	173	650	31	225	164	788	337	1438
01:00		37	181			42	164				
01:15		47	182			48	204				
01:30		33	212			37	192				
01:45		30	175	147	750	50	210	177	770	324	1520
02:00		26	190			54	209				
02:15		19	199			42	228				
02:30		28	212			67	237				
02:45		51	203	124	804	94	243	257	917	381	1721
03:00		22	209			97	224				
03:15		43	215			105	217				
03:30		33	212			106	224				
03:45		68	215	166	851	135	216	443	881	609	1732
04:00		78	194			131	214				
04:15		94	248			142	231				
04:30		82	234			175	197				
04:45		72	224	326	900	182	186	630	828	956	1728
05:00		110	227			133	229				
05:15		106	224			193	212				
05:30		112	254			181	188				
05:45		113	237	441	942	212	169	719	798	1160	1740
06:00		144	216			221	177				
06:15		130	219			236	146				
06:30		138	192			230	141				
06:45		141	210	553	837	216	141	903	605	1456	1442
07:00		167	160			198	120				
07:15		167	175			221	122				
07:30		161	127			232	109				
07:45		142	182	637	644	221	115	872	466	1509	1110
08:00		139	158			193	108				
08:15		134	150			208	82				
08:30		155	117			174	97				
08:45		108	137	536	562	215	79	790	366	1326	928
09:00		104	116			187	86				
09:15		145	130			187	93				
09:30		156	120			192	64				
09:45		148	94	553	460	189	99	755	342	1308	802
10:00		121	102			157	60				
10:15		116	94			190	86				
10:30		118	96			167	74				
10:45		155	82	510	374	182	72	696	292	1206	666
11:00		146	69			171	47				
11:15		164	79			218	52				
11:30		134	76			189	56				
11:45		183	62	627	286	205	45	783	200	1410	486
Total		4793	8060	4793	8060	7189	7253	7189	7253	11982	15313
Combined Total		12853		12853		14442		14442		27295	
AM Peak	-	07:00	-	-	-	06:00	-	-	-	-	-
Vol.	-	637	-	-	-	903	-	-	-	-	-
P.H.F.	-	0.954	-	-	-	0.957	-	-	-	-	-
PM Peak	-	-	05:00	-	-	-	02:15	-	-	-	-
Vol.	-	-	942	-	-	-	932	-	-	-	-
P.H.F.	-	-	0.927	-	-	-	0.959	-	-	-	-
Percentage		37.3%	62.7%			49.8%	50.2%				
ADT/AADT		ADT 27,295		AADT 27,295							

Counts Unlimited, Inc.

City of Victorville
 United States 395
 B/ La Mesa Road - Bear Valley Road
 24 Hour Directional Volume Count

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

VIC009
 Site Code: 999-17016

Start Time	18-Jan-17 Wed	Northbound		Hour Totals		Southbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		53	155			37	139				
12:15		47	159			30	181				
12:30		37	157			32	154				
12:45		31	172	168	643	32	193	131	667	299	1310
01:00		36	172			31	146				
01:15		38	181			35	152				
01:30		37	206			28	166				
01:45		31	164	142	723	38	172	132	636	274	1359
02:00		24	184			40	191				
02:15		18	200			38	177				
02:30		27	211			54	202				
02:45		49	197	118	792	77	213	209	783	327	1575
03:00		21	197			79	193				
03:15		42	209			95	188				
03:30		32	201			96	194				
03:45		59	221	154	828	108	191	378	766	532	1594
04:00		75	196			122	159				
04:15		91	236			125	204				
04:30		82	233			142	168				
04:45		70	217	318	882	174	174	563	705	881	1587
05:00		106	219			120	193				
05:15		105	229			163	184				
05:30		108	249			166	175				
05:45		111	233	430	930	182	145	631	697	1061	1627
06:00		133	206			192	162				
06:15		130	214			192	124				
06:30		126	198			211	121				
06:45		145	197	534	815	179	123	774	530	1308	1345
07:00		150	167			176	101				
07:15		162	163			183	109				
07:30		170	134			189	96				
07:45		138	173	620	637	184	97	732	403	1352	1040
08:00		135	149			167	92				
08:15		129	150			199	87				
08:30		153	109			124	81				
08:45		108	128	525	536	185	73	675	333	1200	869
09:00		92	123			183	70				
09:15		150	131			138	68				
09:30		149	118			159	58				
09:45		150	90	541	462	154	81	634	277	1175	739
10:00		117	97			136	46				
10:15		117	92			149	61				
10:30		113	96			138	54				
10:45		146	82	493	367	148	59	571	220	1064	587
11:00		145	60			161	36				
11:15		167	77			152	38				
11:30		128	73			159	30				
11:45		173	58	613	268	168	33	640	137	1253	405
Total		4656	7883	4656	7883	6070	6154	6070	6154	10726	14037
Combined Total		12539		12539		12224		12224		24763	
AM Peak	-	06:45	-	-	-	05:45	-	-	-	-	-
Vol.	-	627	-	-	-	777	-	-	-	-	-
P.H.F.	-	0.922	-	-	-	0.921	-	-	-	-	-
PM Peak	-	-	05:00	-	-	-	02:30	-	-	-	-
Vol.	-	-	930	-	-	-	796	-	-	-	-
P.H.F.	-	-	0.934	-	-	-	0.934	-	-	-	-
Percentage		37.1%	62.9%			49.7%	50.3%				
ADT/AADT		ADT 24,763		AADT 24,763							

Counts Unlimited, Inc.

City of Victorville
 Palmdale Road
 B/ United States 395 - Cobalt Road
 24 Hour Directional Volume Count

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

VIC002
 Site Code: 999-17016

Start Time	18-Jan-17 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		28	145			10	182				
12:15		19	205			18	188				
12:30		11	175			14	191				
12:45		14	207	72	732	7	185	49	746	121	1478
01:00		11	180			15	210				
01:15		9	197			11	190				
01:30		5	169			11	201				
01:45		11	220	36	766	14	242	51	843	87	1609
02:00		7	224			17	249				
02:15		8	199			9	237				
02:30		7	206			13	234				
02:45		3	187	25	816	7	228	46	948	71	1764
03:00		10	199			9	219				
03:15		15	213			19	194				
03:30		16	177			12	234				
03:45		18	230	59	819	18	218	58	865	117	1684
04:00		16	211			11	247				
04:15		14	236			24	218				
04:30		13	251			37	209				
04:45		33	212	76	910	30	237	102	911	178	1821
05:00		28	169			47	254				
05:15		34	181			51	283				
05:30		55	175			63	250				
05:45		48	182	165	707	68	209	229	996	394	1703
06:00		55	139			55	221				
06:15		80	165			63	169				
06:30		107	148			84	162				
06:45		119	136	361	588	105	153	307	705	668	1293
07:00		124	119			88	128				
07:15		160	118			105	137				
07:30		210	92			138	136				
07:45		213	101	707	430	162	123	493	524	1200	954
08:00		169	94			139	122				
08:15		188	94			137	87				
08:30		178	79			111	118				
08:45		143	79	678	346	112	94	499	421	1177	767
09:00		141	64			111	88				
09:15		144	77			111	95				
09:30		185	79			112	77				
09:45		179	51	649	271	125	81	459	341	1108	612
10:00		174	59			118	76				
10:15		160	34			151	66				
10:30		166	37			153	41				
10:45		170	34	670	164	148	44	570	227	1240	391
11:00		177	39			164	57				
11:15		172	32			186	29				
11:30		180	20			157	23				
11:45		159	17	688	108	166	30	673	139	1361	247
Total		4186	6657	4186	6657	3536	7666	3536	7666	7722	14323
Combined Total		10843		10843		11202		11202		22045	
AM Peak	-	07:30	-	-	-	11:00	-	-	-	-	-
Vol.	-	780	-	-	-	673	-	-	-	-	-
P.H.F.	-	0.915	-	-	-	0.905	-	-	-	-	-
PM Peak	-	-	03:45	-	-	-	04:45	-	-	-	-
Vol.	-	-	928	-	-	-	1024	-	-	-	-
P.H.F.	-	-	0.924	-	-	-	0.905	-	-	-	-
Percentage		38.6%	61.4%			31.6%	68.4%				
ADT/AADT		ADT 22,045		AADT 22,045							

Counts Unlimited, Inc.

City of Victorville
 Palmdale Road
 B/ Cobalt Road - Amethyst Road
 24 Hour Directional Volume Count

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

VIC003
 Site Code: 999-17016

Start Time	18-Jan-17 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		28	160			15	180				
12:15		18	201			22	187				
12:30		16	177			17	219				
12:45		13	208	75	746	10	188	64	774	139	1520
01:00		7	203			20	228				
01:15		7	174			12	237				
01:30		6	198			12	225				
01:45		12	259	32	834	21	218	65	908	97	1742
02:00		10	224			13	237				
02:15		5	207			8	218				
02:30		10	214			15	223				
02:45		7	201	32	846	7	232	43	910	75	1756
03:00		14	199			14	212				
03:15		13	202			20	220				
03:30		18	192			12	257				
03:45		21	216	66	809	19	224	65	913	131	1722
04:00		17	209			11	254				
04:15		17	250			22	221				
04:30		21	263			37	222				
04:45		43	225	98	947	25	243	95	940	193	1887
05:00		41	172			43	266				
05:15		43	164			48	306				
05:30		66	182			63	252				
05:45		67	189	217	707	57	230	211	1054	428	1761
06:00		56	138			49	236				
06:15		94	179			69	188				
06:30		112	147			87	179				
06:45		110	135	372	599	115	146	320	749	692	1348
07:00		140	121			126	149				
07:15		193	122			142	148				
07:30		232	101			172	153				
07:45		223	114	788	458	152	121	592	571	1380	1029
08:00		208	89			112	120				
08:15		202	88			129	91				
08:30		175	90			108	127				
08:45		162	71	747	338	124	106	473	444	1220	782
09:00		151	65			107	92				
09:15		167	70			113	84				
09:30		189	71			112	79				
09:45		185	50	692	256	127	77	459	332	1151	588
10:00		175	62			117	75				
10:15		158	36			138	68				
10:30		165	34			159	49				
10:45		193	34	691	166	151	46	565	238	1256	404
11:00		177	46			173	55				
11:15		167	27			180	29				
11:30		202	22			159	29				
11:45		161	20	707	115	189	30	701	143	1408	258
Total		4517	6821	4517	6821	3653	7976	3653	7976	8170	14797
Combined Total		11338		11338		11629		11629		22967	
AM Peak	-	07:30	-	-	-	11:00	-	-	-	-	-
Vol.	-	865	-	-	-	701	-	-	-	-	-
P.H.F.	-	0.932	-	-	-	0.927	-	-	-	-	-
PM Peak	-	-	04:00	-	-	-	04:45	-	-	-	-
Vol.	-	-	947	-	-	-	1067	-	-	-	-
P.H.F.	-	-	0.900	-	-	-	0.872	-	-	-	-
Percentage		39.8%	60.2%			31.4%	68.6%				
ADT/AADT		ADT 22,967		AADT 22,967							

Counts Unlimited, Inc.

City of Victorville
 Palmdale Road
 B/ Amethyst Road - El Evado Road
 24 Hour Directional Volume Count

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

VIC004
 Site Code: 999-17016

Start Time	18-Jan-17 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		24	178			18	167				
12:15		16	185			19	217				
12:30		16	187			9	194				
12:45		12	204	68	754	15	233	61	811	129	1565
01:00		7	202			16	205				
01:15		7	159			7	237				
01:30		7	220			17	191				
01:45		11	248	32	829	14	238	54	871	86	1700
02:00		13	214			9	218				
02:15		5	223			19	233				
02:30		9	212			7	217				
02:45		8	220	35	869	16	186	51	854	86	1723
03:00		15	219			14	227				
03:15		13	195			13	244				
03:30		20	197			14	238				
03:45		21	205	69	816	6	219	47	928	116	1744
04:00		16	191			22	207				
04:15		20	255			30	213				
04:30		28	227			23	267				
04:45		41	229	105	902	30	283	105	970	210	1872
05:00		47	169			37	284				
05:15		48	179			55	242				
05:30		62	195			45	237				
05:45		71	175	228	718	53	215	190	978	418	1696
06:00		55	149			70	194				
06:15		92	149			98	165				
06:30		106	159			117	154				
06:45		143	131	396	588	116	145	401	658	797	1246
07:00		151	117			137	141				
07:15		201	109			152	148				
07:30		223	95			135	115				
07:45		280	112	855	433	115	116	539	520	1394	953
08:00		213	82			112	90				
08:15		223	89			105	122				
08:30		210	80			118	95				
08:45		171	65	817	316	93	85	428	392	1245	708
09:00		170	50			107	73				
09:15		166	60			119	67				
09:30		193	59			120	70				
09:45		199	43	728	212	113	77	459	287	1187	499
10:00		167	49			131	53				
10:15		191	36			153	47				
10:30		183	32			137	54				
10:45		190	35	731	152	172	56	593	210	1324	362
11:00		190	34			163	26				
11:15		182	22			160	27				
11:30		190	16			177	30				
11:45		159	17	721	89	189	18	689	101	1410	190
Total		4785	6678	4785	6678	3617	7580	3617	7580	8402	14258
Combined Total		11463		11463		11197		11197		22660	
AM Peak	-	07:30	-	-	-	11:00	-	-	-	-	-
Vol.	-	939	-	-	-	689	-	-	-	-	-
P.H.F.	-	0.838	-	-	-	0.911	-	-	-	-	-
PM Peak	-	-	01:30	-	-	-	04:30	-	-	-	-
Vol.	-	-	905	-	-	-	1076	-	-	-	-
P.H.F.	-	-	0.912	-	-	-	0.947	-	-	-	-
Percentage		41.7%	58.3%			32.3%	67.7%				
ADT/AADT		ADT 22,660		AADT 22,660							

Counts Unlimited, Inc.

City of Victorville
 Luna Road
 B/ United States 395 - Mesa Linda Avenue
 24 Hour Directional Volume Count

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

VIC010
 Site Code: 999-17016

Start Time	18-Jan-17 Wed	Eastbound		Hour Totals		Westbound		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		8	31			6	27				
12:15		6	30			0	22				
12:30		2	34			3	33				
12:45		7	42	23	137	4	27	13	109	36	246
01:00		4	39			8	31				
01:15		8	53			3	40				
01:30		4	42			7	64				
01:45		3	42	19	176	3	54	21	189	40	365
02:00		2	51			1	39				
02:15		4	41			2	43				
02:30		3	54			3	58				
02:45		1	49	10	195	5	47	11	187	21	382
03:00		2	41			13	38				
03:15		1	51			9	23				
03:30		3	38			18	37				
03:45		7	46	13	176	9	35	49	133	62	309
04:00		4	48			16	43				
04:15		3	49			18	42				
04:30		3	67			23	38				
04:45		8	50	18	214	20	37	77	160	95	374
05:00		6	43			15	43				
05:15		6	60			23	39				
05:30		8	65			25	43				
05:45		20	46	40	214	35	39	98	164	138	378
06:00		17	47			29	31				
06:15		21	45			30	34				
06:30		34	41			37	33				
06:45		63	44	135	177	46	26	142	124	277	301
07:00		42	32			75	28				
07:15		52	28			59	27				
07:30		41	34			47	32				
07:45		44	31	179	125	49	15	230	102	409	227
08:00		29	30			54	19				
08:15		29	30			38	22				
08:30		23	22			23	23				
08:45		18	27	99	109	28	25	143	89	242	198
09:00		21	28			22	16				
09:15		18	16			21	9				
09:30		21	26			30	18				
09:45		26	16	86	86	29	10	102	53	188	139
10:00		15	18			30	7				
10:15		32	17			19	11				
10:30		27	10			19	6				
10:45		25	9	99	54	25	11	93	35	192	89
11:00		25	6			36	5				
11:15		29	9			23	5				
11:30		38	8			17	7				
11:45		35	8	127	31	36	4	112	21	239	52
Total		848	1694	848	1694	1091	1366	1091	1366	1939	3060
Combined Total		2542		2542		2457		2457		4999	
AM Peak	-	06:45	-	-	-	07:00	-	-	-	-	-
Vol.	-	198	-	-	-	230	-	-	-	-	-
P.H.F.		0.786				0.767					
PM Peak	-	-	04:30	-	-	-	01:30	-	-	-	-
Vol.	-	-	220	-	-	-	200	-	-	-	-
P.H.F.			0.821				0.781				
Percentage		33.4%	66.6%			44.4%	55.6%				
ADT/AADT		ADT 4,999		AADT 4,999							

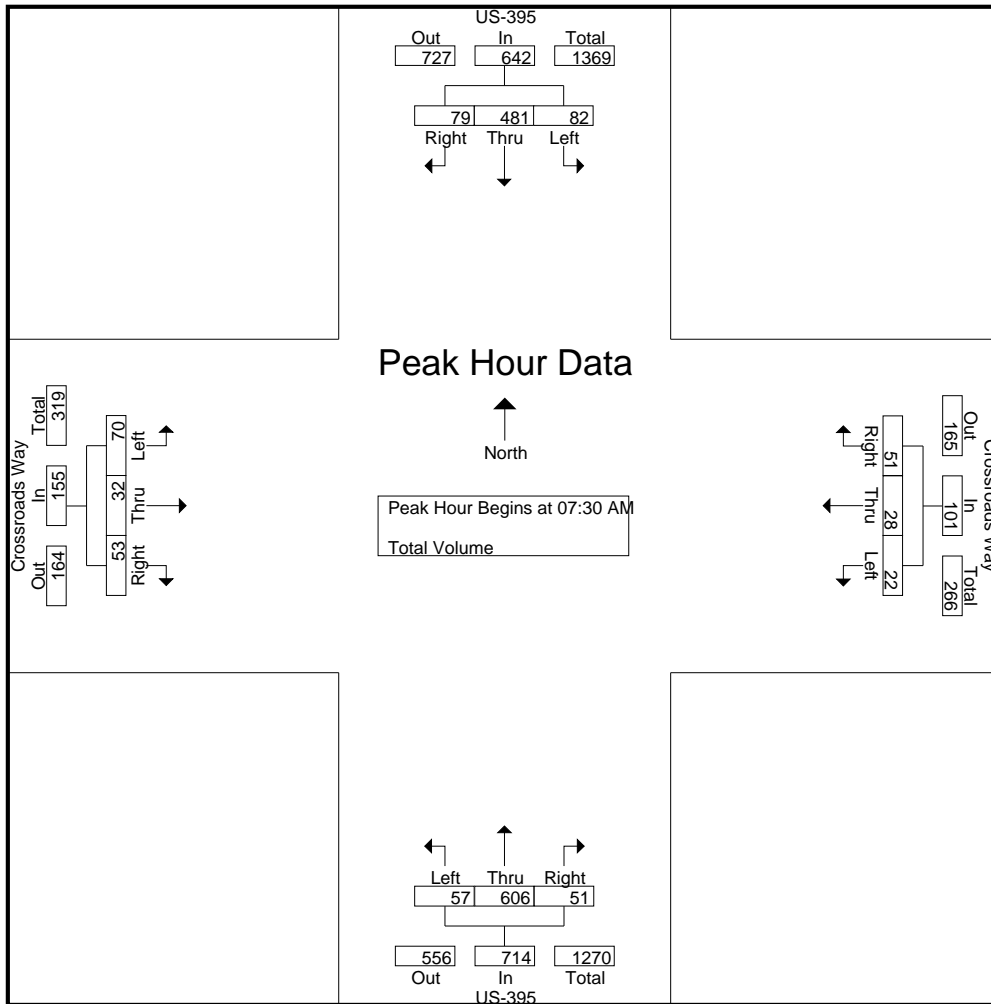
City of Victorville
 N/S: US-395
 E/W: Crossroads Way
 Weather: Clear

File Name : VIC_395_Crossroads AM
 Site Code : 99918035
 Start Date : 1/17/2018
 Page No : 1

Groups Printed- Total Volume

Start Time	US-395 Southbound				Crossroads Way Westbound				US-395 Northbound				Crossroads Way Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
07:00 AM	8	147	13	168	1	4	14	19	7	154	6	167	21	1	16	38	392
07:15 AM	9	112	9	130	5	4	8	17	11	167	9	187	14	6	10	30	364
07:30 AM	19	130	14	163	5	3	7	15	23	197	14	234	18	3	12	33	445
07:45 AM	12	131	24	167	7	12	12	31	14	138	11	163	16	1	15	32	393
Total	48	520	60	628	18	23	41	82	55	656	40	751	69	11	53	133	1594
08:00 AM	24	119	23	166	2	6	12	20	8	137	14	159	17	16	13	46	391
08:15 AM	27	101	18	146	8	7	20	35	12	134	12	158	19	12	13	44	383
08:30 AM	16	105	15	136	6	6	16	28	17	114	10	141	22	12	17	51	356
08:45 AM	19	98	12	129	10	6	15	31	19	139	12	170	15	12	18	45	375
Total	86	423	68	577	26	25	63	114	56	524	48	628	73	52	61	186	1505
Grand Total	134	943	128	1205	44	48	104	196	111	1180	88	1379	142	63	114	319	3099
Apprch %	11.1	78.3	10.6		22.4	24.5	53.1		8	85.6	6.4		44.5	19.7	35.7		
Total %	4.3	30.4	4.1	38.9	1.4	1.5	3.4	6.3	3.6	38.1	2.8	44.5	4.6	2	3.7	10.3	

Start Time	US-395 Southbound				Crossroads Way Westbound				US-395 Northbound				Crossroads Way Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	19	130	14	163	5	3	7	15	23	197	14	234	18	3	12	33	445
07:45 AM	12	131	24	167	7	12	12	31	14	138	11	163	16	1	15	32	393
08:00 AM	24	119	23	166	2	6	12	20	8	137	14	159	17	16	13	46	391
08:15 AM	27	101	18	146	8	7	20	35	12	134	12	158	19	12	13	44	383
Total Volume	82	481	79	642	22	28	51	101	57	606	51	714	70	32	53	155	1612
% App. Total	12.8	74.9	12.3		21.8	27.7	50.5		8	84.9	7.1		45.2	20.6	34.2		
PHF	.759	.918	.823	.961	.688	.583	.638	.721	.620	.769	.911	.763	.921	.500	.883	.842	.906



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

	07:30 AM				07:45 AM				07:00 AM				08:00 AM			
+0 mins.	19	130	14	163	7	12	12	31	7	154	6	167	17	16	13	46
+15 mins.	12	131	24	167	2	6	12	20	11	167	9	187	19	12	13	44
+30 mins.	24	119	23	166	8	7	20	35	23	197	14	234	22	12	17	51
+45 mins.	27	101	18	146	6	6	16	28	14	138	11	163	15	12	18	45
Total Volume	82	481	79	642	23	31	60	114	55	656	40	751	73	52	61	186
% App. Total	12.8	74.9	12.3		20.2	27.2	52.6		7.3	87.4	5.3		39.2	28	32.8	
PHF	.759	.918	.823	.961	.719	.646	.750	.814	.598	.832	.714	.802	.830	.813	.847	.912

City of Victorville
 N/S: US-395
 E/W: Crossroads Way
 Weather: Clear

File Name : VIC_395_Crossroads PM
 Site Code : 99918035
 Start Date : 1/17/2018
 Page No : 1

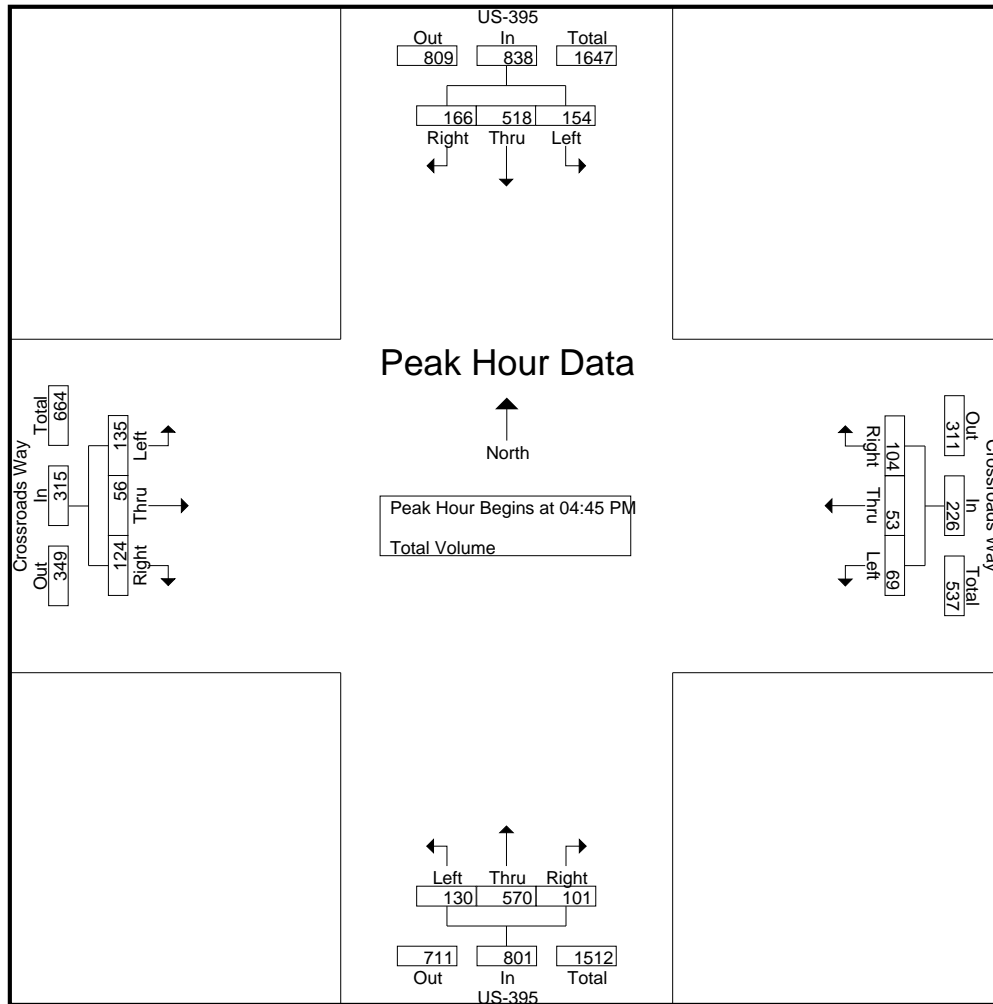
Groups Printed- Total Volume

Start Time	US-395 Southbound				Crossroads Way Westbound				US-395 Northbound				Crossroads Way Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
04:00 PM	44	124	35	203	10	6	30	46	27	155	21	203	36	16	22	74	526
04:15 PM	40	156	27	223	16	11	26	53	20	130	18	168	35	9	29	73	517
04:30 PM	35	114	19	168	19	17	29	65	30	130	20	180	38	17	37	92	505
04:45 PM	47	139	42	228	17	11	25	53	31	143	31	205	32	13	33	78	564
Total	166	533	123	822	62	45	110	217	108	558	90	756	141	55	121	317	2112
05:00 PM	31	132	41	204	17	22	26	65	35	130	28	193	30	18	31	79	541
05:15 PM	33	113	49	195	18	10	31	59	27	133	23	183	39	14	30	83	520
05:30 PM	43	134	34	211	17	10	22	49	37	164	19	220	34	11	30	75	555
05:45 PM	44	102	25	171	11	11	30	52	35	169	25	229	40	19	32	91	543
Total	151	481	149	781	63	53	109	225	134	596	95	825	143	62	123	328	2159
Grand Total	317	1014	272	1603	125	98	219	442	242	1154	185	1581	284	117	244	645	4271
Apprch %	19.8	63.3	17		28.3	22.2	49.5		15.3	73	11.7		44	18.1	37.8		
Total %	7.4	23.7	6.4	37.5	2.9	2.3	5.1	10.3	5.7	27	4.3	37	6.6	2.7	5.7	15.1	

Start Time	US-395 Southbound				Crossroads Way Westbound				US-395 Northbound				Crossroads Way Eastbound				Int. Total
	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	47	139	42	228	17	11	25	53	31	143	31	205	32	13	33	78	564
05:00 PM	31	132	41	204	17	22	26	65	35	130	28	193	30	18	31	79	541
05:15 PM	33	113	49	195	18	10	31	59	27	133	23	183	39	14	30	83	520
05:30 PM	43	134	34	211	17	10	22	49	37	164	19	220	34	11	30	75	555
Total Volume	154	518	166	838	69	53	104	226	130	570	101	801	135	56	124	315	2180
% App. Total	18.4	61.8	19.8		30.5	23.5	46		16.2	71.2	12.6		42.9	17.8	39.4		
PHF	.819	.932	.847	.919	.958	.602	.839	.869	.878	.869	.815	.910	.865	.778	.939	.949	.966

City of Victorville
 N/S: US-395
 E/W: Crossroads Way
 Weather: Clear

File Name : VIC_395_Crossroads PM
 Site Code : 99918035
 Start Date : 1/17/2018
 Page No : 2



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

	04:45 PM				04:30 PM				05:00 PM				04:30 PM			
+0 mins.	47	139	42	228	19	17	29	65	35	130	28	193	38	17	37	92
+15 mins.	31	132	41	204	17	11	25	53	27	133	23	183	32	13	33	78
+30 mins.	33	113	49	195	17	22	26	65	37	164	19	220	30	18	31	79
+45 mins.	43	134	34	211	18	10	31	59	35	169	25	229	39	14	30	83
Total Volume	154	518	166	838	71	60	111	242	134	596	95	825	139	62	131	332
% App. Total	18.4	61.8	19.8		29.3	24.8	45.9		16.2	72.2	11.5		41.9	18.7	39.5	
PHF	.819	.932	.847	.919	.934	.682	.895	.931	.905	.882	.848	.901	.891	.861	.885	.902

APPENDIX D
HCM Analysis Worksheets

Existing Conditions

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Stater Bros Dwy at Palmdale

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	L	T	R	L	T	R	L	T	*R*
Movement 1: 11 secs	X											
Movement 2: 68 secs		X			X	X						
Movement 3: 21 secs										X		X
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2			2	1				1		1
Unadjusted Volume	54	986			559	8				46		92
Peak Hour Factor (PHF)	0.91	0.91			0.81	0.81				0.89		0.89
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600			3600					1700		
Min. Time or Ped. Time	10	20			20	20				10		20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00			1.00	1.00				1.00		1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***	***								***
Pk. Hr. Vol. (vph)	59	1084			690	10			52	103
Saturation Flow (vph)	1700	3600			3600	1800			1700	1800
X or V/C	0.39	0.46			0.29	0.01			0.16	0.30
Effective green (sec)	9	66			66	66			19	19
Split Time (sec)	11	68			68	68			21	21
Min. Time or Ped. Time (sec)	10	20			20	20			10	20
Delay - 15 min pk (sec/veh)	50	9			7	6			35	37
Level of Service (LOS)	D-	A			A	A			C-	D+
Average 'Q' (veh/ln)	2	5			3	1			1	2
Design 'Q'- ft/ln	60	160			100	40			40	60
Do Vehicles Clear?	YES	YES			YES	YES			YES	YES

Summary

Whole Intersection		Weighted Avg Delay (sec) =	12
		Level of Service - LOS =	B
Critical Movements		Weighted Avg Delay (sec) =	13
		Level of Service - LOS =	B
		Intersection Capacity Utilization - ICU =	0.42
Predetermined Cycle Length is 100 sec			
Min./Ped. Times Satisfied			

WEBSTER
Webster Based Signal Timing Evaluation Routine
 For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Stater Bros Dwy at Palmdale

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	L	T	R	L	T	R	L	T	*R*
Movement 1: 12 secs	X											
Movement 2: 36 secs		X			X	X						
Movement 3: 22 secs										X		X
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2			2	1				1		1
Unadjusted Volume	119	919			774	12				104		227
Peak Hour Factor (PHF)	0.88	0.88			0.92	0.92				0.93		0.93
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600			3600					1700		
Min. Time or Ped. Time	10	20			20	20				10		20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00			1.00	1.00				1.00		1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***	***								***
Pk. Hr. Vol. (vph)	135	1044			841	13			112	244
Saturation Flow (vph)	1700	3600			3600	1800			1700	1800
X or V/C	0.56	0.60			0.48	0.01			0.23	0.47
Effective green (sec)	10	34			34	34			20	20
Split Time (sec)	12	36			36	36			22	22
Min. Time or Ped. Time (sec)	10	20			20	20			10	20
Delay - 15 min pk (sec/veh)	37	15			13	9			20	24
Level of Service (LOS)	D+	B			B	A			C+	C+
Average 'Q' (veh/ln)	2	5			4	1			2	3
Design 'Q'- ft/ln	60	160			120	40			60	100
Do Vehicles Clear?	YES	YES			YES	YES			YES	YES

Summary

Whole Intersection		Weighted Avg Delay (sec) =	16
		Level of Service - LOS =	B
Critical Movements		Weighted Avg Delay (sec) =	18
		Level of Service - LOS =	B
		Intersection Capacity Utilization - ICU =	0.55
Predetermined Cycle Length is 70 sec			
Min./Ped. Times Satisfied			

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

US395 and Palmdale

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	*R*	L	T	R	*L*	*T*	R	L	T	R
Movement 1: 14 secs	X			X								
Movement 2: 37 secs		X	X		X	X						
Movement 3: 30 secs							X			X		
Movement 4: 39 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	2	2	1	1	2	S	1	2	1
Unadjusted Volume	105	520	413	106	303	91	305	691	160	124	457	39
Peak Hour Factor (PHF)	0.90	0.90	0.90	0.82	0.82	0.82	0.89	0.89	0.89	0.88	0.88	0.88
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		3200	3600		1700	3600	Shrd	1700	3600	
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***			***		
Pk. Hr. Vol. (vph)	117	578	459	129	370	111	343	776	180	141	519	44
Saturation Flow (vph)	1700	3600	1800	3200	3600	1800	1700	3600	Shrd	1700	3600	1800
X or V/C	0.69	0.55	0.87	0.40	0.35	0.21	0.86	0.86	-	0.36	0.47	0.08
Effective green (sec)	12	35	35	12	35	35	28	37	-	28	37	37
Split Time (sec)	14	37	37	14	37	37	30	39	-	30	39	39
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	-	10	20	20
Delay - 15 min pk (sec/veh)	73	38	58	54	34	33	66	48	-	41	35	30
Level of Service (LOS)	E	D+	E+	D-	C-	C-	E	D	-	D	C-	C
Average 'Q' (veh/ln)	4	7	11	2	4	3	9	11	-	4	6	1
Design 'Q'- ft/ln	120	220	340	60	120	100	280	340	-	120	180	40
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	-	YES	YES	YES

Summary

Whole Intersection		Weighted Avg Delay (sec) =	46
		Level of Service - LOS =	D
Critical Movements		Weighted Avg Delay (sec) =	55
		Level of Service - LOS =	E+
		Intersection Capacity Utilization - ICU =	0.85
Predetermined Cycle Length is 120 sec			
Min./Ped. Times Satisfied			

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

US395 and Palmdale

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	*R*	*L*	T	R	*L*	*T*	R	L	T	R
Movement 1: 13 secs	X			X								
Movement 2: 28 secs		X	X		X	X						
Movement 3: 21 secs							X			X		
Movement 4: 28 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	2	2	1	1	2	S	1	2	1
Unadjusted Volume	102	484	309	254	538	140	269	664	102	140	600	49
Peak Hour Factor (PHF)	0.78	0.78	0.78	0.89	0.89	0.89	0.93	0.93	0.93	0.89	0.89	0.89
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		3200	3600		1700	3600	Shrd	1700	3600	
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

			***	***			***	***				
Pk. Hr. Vol. (vph)	131	621	396	285	604	157	289	714	110	157	674	55
Saturation Flow (vph)	1700	3600	1800	3200	3600	1800	1700	3600	Shrd	1700	3600	1800
X or V/C	0.63	0.60	0.76	0.73	0.58	0.30	0.81	0.79	-	0.44	0.65	0.11
Effective green (sec)	11	26	26	11	26	26	19	26	-	19	26	26
Split Time (sec)	13	28	28	13	28	28	21	28	-	21	28	28
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	-	10	20	20
Delay - 15 min pk (sec/veh)	51	30	39	49	30	26	51	36	-	35	31	24
Level of Service (LOS)	D-	C-	D+	D	C	C	D-	D+	-	C-	C-	C+
Average 'Q' (veh/ln)	3	6	7	3	5	3	6	7	-	3	6	1
Design 'Q'- ft/ln	100	180	220	100	160	100	180	220	-	100	180	40
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	-	YES	YES	YES

Summary

Whole Intersection	Weighted Avg Delay (sec) = 36 Level of Service - LOS = D+
Critical Movements	Weighted Avg Delay (sec) = 41 Level of Service - LOS = D Intersection Capacity Utilization - ICU = 0.78
Predetermined Cycle Length is 90 sec	
Min./Ped. Times Satisfied	

WEBSTER
Webster Based Signal Timing Evaluation Routine
 For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

US-395 and Dos Palmas

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	*R*	L	T	R	*L*	*T*	R
Movement 1: 16 secs	X			X								
Movement 2: 22 secs		X	X		X	X						
Movement 3: 11 secs							X			X		
Movement 4: 31 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	1	1	1	1	1	1	2	1	1	2	S
Unadjusted Volume	168	39	53	35	28	211	17	790	21	127	827	86
Peak Hour Factor (PHF)	0.77	0.77	0.77	0.80	0.80	0.80	0.92	0.92	0.92	0.97	0.97	0.97
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	1800		1700	1800		1700	3600		1700	3600	Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***			***		
Pk. Hr. Vol. (vph)	218	51	69	44	35	264	18	859	23	131	853	89
Saturation Flow (vph)	1700	1800	1800	1700	1800	1800	1700	3600	1800	1700	3600	Shrd
X or V/C	0.73	0.11	0.15	0.15	0.08	0.59	0.09	0.66	0.04	0.68	0.72	-
Effective green (sec)	14	20	20	14	20	20	9	29	29	9	29	-
Split Time (sec)	16	22	22	16	22	22	11	31	31	11	31	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	20	10	20	-
Delay - 15 min pk (sec/veh)	46	24	24	29	23	32	33	24	17	52	25	-
Level of Service (LOS)	D	C+	C+	C	C+	C-	C-	C+	B	D-	C	-
Average 'Q' (veh/ln)	4	1	1	1	1	4	1	6	1	3	7	-
Design 'Q'- ft/ln	120	40	40	40	40	120	40	180	40	100	220	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	-

Summary

Whole Intersection		Weighted Avg Delay (sec) =	29
		Level of Service - LOS =	C
Critical Movements		Weighted Avg Delay (sec) =	32
		Level of Service - LOS =	C-
		Intersection Capacity Utilization - ICU =	0.68
Predetermined Cycle Length is 80 sec			
Min./Ped. Times Satisfied			

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

US-395 and Dos Palmas

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	*R*	L	T	R	*L*	*T*	R
Movement 1: 13 secs	X			X								
Movement 2: 20 secs		X	X		X	X						
Movement 3: 10 secs							X			X		
Movement 4: 47 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	1	1	1	1	1	1	2	1	1	2	S
Unadjusted Volume	123	32	43	14	31	75	34	870	26	84	920	157
Peak Hour Factor (PHF)	0.93	0.93	0.93	0.73	0.73	0.73	0.95	0.95	0.95	0.92	0.92	0.92
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	1800		1700	1800		1700	3600		1700	3600	Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***			***		
Pk. Hr. Vol. (vph)	132	34	46	19	42	103	36	916	27	91	1000	171
Saturation Flow (vph)	1700	1800	1800	1700	1800	1800	1700	3600	1800	1700	3600	Shrd
X or V/C	0.64	0.09	0.13	0.09	0.12	0.29	0.24	0.51	0.03	0.60	0.65	-
Effective green (sec)	11	18	18	11	18	18	8	45	45	8	45	-
Split Time (sec)	13	20	20	13	20	20	10	47	47	10	47	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	20	10	20	-
Delay - 15 min pk (sec/veh)	52	30	30	36	30	33	42	16	11	56	19	-
Level of Service (LOS)	D-	C	C-	D+	C-	C-	D	B	B	E+	B	-
Average 'Q' (veh/ln)	3	1	1	1	1	2	1	6	1	2	7	-
Design 'Q'- ft/ln	100	40	40	40	40	60	40	180	40	60	220	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	-

Summary

Whole Intersection		Weighted Avg Delay (sec) = 22 Level of Service - LOS = C+
Critical Movements		Weighted Avg Delay (sec) = 25 Level of Service - LOS = C+ Intersection Capacity Utilization - ICU = 0.56
Predetermined Cycle Length is 90 sec		
Min./Ped. Times Satisfied		

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

US-395 and Luna

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	*R*	L	T	R	*L*	*T*	R
Movement 1: 26 secs	X	X	X	X	X	X						
Movement 2: 18 secs							X			X		
Movement 3: 26 secs								X	X		X	X
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	1	1	1	1	1	1	2	S	1	2	1
Unadjusted Volume	66	102	86	85	85	270	51	495	34	226	599	82
Peak Hour Factor (PHF)	0.85	0.85	0.85	0.85	0.85	0.85	0.90	0.90	0.90	0.95	0.95	0.95
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)		1800			1800		1700	3600	Shrd	1700	3600	
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***						***			***		
Pk. Hr. Vol. (vph)	78	120	101	100	100	318	57	550	38	238	631	86
Saturation Flow (vph)	900	1800	1800	1200	1800	1800	1700	3600	Shrd	1700	3600	1800
X or V/C	0.25	0.19	0.16	0.24	0.16	0.52	0.15	0.48	-	0.61	0.51	0.14
Effective green (sec)	24	24	24	24	24	24	16	24	-	16	24	24
Split Time (sec)	26	26	26	26	26	26	18	26	-	18	26	26
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	-	10	20	20
Delay - 15 min pk (sec/veh)	19	17	17	18	17	21	22	19	-	31	20	16
Level of Service (LOS)	B	B	B	B	B	C+	C+	B	-	C-	B	B
Average 'Q' (veh/ln)	1	2	1	1	1	4	1	4	-	4	4	1
Design 'Q'- ft/ln	40	60	40	40	40	120	40	120	-	120	120	40
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	-	YES	YES	YES

Summary

Whole Intersection		Weighted Avg Delay (sec) = 20 Level of Service - LOS = C+
Critical Movements		Weighted Avg Delay (sec) = 23 Level of Service - LOS = C+ Intersection Capacity Utilization - ICU = 0.54
Predetermined Cycle Length is 70 sec		
Min./Ped. Times Satisfied		

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

US-395 and Luna

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	*R*	L	*T*	R	*L*	T	R
Movement 1: 25 secs	X	X	X	X	X	X						
Movement 2: 20 secs							X			X		
Movement 3: 35 secs								X	X		X	X
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	1	1	1	1	1	1	2	S	1	2	1
Unadjusted Volume	54	74	33	44	97	163	78	723	72	215	666	79
Peak Hour Factor (PHF)	0.82	0.82	0.82	0.84	0.84	0.84	0.93	0.93	0.93	0.91	0.91	0.91
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)		1800			1800		1700	3600	Shrd	1700	3600	
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***					
Pk. Hr. Vol. (vph)	66	90	40	52	115	194	84	777	77	236	732	87
Saturation Flow (vph)	1100	1800	1800	1300	1800	1800	1700	3600	Shrd	1700	3600	1800
X or V/C	0.21	0.17	0.08	0.14	0.22	0.37	0.22	0.58	-	0.62	0.49	0.12
Effective green (sec)	23	23	23	23	23	23	18	33	-	18	33	33
Split Time (sec)	25	25	25	25	25	25	20	35	-	20	35	35
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	-	10	20	20
Delay - 15 min pk (sec/veh)	23	22	21	22	23	25	27	20	-	35	19	15
Level of Service (LOS)	C+	C+	C+	C+	C+	C+	C	B	-	D+	B	B
Average 'Q' (veh/ln)	1	1	1	1	2	3	1	6	-	4	5	1
Design 'Q'- ft/ln	40	40	40	40	60	100	40	180	-	120	160	40
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	-	YES	YES	YES

Summary

Whole Intersection	Weighted Avg Delay (sec) = 22 Level of Service - LOS = C+
Critical Movements	Weighted Avg Delay (sec) = 23 Level of Service - LOS = C+ Intersection Capacity Utilization - ICU = 0.52
Predetermined Cycle Length is 80 sec	
Min./Ped. Times Satisfied	

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

US-395 and Bear Valley

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	*R*	*L*	T	R	L	T	R	*L*	*T*	R
Movement 1: 20 secs	X	X	X									
Movement 2: 20 secs				X	X	X						
Movement 3: 12 secs							X			X		
Movement 4: 50 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	1	1	2	1	1	1	1
Unadjusted Volume	40	240	126	149	162	92	65	478	65	112	636	16
Peak Hour Factor (PHF)	0.86	0.86	0.86	0.83	0.83	0.83	0.93	0.93	0.93	0.96	0.96	0.96
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		1700	3600		1700	3600		1700	1800	
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***			***		
Pk. Hr. Vol. (vph)	47	279	147	180	195	111	70	514	70	117	662	17
Saturation Flow (vph)	1700	3600	1800	1700	3600	1800	1700	3600	1800	1700	1800	1800
X or V/C	0.16	0.44	0.46	0.60	0.31	0.35	0.42	0.30	0.08	0.70	0.78	0.02
Effective green (sec)	18	18	18	18	18	18	10	48	48	10	48	48
Split Time (sec)	20	20	20	20	20	20	12	50	50	12	50	50
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	20	10	20	20
Delay - 15 min pk (sec/veh)	37	40	42	47	38	40	51	17	15	66	30	14
Level of Service (LOS)	D+	D+	D	D	D+	D+	D-	B	B	E	C	B
Average 'Q' (veh/ln)	1	3	3	4	2	3	2	4	1	3	10	1
Design 'Q'- ft/ln	40	100	100	120	60	100	60	120	40	100	300	40
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Summary

Whole Intersection		Weighted Avg Delay (sec) =	33
		Level of Service - LOS =	C-
Critical Movements		Weighted Avg Delay (sec) =	38
		Level of Service - LOS =	D+
		Intersection Capacity Utilization - ICU =	0.68
Required Cycle Length is 102 sec			
Min./Ped. Times Satisfied			

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

US-395 and Bear Valley

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	L	T	*R*	*L*	T	R	L	*T*	R
Movement 1: 21 secs	X	X	X									
Movement 2: 21 secs				X	X	X						
Movement 3: 17 secs							X			X		
Movement 4: 51 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	1	1	2	1	1	1	1
Unadjusted Volume	33	277	76	87	244	142	153	695	203	155	603	20
Peak Hour Factor (PHF)	0.77	0.77	0.77	0.92	0.92	0.92	0.89	0.89	0.89	0.94	0.94	0.94
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		1700	3600		1700	3600		1700	1800	
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***			***		
Pk. Hr. Vol. (vph)	43	360	99	95	265	154	172	781	228	165	641	21
Saturation Flow (vph)	1700	3600	1800	1700	3600	1800	1700	3600	1800	1700	1800	1800
X or V/C	0.15	0.58	0.32	0.32	0.43	0.50	0.74	0.49	0.28	0.71	0.80	0.03
Effective green (sec)	19	19	19	19	19	19	15	49	49	15	49	49
Split Time (sec)	21	21	21	21	21	21	17	51	51	17	51	51
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	20	10	20	20
Delay - 15 min pk (sec/veh)	40	46	43	43	43	47	65	23	20	62	34	17
Level of Service (LOS)	D+	D	D	D	D	D	E	C+	C+	E	C-	B
Average 'Q' (veh/ln)	1	5	3	2	3	4	5	7	4	5	11	1
Design 'Q'- ft/ln	40	160	100	60	100	120	160	220	120	160	340	40
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Summary

Whole Intersection		Weighted Avg Delay (sec) = 37 Level of Service - LOS = D+
Critical Movements		Weighted Avg Delay (sec) = 43 Level of Service - LOS = D Intersection Capacity Utilization - ICU = 0.69
Predetermined Cycle Length is 110 sec		
Min./Ped. Times Satisfied		

WEBSTER
Webster Based Signal Timing Evaluation Routine
 For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Cantina Drive and Palmdale

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	L	T	R	L	T	R	*L*	T	R
Movement 1: 10 secs	X											
Movement 2: 50 secs		X			X	X						
Movement 3: 10 secs										X		X
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2			2	1				2		1
Unadjusted Volume	9	768			524	61				69		7
Peak Hour Factor (PHF)	0.91	0.91			0.90	0.90				0.67		0.67
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600			3600					3200		
Min. Time or Ped. Time	10	20			20	20				10		20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00			1.00	1.00				1.00		1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***	***							***		
Pk. Hr. Vol. (vph)	10	844			582	68			103		10
Saturation Flow (vph)	1700	3600			3600	1800			3200		1800
X or V/C	0.05	0.34			0.24	0.06			0.28		0.05
Effective green (sec)	8	48			48	48			8		8
Split Time (sec)	10	50			50	50			10		10
Min. Time or Ped. Time (sec)	10	20			20	20			10		20
Delay - 15 min pk (sec/veh)	28	5			4	4			30		28
Level of Service (LOS)	C	A			A	A			C-		C
Average 'Q' (veh/ln)	1	3			2	1			1		1
Design 'Q'- ft/ln	40	100			60	40			40		40
Do Vehicles Clear?	YES	YES			YES	YES			YES		YES

Summary

Whole Intersection		Weighted Avg Delay (sec) =	7
		Level of Service - LOS =	A
Critical Movements		Weighted Avg Delay (sec) =	8
		Level of Service - LOS =	A
		Intersection Capacity Utilization - ICU =	0.30
Predetermined Cycle Length is 70 sec			
Min./Ped. Times May Not Be Satisfied			

WEBSTER
Webster Based Signal Timing Evaluation Routine
 For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Cantina Drive and Palmdale

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	*T*	R	L	T	R	*L*	T	R
Movement 1: 10 secs	X											
Movement 2: 46 secs		X			X	X						
Movement 3: 14 secs										X		X
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2			2	1				2		1
Unadjusted Volume	9	751			816	145				179		21
Peak Hour Factor (PHF)	0.87	0.87			0.89	0.89				0.83		0.83
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600			3600					3200		
Min. Time or Ped. Time	10	20			20	20				10		20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00			1.00	1.00				1.00		1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***				
Pk. Hr. Vol. (vph)	10	863			917	163			216		25
Saturation Flow (vph)	1700	3600			3600	1800			3200		1800
X or V/C	0.05	0.38			0.41	0.14			0.39		0.08
Effective green (sec)	8	44			44	44			12		12
Split Time (sec)	10	46			46	46			14		14
Min. Time or Ped. Time (sec)	10	20			20	20			10		20
Delay - 15 min pk (sec/veh)	28	7			7	6			28		25
Level of Service (LOS)	C	A			A	A			C		C+
Average 'Q' (veh/ln)	1	3			3	1			2		1
Design 'Q'- ft/ln	40	100			100	40			60		40
Do Vehicles Clear?	YES	YES			YES	YES			YES		YES

Summary

Whole Intersection		Weighted Avg Delay (sec) =	9
		Level of Service - LOS =	A
Critical Movements		Weighted Avg Delay (sec) =	11
		Level of Service - LOS =	B
		Intersection Capacity Utilization - ICU =	0.36
Predetermined Cycle Length is 70 sec			
Min./Ped. Times May Not Be Satisfied			

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Cobalt and Palmdale

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	*L*	T	R	L	T	R	L	*T*	R
Movement 1: 13 secs	X			X								
Movement 2: 21 secs		X	X		X	X						
Movement 3: 36 secs							X	X	X	X	X	X
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	S	1	1	1	S	1	S
Unadjusted Volume	21	598	198	182	352	10	125	186	238	13	250	7
Peak Hour Factor (PHF)	0.76	0.76	0.76	0.85	0.85	0.85	0.83	0.83	0.83	0.73	0.73	0.73
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		1700	3600	Shrd		1800		Shrd		Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00	-	1.00	-

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***					
Pk. Hr. Vol. (vph)	28	787	261	214	414	12	151	224	287	18	342	10
Saturation Flow (vph)	1700	3600	1800	1700	3600	Shrd	1000	1800	1800	Shrd	800	Shrd
X or V/C	0.10	0.81	0.53	0.80	0.44	-	0.31	0.26	0.33	-	0.95	-
Effective green (sec)	11	19	19	11	19	-	34	34	34	-	34	-
Split Time (sec)	13	21	21	13	21	-	36	36	36	-	36	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	-	10	20	20	-	20	-
Delay - 15 min pk (sec/veh)	26	31	26	50	22	-	13	11	12	-	52	-
Level of Service (LOS)	C	C-	C	D-	C+	-	B	B	B	-	D-	-
Average 'Q' (veh/ln)	1	6	4	4	3	-	2	2	3	-	5	-
Design 'Q'- ft/ln	40	180	120	120	100	-	60	60	100	-	160	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	-	YES	YES	YES	-	NO	-

Summary

Whole Intersection		Weighted Avg Delay (sec) = 29 Level of Service - LOS = C
Critical Movements		Weighted Avg Delay (sec) = 40 Level of Service - LOS = D+ Intersection Capacity Utilization - ICU = 0.88
Predetermined Cycle Length is 70 sec		
Min./Ped. Times Satisfied		

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Cobalt and Palmdale

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	*L*	T	R	L	T	R	L	*T*	R
Movement 1: 13 secs	X			X								
Movement 2: 35 secs		X	X		X	X						
Movement 3: 22 secs							X	X	X	X	X	X
Movement 4: 0 secs												
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	S	1	1	S	S	1	S
Unadjusted Volume	42	829	55	137	786	13	50	44	11	21	49	27
Peak Hour Factor (PHF)	0.89	0.89	0.89	0.89	0.89	0.89	0.92	0.92	0.92	0.81	0.81	0.81
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		1700	3600	Shrd		1800	Shrd	Shrd		Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	-	-	1.00	-

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***					
Pk. Hr. Vol. (vph)	47	931	62	154	883	15	54	48	12	26	60	33
Saturation Flow (vph)	1700	3600	1800	1700	3600	Shrd	1300	1800	Shrd	Shrd	1300	Shrd
X or V/C	0.18	0.55	0.07	0.58	0.53	-	0.15	0.12	-	-	0.32	-
Effective green (sec)	11	33	33	11	33	-	20	20	-	-	20	-
Split Time (sec)	13	35	35	13	35	-	22	22	-	-	22	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	-	10	20	-	-	20	-
Delay - 15 min pk (sec/veh)	27	14	10	36	14	-	19	19	-	-	22	-
Level of Service (LOS)	C	B	B	D+	B	-	B	B	-	-	C+	-
Average 'Q' (veh/ln)	1	5	1	3	5	-	1	1	-	-	2	-
Design 'Q'- ft/ln	40	160	40	100	160	-	40	40	-	-	60	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	-	YES	YES	-	-	YES	-

Summary

Whole Intersection		Weighted Avg Delay (sec) = 17 Level of Service - LOS = B
Critical Movements		Weighted Avg Delay (sec) = 18 Level of Service - LOS = B Intersection Capacity Utilization - ICU = 0.48
Predetermined Cycle Length is 70 sec		
Min./Ped. Times Satisfied		

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Topaz and Bear Valley

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	*L*	T	R	L	T	*R*	L	T	R
Movement 1: 14 secs	X			X								
Movement 2: 46 secs		X	X		X	X						
Movement 3: 0 secs							X			X		
Movement 4: 30 secs							X	X	X	X	X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	1	P	1	1	P	1	1
Unadjusted Volume	31	458	9	49	282	68	8	51	111	146	41	53
Peak Hour Factor (PHF)	0.89	0.89	0.89	0.85	0.85	0.85	0.80	0.80	0.80	0.82	0.82	0.82
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		1700	3600		P/P	1800		P/P	1800	
Min. Time or Ped. Time	10	20	20	10	20	20	8	20	20	8	20	20
Permissive Veh/Cycle							2			2		
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	P/P	1.00	1.00	P/P	1.00	1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***					
Pk. Hr. Vol. (vph)	35	515	10	58	332	80	10	64	139	178	50	65
Saturation Flow (vph)	1700	3600	1800	1700	3600	1800	P/P	1800	1800	P/P	1800	1800
X or V/C	0.15	0.29	0.01	0.26	0.19	0.09	0.01	0.11	0.25	0.10	0.09	0.12
Effective green (sec)	12	44	44	12	44	44	28	28	28	28	28	28
Split Time (sec)	14	46	46	14	46	46	30	30	30	30	30	30
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	8	20	20	8	20	20
Delay - 15 min pk (sec/veh)	36	14	12	38	13	13	2	23	24	7	22	23
Level of Service (LOS)	D+	B	B	D+	B	B	A	C+	C+	A	C+	C+
Average 'Q' (veh/ln)	1	3	1	1	2	1	1	1	2	1	1	1
Design 'Q'- ft/ln	40	100	40	40	60	40	40	40	60	40	40	40
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Summary

Whole Intersection		Weighted Avg Delay (sec) = 16 Level of Service - LOS = B
Critical Movements		Weighted Avg Delay (sec) = 18 Level of Service - LOS = B Intersection Capacity Utilization - ICU = 0.27
Predetermined Cycle Length is 90 sec		
Min./Ped. Times Satisfied		

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Topaz and Bear Valley

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	*L*	*T*	R	L	T	*R*	L	T	R
Movement 1: 13 secs	X			X								
Movement 2: 45 secs		X	X		X	X						
Movement 3: 0 secs							X			X		
Movement 4: 22 secs							X	X	X	X	X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	1	P	1	1	P	1	1
Unadjusted Volume	42	479	10	80	579	147	8	30	48	94	34	25
Peak Hour Factor (PHF)	0.89	0.89	0.89	0.92	0.92	0.92	0.80	0.80	0.80	0.77	0.77	0.77
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)							P/P			P/P		
Min. Time or Ped. Time	10	20	20	10	20	20	8	20	20	10	20	20
Permissive Veh/Cycle							2			2		
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	P/P	1.00	1.00	P/P	1.00	1.00

Parameter Values (using default set 'SANBAG (Existing)')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)	1700	1800
Sat Flow (2 Left lanes, vphg)	3200	3500
Sat Flow (1 Thru lane, vphg)	1800	1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

				***	***				***			
Pk. Hr. Vol. (vph)	47	538	11	87	629	160	10	38	60	122	44	32
Saturation Flow (vph)	1700	3600	1800	1700	3600	1800	P/P	1800	1800	P/P	1800	1800
X or V/C	0.20	0.28	0.01	0.37	0.33	0.17	0.01	0.08	0.13	0.09	0.10	0.07
Effective green (sec)	11	43	43	11	43	43	20	20	20	20	20	20
Split Time (sec)	13	45	45	13	45	45	22	22	22	22	22	22
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	8	20	20	10	20	20
Delay - 15 min pk (sec/veh)	33	10	9	36	11	10	2	23	24	2	23	23
Level of Service (LOS)	C-	B	A	D+	B	A	A	C+	C+	A	C+	C+
Average 'Q' (veh/ln)	1	3	1	2	3	2	1	1	1	1	1	1
Design 'Q'- ft/ln	40	100	40	60	100	60	40	40	40	40	40	40
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES

Summary

Whole Intersection	Weighted Avg Delay (sec) = 13 Level of Service - LOS = B
Critical Movements	Weighted Avg Delay (sec) = 15 Level of Service - LOS = B Intersection Capacity Utilization - ICU = 0.28
Predetermined Cycle Length is 80 sec	
Min./Ped. Times Satisfied	

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Amethyst and Palmdale

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	*L*	T	R	L	T	R	*L*	*T*	R
Movement 1: 11 secs	X			X								
Movement 2: 26 secs		X	X		X	X						
Movement 3: 11 secs							X			X		
Movement 4: 22 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	S	1	1	1	1	1	S
Unadjusted Volume	69	772	61	88	416	15	74	216	163	58	236	74
Peak Hour Factor (PHF)	0.89	0.89	0.89	0.81	0.81	0.81	0.91	0.91	0.91	0.89	0.89	0.89
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)						Shrd				951		Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	-

Parameter Values (using default set 'SANBAG (Existing)')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)	1700	1800
Sat Flow (2 Left lanes, vphg)	3200	3500
Sat Flow (1 Thru lane, vphg)	1800	1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***			***			***			***		
Pk. Hr. Vol. (vph)	78	867	69	109	514	19	81	237	179	65	265	83
Saturation Flow (vph)	1700	3600	1800	1700	3600	Shrd	1700	1800	1800	951	1800	Shrd
X or V/C	0.36	0.70	0.11	0.50	0.43	-	0.37	0.46	0.35	0.53	0.68	-
Effective green (sec)	9	24	24	9	24	-	9	20	20	9	20	-
Split Time (sec)	11	26	26	11	26	-	11	22	22	11	22	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	-	10	20	20	10	20	-
Delay - 15 min pk (sec/veh)	32	23	16	36	19	-	33	24	22	44	29	-
Level of Service (LOS)	C-	C+	B	D+	B	-	C-	C+	C+	D	C	-
Average 'Q' (veh/ln)	1	6	1	2	3	-	1	3	2	1	5	-
Design 'Q'- ft/ln	40	180	40	60	100	-	40	100	60	40	160	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	-	YES	YES	YES	YES	YES	-

Summary

Whole Intersection		Weighted Avg Delay (sec) = 25 Level of Service - LOS = C+
Critical Movements		Weighted Avg Delay (sec) = 27 Level of Service - LOS = C Intersection Capacity Utilization - ICU = 0.64
Predetermined Cycle Length is 70 sec		
Min./Ped. Times Satisfied		

WEBSTER
Webster Based Signal Timing Evaluation Routine
 For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Amethyst and Palmdale

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	*L*	*T*	R	*L*	T	R	L	*T*	R
Movement 1: 13 secs	X			X								
Movement 2: 31 secs		X	X		X	X						
Movement 3: 11 secs							X			X		
Movement 4: 25 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	S	1	1	1	1	1	S
Unadjusted Volume	63	707	74	152	854	51	94	156	78	40	237	84
Peak Hour Factor (PHF)	0.87	0.87	0.87	0.88	0.88	0.88	0.90	0.90	0.90	0.81	0.81	0.81
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		1700	3600	Shrd	1700	1800		1700	1800	Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	-

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

				***	***				***			
Pk. Hr. Vol. (vph)	72	813	85	173	970	58	104	173	87	49	293	104
Saturation Flow (vph)	1700	3600	1800	1700	3600	Shrd	1700	1800	1800	1700	1800	Shrd
X or V/C	0.31	0.62	0.13	0.74	0.79	-	0.54	0.33	0.17	0.26	0.77	-
Effective green (sec)	11	29	29	11	29	-	9	23	23	9	23	-
Split Time (sec)	13	31	31	13	31	-	11	25	25	11	25	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	-	10	20	20	10	20	-
Delay - 15 min pk (sec/veh)	34	23	17	52	28	-	44	24	22	36	36	-
Level of Service (LOS)	C-	C+	B	D-	C	-	D	C+	C+	D+	D+	-
Average 'Q' (veh/ln)	1	6	1	4	7	-	2	3	1	1	7	-
Design 'Q'- ft/ln	40	180	40	120	220	-	60	100	40	40	220	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	-	YES	YES	YES	YES	YES	-

Summary

Whole Intersection		Weighted Avg Delay (sec) =	29
		Level of Service - LOS =	C
Critical Movements		Weighted Avg Delay (sec) =	33
		Level of Service - LOS =	C-
		Intersection Capacity Utilization - ICU =	0.74
Predetermined Cycle Length is 80 sec			
Min./Ped. Times Satisfied			

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Amethyst and Luna

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	L	T	R	L	*T*	R	*L*	T	R
Movement 1: 11 secs	X			X								
Movement 2: 26 secs		X	X		X	X						
Movement 3: 12 secs							X			X		
Movement 4: 21 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	1	S	1	1	S	1	2	1	1	2	1
Unadjusted Volume	104	218	156	50	84	50	115	405	79	158	366	59
Peak Hour Factor (PHF)	0.84	0.84	0.84	0.78	0.78	0.78	0.71	0.71	0.71	0.89	0.89	0.89
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	1800	Shrd	1700	1800	Shrd	1700	3600		1700	3600	
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	-	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***	***					***	***				
Pk. Hr. Vol. (vph)	124	260	186	64	108	64	162	570	111	178	411	66
Saturation Flow (vph)	1700	1800	Shrd	1700	1800	Shrd	1700	3600	1800	1700	3600	1800
X or V/C	0.57	0.72	-	0.29	0.28	-	0.67	0.58	0.23	0.73	0.42	0.14
Effective green (sec)	9	24	-	9	24	-	10	19	19	10	19	19
Split Time (sec)	11	26	-	11	26	-	12	21	21	12	21	21
Min. Time or Ped. Time (sec)	10	20	-	10	20	-	10	20	20	10	20	20
Delay - 15 min pk (sec/veh)	39	27	-	31	18	-	42	25	21	46	22	20
Level of Service (LOS)	D+	C	-	C-	B	-	D	C+	C+	D	C+	B
Average 'Q' (veh/ln)	2	6	-	1	2	-	3	4	2	3	3	1
Design 'Q'- ft/ln	60	180	-	40	60	-	100	120	60	100	100	40
Do Vehicles Clear?	YES	YES	-	YES	YES	-	YES	YES	YES	YES	YES	YES

Summary

Whole Intersection		Weighted Avg Delay (sec) = 28 Level of Service - LOS = C
Critical Movements		Weighted Avg Delay (sec) = 30 Level of Service - LOS = C Intersection Capacity Utilization - ICU = 0.66
Predetermined Cycle Length is 70 sec		
Min./Ped. Times Satisfied		

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Amethyst and Luna

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	L	T	R	*L*	T	R	L	*T*	R
Movement 1: 11 secs	X			X								
Movement 2: 23 secs		X	X		X	X						
Movement 3: 13 secs							X			X		
Movement 4: 23 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	1	S	1	1	S	1	2	1	1	2	1
Unadjusted Volume	39	95	75	23	127	36	123	340	21	42	338	56
Peak Hour Factor (PHF)	0.90	0.90	0.90	0.93	0.93	0.93	0.89	0.89	0.89	0.85	0.85	0.85
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)			Shrd			Shrd						
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	-	1.00	1.00	-	1.00	1.00	1.00	1.00	1.00	1.00

Parameter Values (using default set 'SANBAG (Existing)')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)	1700	1800
Sat Flow (2 Left lanes, vphg)	3200	3500
Sat Flow (1 Thru lane, vphg)	1800	1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***	***					***				***	
Pk. Hr. Vol. (vph)	43	106	83	25	137	39	138	382	24	49	398	66
Saturation Flow (vph)	1700	1800	Shrd	1700	1800	Shrd	1700	3600	1800	1700	3600	1800
X or V/C	0.20	0.35	-	0.11	0.33	-	0.52	0.35	0.04	0.18	0.37	0.12
Effective green (sec)	9	21	-	9	21	-	11	21	21	11	21	21
Split Time (sec)	11	23	-	11	23	-	13	23	23	13	23	23
Min. Time or Ped. Time (sec)	10	20	-	10	20	-	10	20	20	10	20	20
Delay - 15 min pk (sec/veh)	29	21	-	28	21	-	34	20	18	27	20	18
Level of Service (LOS)	C	C+	-	C	C+	-	C-	C+	B	C	C+	B
Average 'Q' (veh/ln)	1	3	-	1	2	-	2	3	1	1	3	1
Design 'Q'- ft/ln	40	100	-	40	60	-	60	100	40	40	100	40
Do Vehicles Clear?	YES	YES	-	YES	YES	-	YES	YES	YES	YES	YES	YES

Summary

Whole Intersection	Weighted Avg Delay (sec) = 22 Level of Service - LOS = C+
Critical Movements	Weighted Avg Delay (sec) = 23 Level of Service - LOS = C+ Intersection Capacity Utilization - ICU = 0.36
Predetermined Cycle Length is 70 sec	
Min./Ped. Times Satisfied	

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

EI Evado and Palmdale

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	L	T	R	L	T	R	*L*	*T*	R
Movement 1: 14 secs	X			X								
Movement 2: 34 secs		X	X		X	X						
Movement 3: 20 secs							X			X		
Movement 4: 22 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	1	1	2	1	1	3	S
Unadjusted Volume	121	750	56	48	377	78	71	226	120	198	282	95
Peak Hour Factor (PHF)	0.79	0.79	0.79	0.96	0.96	0.96	0.85	0.85	0.85	0.76	0.76	0.76
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)		3600			3600			3600			5400	Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-

Parameter Values

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)	1700	1800
Sat Flow (2 Left lanes, vphg)	3200	3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***	***								***	***	
Pk. Hr. Vol. (vph)	153	949	71	50	393	81	84	266	141	261	371	125
Saturation Flow (vph)	1700	3600	1800	1700	3600	1800	1700	3600	1800	1700	5400	Shrd
X or V/C	0.68	0.74	0.11	0.22	0.31	0.13	0.25	0.33	0.35	0.77	0.41	-
Effective green (sec)	12	32	32	12	32	32	18	20	20	18	20	-
Split Time (sec)	14	34	34	14	34	34	20	22	22	20	22	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	20	10	20	-
Delay - 15 min pk (sec/veh)	52	29	20	37	22	20	32	31	32	49	31	-
Level of Service (LOS)	D-	C	B	D+	C+	B	C-	C-	C-	D	C-	-
Average 'Q' (veh/ln)	3	8	1	1	3	1	2	3	3	5	3	-
Design 'Q'- ft/ln	100	240	40	40	100	40	60	100	100	160	100	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	-

Summary

Whole Intersection		Weighted Avg Delay (sec) =	31
		Level of Service - LOS =	C-
Critical Movements		Weighted Avg Delay (sec) =	34
		Level of Service - LOS =	C-
		Intersection Capacity Utilization - ICU =	0.66
Predetermined Cycle Length is 90 sec			
Min./Ped. Times Satisfied			

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

EI Evado and Palmdale

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	*L*	*T*	R	L	*T*	R	*L*	T	R
Movement 1: 18 secs	X			X								
Movement 2: 52 secs		X	X		X	X						
Movement 3: 21 secs							X			X		
Movement 4: 29 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	1	1	2	1	1	3	S
Unadjusted Volume	128	673	77	139	922	175	98	379	66	168	291	99
Peak Hour Factor (PHF)	0.90	0.90	0.90	0.89	0.89	0.89	0.94	0.94	0.94	0.90	0.90	0.90
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		1700	3600		1700	3600		1700	5400	Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

				***	***	***			***			
Pk. Hr. Vol. (vph)	142	748	86	156	1036	197	104	403	70	187	323	110
Saturation Flow (vph)	1700	3600	1800	1700	3600	1800	1700	3600	1800	1700	5400	Shrd
X or V/C	0.63	0.50	0.11	0.69	0.69	0.26	0.39	0.50	0.17	0.69	0.36	-
Effective green (sec)	16	50	50	16	50	50	19	27	27	19	27	-
Split Time (sec)	18	52	52	18	52	52	21	29	29	21	29	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	20	10	20	-
Delay - 15 min pk (sec/veh)	62	27	22	65	31	24	49	43	38	62	40	-
Level of Service (LOS)	E	C	C+	E	C-	C+	D	D	D+	E	D+	-
Average 'Q' (veh/ln)	4	7	2	5	10	4	3	5	2	5	4	-
Design 'Q'- ft/ln	120	220	60	160	300	120	100	160	60	160	120	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	-

Summary

Whole Intersection		Weighted Avg Delay (sec) = 37 Level of Service - LOS = D+
Critical Movements		Weighted Avg Delay (sec) = 40 Level of Service - LOS = D Intersection Capacity Utilization - ICU = 0.64
Predetermined Cycle Length is 120 sec		
Min./Ped. Times Satisfied		

WEBSTER
Webster Based Signal Timing Evaluation Routine
 For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Amargosa and Palmdale

Victorville

AM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	*T*	R	L	T	R	L	T	R	*L*	*T*	R
Movement 1: 14 secs	X			X								
Movement 2: 31 secs		X	X		X	X						
Movement 3: 14 secs							X			X		
Movement 4: 21 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	1	1	2	S	1	2	S
Unadjusted Volume	161	848	99	57	529	86	97	230	55	150	227	75
Peak Hour Factor (PHF)	0.85	0.85	0.85	0.85	0.85	0.85	0.91	0.91	0.91	0.74	0.74	0.74
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)	1700	3600		1700	3600		1700	3600	Shrd	1700	3600	Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	-

Parameter Values (using default set 'Webster')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)		1800
Sat Flow (2 Left lanes, vphg)		3500
Sat Flow (1 Thru lane, vphg)		1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

	***	***								***	***	
Pk. Hr. Vol. (vph)	189	998	116	67	622	101	107	253	60	203	307	101
Saturation Flow (vph)	1700	3600	1800	1700	3600	1800	1700	3600	Shrd	1700	3600	Shrd
X or V/C	0.74	0.76	0.18	0.26	0.48	0.15	0.42	0.37	-	0.80	0.48	-
Effective green (sec)	12	29	29	12	29	29	12	19	-	12	19	-
Split Time (sec)	14	31	31	14	31	31	14	21	-	14	21	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	-	10	20	-
Delay - 15 min pk (sec/veh)	50	27	18	33	21	18	36	27	-	55	28	-
Level of Service (LOS)	D-	C	B	C-	C+	B	D+	C	-	E+	C	-
Average 'Q' (veh/ln)	4	7	2	1	4	1	2	3	-	4	3	-
Design 'Q'- ft/ln	120	220	60	40	120	40	60	100	-	120	100	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	-	YES	YES	-

Summary

Whole Intersection		Weighted Avg Delay (sec) =	29
		Level of Service - LOS =	C
Critical Movements		Weighted Avg Delay (sec) =	33
		Level of Service - LOS =	C-
		Intersection Capacity Utilization - ICU =	0.69
Predetermined Cycle Length is 80 sec			
Min./Ped. Times Satisfied			

WEBSTER

Webster Based Signal Timing Evaluation Routine

For Capacity and Level of Service Analysis Using HCM 2000 Control Delay

Existing Traffic with Existing Lane Geometrics

Amargosa and Palmdale

Victorville

PM Peak Hour

Input

Movement Times	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	*L*	*T*	R	L	T	R	*L*	*T*	R
Movement 1: 13 secs	X			X								
Movement 2: 36 secs		X	X		X	X						
Movement 3: 15 secs							X			X		
Movement 4: 26 secs								X	X		X	X
Movement 5: 0 secs												
Movement 6: 0 secs												
# of Lanes (#, S, P)	1	2	1	1	2	1	1	2	S	1	2	S
Unadjusted Volume	92	812	124	131	978	92	159	320	80	164	360	186
Peak Hour Factor (PHF)	0.86	0.86	0.86	0.92	0.92	0.92	0.97	0.97	0.97	0.89	0.89	0.89
Growth Factor (%)												
Project Trip Volume (vph)												
Sat. Flow Override (vph)									Shrd			Shrd
Min. Time or Ped. Time	10	20	20	10	20	20	10	20	20	10	20	20
Permissive Veh/Cycle												
Progression Adj. Factor (PAF)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	-	1.00	1.00	-

Parameter Values (using default set 'SANBAG (Existing)')

	Other	Default
Duration of Peak Period (min)		15
Lost Time (sec)		2
Min. Time (Left Turns, sec)		10
Min/Ped Time (Thru Lanes, sec)		20
Sat Flow (1 Left lane, vphg)	1700	1800
Sat Flow (2 Left lanes, vphg)	3200	3500
Sat Flow (1 Thru lane, vphg)	1800	1900
Sat Flow (1 Right lane, vphg)		1800
Vehicle Length (feet)		20

Output

				***	***				***	***		
Pk. Hr. Vol. (vph)	107	944	144	142	1063	100	164	330	82	184	404	209
Saturation Flow (vph)	1700	3600	1800	1700	3600	1800	1700	3600	Shrd	1700	3600	Shrd
X or V/C	0.51	0.69	0.21	0.68	0.78	0.15	0.67	0.43	-	0.75	0.64	-
Effective green (sec)	11	34	34	11	34	34	13	24	-	13	24	-
Split Time (sec)	13	36	36	13	36	36	15	26	-	15	26	-
Min. Time or Ped. Time (sec)	10	20	20	10	20	20	10	20	-	10	20	-
Delay - 15 min pk (sec/veh)	46	27	20	55	29	19	50	29	-	56	32	-
Level of Service (LOS)	D	C	B	D-	C	B	D	C	-	E+	C-	-
Average 'Q' (veh/ln)	2	7	2	3	8	2	4	4	-	4	6	-
Design 'Q'- ft/ln	60	220	60	100	240	60	120	120	-	120	180	-
Do Vehicles Clear?	YES	YES	YES	YES	YES	YES	YES	YES	-	YES	YES	-

Summary

Whole Intersection		Weighted Avg Delay (sec) =	32
		Level of Service - LOS =	C-
Critical Movements		Weighted Avg Delay (sec) =	34
		Level of Service - LOS =	C-
		Intersection Capacity Utilization - ICU =	0.72
Predetermined Cycle Length is 90 sec			
Min./Ped. Times Satisfied			

Intersection

Int Delay, s/veh 8.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	3	898	619	76	145	5
Future Vol, veh/h	3	898	619	76	145	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	225	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	1009	696	85	163	6



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	696	0	348
Stage 1	-	-	696
Stage 2	-	-	511
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	896	-	648
Stage 1	-	-	456
Stage 2	-	-	567
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	896	-	648
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	456
Stage 2	-	-	565

Approach	EB	WB	SB
HCM Control Delay, s	0	0	101.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	896	-	-	-	175	648
HCM Lane V/C Ratio	0.004	-	-	-	0.931	0.009
HCM Control Delay (s)	9	-	-	-	104.2	10.6
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	7.1	0

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	986	0	0	599	7	0	0	0	46	0	92
Future Volume (veh/h)	54	986	0	0	599	7	0	0	0	46	0	92
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1667	1765	0	0	1765	1765				1667	0	1765
Adj Flow Rate, veh/h	60	1096	0	0	666	8				51	0	102
Adj No. of Lanes	1	2	0	0	2	1				1	0	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	0	2	2				2	0	2
Cap, veh/h	99	2184	0	0	1571	703				169	0	160
Arrive On Green	0.06	0.65	0.00	0.00	0.47	0.47				0.11	0.00	0.11
Sat Flow, veh/h	1587	3441	0	0	3441	1500				1587	0	1500
Grp Volume(v), veh/h	60	1096	0	0	666	8				51	0	102
Grp Sat Flow(s),veh/h/ln	1587	1676	0	0	1676	1500				1587	0	1500
Q Serve(g_s), s	1.4	6.3	0.0	0.0	4.9	0.1				1.1	0.0	2.4
Cycle Q Clear(g_c), s	1.4	6.3	0.0	0.0	4.9	0.1				1.1	0.0	2.4
Prop In Lane	1.00		0.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	99	2184	0	0	1571	703				169	0	160
V/C Ratio(X)	0.61	0.50	0.00	0.00	0.42	0.01				0.30	0.00	0.64
Avail Cap(c_a), veh/h	363	3468	0	0	2297	1028				533	0	504
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	17.0	3.4	0.0	0.0	6.6	5.3				15.3	0.0	15.9
Incr Delay (d2), s/veh	5.9	0.2	0.0	0.0	0.2	0.0				1.0	0.0	4.2
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	0.8	2.8	0.0	0.0	2.3	0.1				0.5	0.0	2.2
LnGrp Delay(d),s/veh	23.0	3.5	0.0	0.0	6.7	5.3				16.3	0.0	20.1
LnGrp LOS	C	A			A	A				B		C
Approach Vol, veh/h		1156			674						153	
Approach Delay, s/veh		4.5			6.7						18.8	
Approach LOS		A			A						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				28.7		8.5	6.8	21.9				
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s				38.5		12.5	8.5	25.5				
Max Q Clear Time (g_c+I1), s				8.3		4.4	3.4	6.9				
Green Ext Time (p_c), s				13.6		0.2	0.0	10.5				
Intersection Summary												
HCM 2010 Ctrl Delay			6.4									
HCM 2010 LOS			A									

Intersection

Int Delay, s/veh 7.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	21	0	212	0	0	0	114	756	0	0	547	36
Future Vol, veh/h	21	0	212	0	0	0	114	756	0	0	547	36
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	-	-	-	-	-	-	300	-	-	-	-	250
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	230	0	0	0	124	822	0	0	595	39

























Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1665	1665	595	1780	1665	822	595	0	-	-	-	0
Stage 1	595	595	-	1070	1070	-	-	-	-	-	-	-
Stage 2	1070	1070	-	710	595	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	77	97	504	64	97	374	981	-	0	0	-	-
Stage 1	491	492	-	268	298	-	-	-	0	0	-	-
Stage 2	268	298	-	424	492	-	-	-	0	0	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	70	85	504	31	85	374	981	-	-	-	-	-
Mov Cap-2 Maneuver	70	85	-	31	85	-	-	-	-	-	-	-
Stage 1	429	492	-	234	260	-	-	-	-	-	-	-
Stage 2	234	260	-	230	492	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	46.9	0	1.2	0
HCM LOS	E	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	981	-	323	-	-
HCM Lane V/C Ratio	0.126	-	0.784	-	-
HCM Control Delay (s)	9.2	-	46.9	0	-
HCM Lane LOS	A	-	E	A	-
HCM 95th %tile Q(veh)	0.4	-	6.3	-	-
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 4: US-395 & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	520	413	106	303	91	305	691	160	124	457	39
Future Volume (veh/h)	105	520	413	106	303	91	305	691	160	124	457	39
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	115	571	454	116	333	100	335	759	176	136	502	43
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	235	751	336	166	445	199	432	1465	655	164	899	402
Arrive On Green	0.15	0.22	0.22	0.06	0.13	0.13	0.27	0.44	0.44	0.10	0.27	0.27
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	115	571	454	116	333	100	335	759	176	136	502	43
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	6.7	16.0	12.0	4.0	9.6	4.9	19.6	16.6	7.5	8.5	13.0	2.2
Cycle Q Clear(g_c), s	6.7	16.0	12.0	4.0	9.6	4.9	19.6	16.6	7.5	8.5	13.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	235	751	336	166	445	199	432	1465	655	164	899	402
V/C Ratio(X)	0.49	0.76	1.35	0.70	0.75	0.50	0.78	0.52	0.27	0.83	0.56	0.11
Avail Cap(c_a), veh/h	235	1065	477	216	832	372	559	1465	655	292	899	402
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	39.4	36.6	11.2	46.6	42.0	24.6	33.8	20.6	18.1	44.3	31.7	27.8
Incr Delay (d2), s/veh	1.6	2.0	175.6	6.6	2.5	2.0	5.1	1.3	1.0	10.2	2.5	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	3.0	7.7	23.6	1.7	4.6	2.5	9.2	8.0	3.3	4.2	6.3	1.0
LnGrp Delay(d),s/veh	40.9	38.6	186.7	53.2	44.6	26.5	38.9	22.0	19.1	54.5	34.2	28.3
LnGrp LOS	D	D	F	D	D	C	D	C	B	D	C	C
Approach Vol, veh/h		1140			549			1270			681	
Approach Delay, s/veh		97.8			43.1			26.0			37.9	
Approach LOS		F			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.9	48.5	10.3	27.0	31.9	31.5	19.4	17.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	44.0	7.5	32.0	35.5	27.0	14.5	25.0				
Max Q Clear Time (g_c+I1), s	10.5	18.6	6.0	18.0	21.6	15.0	8.7	11.6				
Green Ext Time (p_c), s	0.2	6.5	0.0	4.5	5.2	2.3	2.7	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			53.3									
HCM 2010 LOS			D									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 6: US-395 & Dos Palmas Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	39	53	35	28	211	17	790	21	127	827	86
Future Volume (veh/h)	168	39	53	35	28	211	17	790	21	127	827	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	175	41	55	36	29	220	18	823	22	132	861	90
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	208	691	587	324	35	267	117	1071	479	161	1064	111
Arrive On Green	0.13	0.39	0.39	0.20	0.20	0.20	0.07	0.32	0.32	0.10	0.35	0.35
Sat Flow, veh/h	1587	1765	1500	1222	178	1349	1587	3353	1500	1587	3064	320
Grp Volume(v), veh/h	175	41	55	36	0	249	18	823	22	132	471	480
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1222	0	1527	1587	1676	1500	1587	1676	1708
Q Serve(g_s), s	7.8	1.0	1.7	1.8	0.0	11.3	0.8	15.9	0.7	5.9	18.4	18.4
Cycle Q Clear(g_c), s	7.8	1.0	1.7	2.8	0.0	11.3	0.8	15.9	0.7	5.9	18.4	18.4
Prop In Lane	1.00		1.00	1.00		0.88	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	208	691	587	324	0	302	117	1071	479	161	582	593
V/C Ratio(X)	0.84	0.06	0.09	0.11	0.00	0.82	0.15	0.77	0.05	0.82	0.81	0.81
Avail Cap(c_a), veh/h	209	882	750	456	0	466	121	1071	479	165	582	593
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.5	13.6	13.8	24.7	0.0	27.7	31.2	22.1	16.9	31.7	21.3	21.3
Incr Delay (d2), s/veh	24.9	0.0	0.1	0.1	0.0	6.9	0.6	5.3	0.2	26.2	11.6	11.4
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	4.8	0.5	0.7	0.6	0.0	5.3	0.4	8.1	0.3	3.7	10.4	10.5
LnGrp Delay(d),s/veh	55.5	13.7	13.9	24.9	0.0	34.6	31.8	27.4	17.1	57.9	32.9	32.7
LnGrp LOS	E	B	B	C		C	C	C	B	E	C	C
Approach Vol, veh/h		271			285			863			1083	
Approach Delay, s/veh		40.7			33.4			27.2			35.9	
Approach LOS		D			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	27.5		32.7	9.8	29.5	14.0	18.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	23.0		36.0	5.5	25.0	9.5	22.0				
Max Q Clear Time (g_c+I1), s	7.9	17.9		3.7	2.8	20.4	9.8	13.3				
Green Ext Time (p_c), s	0.0	2.2		0.9	0.1	2.2	0.0	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			33.1									
HCM 2010 LOS			C									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 7: US-395 & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	66	102	86	85	85	270	51	495	34	226	599	82
Future Volume (veh/h)	66	102	86	85	85	270	51	495	34	226	599	82
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	69	107	91	89	89	284	54	521	36	238	631	86
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	616	523	456	130	413	77	1012	453	214	1301	582
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.05	0.30	0.30	0.13	0.39	0.39
Sat Flow, veh/h	949	1765	1500	1114	371	1184	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	69	107	91	89	0	373	54	521	36	238	631	86
Grp Sat Flow(s),veh/h/ln	949	1765	1500	1114	0	1556	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	4.2	2.6	2.6	3.8	0.0	12.9	2.1	8.1	1.1	8.5	8.9	2.3
Cycle Q Clear(g_c), s	17.2	2.6	2.6	6.4	0.0	12.9	2.1	8.1	1.1	8.5	8.9	2.3
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	251	616	523	456	0	543	77	1012	453	214	1301	582
V/C Ratio(X)	0.28	0.17	0.17	0.20	0.00	0.69	0.70	0.52	0.08	1.11	0.48	0.15
Avail Cap(c_a), veh/h	357	813	691	581	0	716	139	1012	453	214	1301	582
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	14.2	14.2	16.4	0.0	17.6	29.5	18.2	15.7	27.2	14.5	12.5
Incr Delay (d2), s/veh	0.6	0.1	0.2	0.2	0.0	1.8	11.0	1.9	0.3	94.4	1.3	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	1.2	1.3	1.1	1.2	0.0	5.8	1.2	4.0	0.5	9.3	4.4	1.0
LnGrp Delay(d),s/veh	25.5	14.3	14.4	16.6	0.0	19.3	40.5	20.1	16.1	121.7	15.8	13.0
LnGrp LOS	C	B	B	B		B	D	C	B	F	B	B
Approach Vol, veh/h		267			462			611			955	
Approach Delay, s/veh		17.2			18.8			21.6			41.9	
Approach LOS		B			B			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	23.5		26.5	7.6	28.9		26.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	19.0		29.0	5.5	22.0		29.0				
Max Q Clear Time (g_c+I1), s	10.5	10.1		19.2	4.1	10.9		14.9				
Green Ext Time (p_c), s	0.0	2.0		2.8	0.0	3.5		3.4				
Intersection Summary												
HCM 2010 Ctrl Delay			29.0									
HCM 2010 LOS			C									

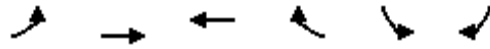
SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 9: US-395 & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	240	126	149	162	92	65	478	65	112	636	16
Future Volume (veh/h)	40	240	126	149	162	92	65	478	65	112	636	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	43	255	134	159	172	98	69	509	69	119	677	17
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	459	206	168	680	304	124	1423	637	124	1419	36
Arrive On Green	0.04	0.14	0.14	0.11	0.20	0.20	0.08	0.42	0.42	0.08	0.42	0.42
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3342	84
Grp Volume(v), veh/h	43	255	134	159	172	98	69	509	69	119	339	355
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1750
Q Serve(g_s), s	1.9	5.0	6.0	7.0	3.0	2.9	3.0	7.3	2.0	5.3	10.3	10.3
Cycle Q Clear(g_c), s	1.9	5.0	6.0	7.0	3.0	2.9	3.0	7.3	2.0	5.3	10.3	10.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	64	459	206	168	680	304	124	1423	637	124	712	743
V/C Ratio(X)	0.67	0.56	0.65	0.94	0.25	0.32	0.56	0.36	0.11	0.96	0.48	0.48
Avail Cap(c_a), veh/h	146	1376	615	168	1423	637	124	1423	637	124	712	743
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	33.5	28.5	28.9	31.4	23.7	13.3	31.4	13.8	12.3	32.5	14.7	14.7
Incr Delay (d2), s/veh	11.5	1.1	3.5	53.0	0.2	0.6	5.5	0.7	0.3	69.4	2.3	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	1.0	2.4	2.7	5.5	1.4	1.5	1.5	3.5	0.9	4.7	5.2	5.4
LnGrp Delay(d),s/veh	45.0	29.5	32.4	84.4	23.9	13.9	37.0	14.5	12.6	101.9	17.0	16.9
LnGrp LOS	D	C	C	F	C	B	D	B	B	F	B	B
Approach Vol, veh/h		432			429			647			813	
Approach Delay, s/veh		32.0			44.0			16.7			29.4	
Approach LOS		C			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	34.5	12.0	14.2	10.0	34.5	7.4	18.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	30.0	7.5	29.0	5.5	30.0	6.5	30.0				
Max Q Clear Time (g_c+I1), s	7.3	9.3	9.0	8.0	5.0	12.3	3.9	5.0				
Green Ext Time (p_c), s	0.0	3.0	0.0	1.7	0.0	3.3	0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			29.0									
HCM 2010 LOS			C									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 10: Palmdale Road (SR-18) & Cantina Street



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	2	768	524	61	69	3		
Future Volume (veh/h)	2	768	524	61	69	3		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1569	1765		
Adj Flow Rate, veh/h	2	844	576	67	76	3		
Adj No. of Lanes	1	2	2	1	2	1		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	15	1216	858	384	1284	664		
Arrive On Green	0.01	0.36	0.26	0.26	0.44	0.44		
Sat Flow, veh/h	1587	3441	3441	1500	2898	1500		
Grp Volume(v), veh/h	2	844	576	67	76	3		
Grp Sat Flow(s),veh/h/ln	1587	1676	1676	1500	1449	1500		
Q Serve(g_s), s	0.1	9.9	7.1	1.6	0.7	0.1		
Cycle Q Clear(g_c), s	0.1	9.9	7.1	1.6	0.7	0.1		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	15	1216	858	384	1284	664		
V/C Ratio(X)	0.13	0.69	0.67	0.17	0.06	0.00		
Avail Cap(c_a), veh/h	189	2210	1485	664	1284	664		
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	22.7	12.6	15.5	13.4	7.4	7.2		
Incr Delay (d2), s/veh	3.8	0.7	0.9	0.2	0.1	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	0.0	4.7	3.4	0.7	0.3	0.1		
LnGrp Delay(d),s/veh	26.6	13.3	16.4	13.6	7.5	7.2		
LnGrp LOS	C	B	B	B	A	A		
Approach Vol, veh/h		846	643		79			
Approach Delay, s/veh		13.3	16.1		7.5			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				21.3		25.0	4.9	16.3
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				30.5		20.5	5.5	20.5
Max Q Clear Time (g_c+I1), s				11.9		2.7	2.1	9.1
Green Ext Time (p_c), s				4.9		0.2	1.6	2.7
Intersection Summary								
HCM 2010 Ctrl Delay			14.2					
HCM 2010 LOS			B					

Intersection

Int Delay, s/veh 9.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	143	34	92	166	7	97	13	136	17	20	11
Future Vol, veh/h	7	143	34	92	166	7	97	13	136	17	20	11
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	174	41	112	202	9	118	16	166	21	24	13

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	211	0	0	216	0	0	662	647	195	734	664	207
Stage 1	-	-	-	-	-	-	212	212	-	431	431	-
Stage 2	-	-	-	-	-	-	450	435	-	303	233	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1360	-	-	1354	-	-	375	390	846	336	381	833
Stage 1	-	-	-	-	-	-	790	727	-	603	583	-
Stage 2	-	-	-	-	-	-	589	580	-	706	712	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1360	-	-	1354	-	-	322	351	846	241	342	833
Mov Cap-2 Maneuver	-	-	-	-	-	-	322	351	-	241	342	-
Stage 1	-	-	-	-	-	-	784	721	-	598	528	-
Stage 2	-	-	-	-	-	-	501	525	-	551	706	-

Approach	EB		WB		NB		SB
HCM Control Delay, s	0.3		2.7		23		17.9
HCM LOS					C		C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	493	1360	-	-	1354	-	-	337
HCM Lane V/C Ratio	0.609	0.006	-	-	0.083	-	-	0.174
HCM Control Delay (s)	23	7.7	0	-	7.9	0	-	17.9
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	4	0	-	-	0.3	-	-	0.6

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵	↵
Traffic Vol, veh/h	0	28	110	64	0	80	88	13	0	86	131	181
Future Vol, veh/h	0	28	110	64	0	80	88	13	0	86	131	181
Peak Hour Factor	0.92	0.77	0.77	0.77	0.92	0.77	0.77	0.77	0.92	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	36	143	83	0	104	114	17	0	112	170	235
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	17.7	14.5	14.8
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	63%	0%	87%	0%	79%
Vol Right, %	0%	0%	100%	0%	37%	0%	13%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	86	131	181	28	174	80	101	91	145
LT Vol	86	0	0	28	0	80	0	91	0
Through Vol	0	131	0	0	110	0	88	0	114
RT Vol	0	0	181	0	64	0	13	0	31
Lane Flow Rate	112	170	235	36	226	104	131	118	188
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.253	0.361	0.453	0.088	0.499	0.254	0.299	0.282	0.414
Departure Headway (Hd)	8.161	7.649	6.932	8.723	7.949	8.815	8.211	8.585	7.917
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	439	468	517	409	452	406	435	417	452
Service Time	5.937	5.425	4.708	6.509	5.734	6.605	6	6.371	5.703
HCM Lane V/C Ratio	0.255	0.363	0.455	0.088	0.5	0.256	0.301	0.283	0.416
HCM Control Delay	13.7	14.7	15.4	12.4	18.5	14.6	14.5	14.7	16.2
HCM Lane LOS	B	B	C	B	C	B	B	B	C
HCM 95th-tile Q	1	1.6	2.3	0.3	2.7	1	1.2	1.1	2

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↶	↷	
Traffic Vol, veh/h	0	91	114	31
Future Vol, veh/h	0	91	114	31
Peak Hour Factor	0.92	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	118	148	40
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	15.6
HCM LOS	C

Intersection	
Intersection Delay, s/veh	13.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	41	130	13	0	20	101	139	0	8	100	67
Future Vol, veh/h	0	41	130	13	0	20	101	139	0	8	100	67
Peak Hour Factor	0.92	0.75	0.75	0.75	0.92	0.75	0.75	0.75	0.92	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	55	173	17	0	27	135	185	0	11	133	89
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	12.2	13.7	12.2
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	33%	0%	100%	77%	0%	100%	19%	0%	100%
Vol Right, %	0%	0%	67%	0%	0%	23%	0%	0%	81%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	67	100	41	87	56	20	67	173	185	55
LT Vol	8	0	0	41	0	0	20	0	0	185	0
Through Vol	0	67	33	0	87	43	0	67	34	0	55
RT Vol	0	0	67	0	0	13	0	0	139	0	0
Lane Flow Rate	11	89	134	55	116	75	27	90	230	247	74
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.024	0.188	0.265	0.123	0.243	0.155	0.058	0.184	0.435	0.524	0.147
Departure Headway (Hd)	8.098	7.598	7.13	8.073	7.573	7.411	7.869	7.369	6.806	7.65	7.15
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	442	472	504	444	474	484	455	487	530	471	502
Service Time	5.843	5.343	4.876	5.818	5.318	5.157	5.612	5.112	4.548	5.389	4.889
HCM Lane V/C Ratio	0.025	0.189	0.266	0.124	0.245	0.155	0.059	0.185	0.434	0.524	0.147
HCM Control Delay	11	12.1	12.4	12	12.7	11.5	11.1	11.8	14.7	18.5	11.1
HCM Lane LOS	B	B	B	B	B	B	B	B	B	C	B
HCM 95th-tile Q	0.1	0.7	1.1	0.4	0.9	0.5	0.2	0.7	2.2	3	0.5

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↘	↕	
Traffic Vol, veh/h	0	185	83	43
Future Vol, veh/h	0	185	83	43
Peak Hour Factor	0.92	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	247	111	57
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	15.5
HCM LOS	C

Intersection	
Intersection Delay, s/veh	23.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵	
Traffic Vol, veh/h	0	66	243	35	0	101	182	74	0	12	218	86
Future Vol, veh/h	0	66	243	35	0	101	182	74	0	12	218	86
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	75	276	40	0	115	207	84	0	14	248	98
Number of Lanes	0	1	1	0	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	30.1	24.7	17.7
HCM LOS	D	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	49%	0%
Vol Thru, %	0%	100%	46%	0%	87%	0%	71%	51%	70%
Vol Right, %	0%	0%	54%	0%	13%	0%	29%	0%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	145	159	66	278	101	256	145	105
LT Vol	12	0	0	66	0	101	0	71	0
Through Vol	0	145	73	0	243	0	182	74	74
RT Vol	0	0	86	0	35	0	74	0	31
Lane Flow Rate	14	165	180	75	316	115	291	165	119
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.036	0.413	0.432	0.192	0.757	0.294	0.688	0.434	0.298
Departure Headway (Hd)	9.531	9.013	8.62	9.235	8.63	9.235	8.513	9.475	9.004
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	375	400	417	389	420	389	425	379	399
Service Time	7.298	6.78	6.386	6.998	6.393	6.998	6.276	7.245	6.774
HCM Lane V/C Ratio	0.037	0.412	0.432	0.193	0.752	0.296	0.685	0.435	0.298
HCM Control Delay	12.7	18	17.8	14.2	33.9	15.8	28.2	19.4	15.6
HCM Lane LOS	B	C	C	B	D	C	D	C	C
HCM 95th-tile Q	0.1	2	2.1	0.7	6.2	1.2	5.1	2.1	1.2

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			←↑→	
Traffic Vol, veh/h	0	71	148	31
Future Vol, veh/h	0	71	148	31
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	81	168	35
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	17.8
HCM LOS	C

Intersection	
Intersection Delay, s/veh	21.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕↔			↵	↕↔			↵	↕↔	
Traffic Vol, veh/h	0	70	331	80	0	83	229	98	0	74	147	102
Future Vol, veh/h	0	70	331	80	0	83	229	98	0	74	147	102
Peak Hour Factor	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	86	409	99	0	102	283	121	0	91	181	126
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	25.8	20.7	18.7
HCM LOS	D	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	32%	0%	100%	58%	0%	100%	44%	0%	100%
Vol Right, %	0%	0%	68%	0%	0%	42%	0%	0%	56%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	98	151	70	221	190	83	153	174	101	83
LT Vol	74	0	0	70	0	0	83	0	0	101	0
Through Vol	0	98	49	0	221	110	0	153	76	0	83
RT Vol	0	0	102	0	0	80	0	0	98	0	0
Lane Flow Rate	91	121	186	86	272	235	102	188	215	125	103
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.261	0.328	0.482	0.234	0.699	0.584	0.283	0.495	0.542	0.358	0.281
Departure Headway (Hd)	10.273	9.773	9.3	9.742	9.242	8.948	9.958	9.458	9.064	10.328	9.828
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	349	368	386	368	390	402	361	381	398	348	365
Service Time	8.051	7.551	7.078	7.514	7.014	6.72	7.733	7.233	6.84	8.108	7.608
HCM Lane V/C Ratio	0.261	0.329	0.482	0.234	0.697	0.585	0.283	0.493	0.54	0.359	0.282
HCM Control Delay	16.7	17.3	20.5	15.5	31	23.6	16.6	21.2	22.1	18.8	16.4
HCM Lane LOS	C	C	C	C	D	C	C	C	C	C	C
HCM 95th-tile Q	1	1.4	2.5	0.9	5.1	3.6	1.1	2.6	3.1	1.6	1.1

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕↵	
Traffic Vol, veh/h	0	101	125	79
Future Vol, veh/h	0	101	125	79
Peak Hour Factor	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	125	154	98
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	17.8
HCM LOS	C






















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 16: Topaz Road & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	458	7	49	282	68	7	51	111	146	41	53
Future Volume (veh/h)	31	458	7	49	282	68	7	51	111	146	41	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	34	503	8	54	310	75	8	56	122	160	45	58
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	735	329	80	626	149	541	581	494	616	721	613
Arrive On Green	0.04	0.22	0.22	0.05	0.23	0.23	0.01	0.33	0.33	0.09	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	2687	641	1587	1765	1500	1587	1765	1500
Grp Volume(v), veh/h	34	503	8	54	192	193	8	56	122	160	45	58
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1652	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.2	8.0	0.2	1.9	5.7	5.9	0.2	1.3	2.4	3.5	0.9	1.4
Cycle Q Clear(g_c), s	1.2	8.0	0.2	1.9	5.7	5.9	0.2	1.3	2.4	3.5	0.9	1.4
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	58	735	329	80	391	385	541	581	494	616	721	613
V/C Ratio(X)	0.59	0.68	0.02	0.68	0.49	0.50	0.01	0.10	0.25	0.26	0.06	0.09
Avail Cap(c_a), veh/h	151	1684	753	179	871	858	676	581	494	679	721	613
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	27.4	20.7	11.0	27.0	19.2	19.2	12.7	13.4	6.8	9.7	10.4	10.5
Incr Delay (d2), s/veh	9.2	1.1	0.0	9.6	1.0	1.0	0.0	0.3	1.2	0.2	0.2	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	0.7	3.7	0.1	1.1	2.7	2.8	0.1	0.7	1.5	1.5	0.5	0.6
LnGrp Delay(d),s/veh	36.6	21.8	11.0	36.6	20.1	20.2	12.7	13.8	8.0	9.9	10.5	10.8
LnGrp LOS	D	C	B	D	C	C	B	B	A	A	B	B
Approach Vol, veh/h		545			439			186			263	
Approach Delay, s/veh		22.6			22.2			9.9			10.2	
Approach LOS		C			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	23.5	7.4	17.2	5.1	28.1	6.6	18.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	19.0	6.5	29.0	5.5	21.0	5.5	30.0				
Max Q Clear Time (g_c+I1), s	5.5	4.4	3.9	10.0	2.2	3.4	3.2	7.9				
Green Ext Time (p_c), s	0.1	0.8	0.5	2.7	0.0	0.9	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.6									
HCM 2010 LOS			B									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 17: Cobalt Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	598	198	182	352	4	125	186	238	13	250	7
Future Volume (veh/h)	21	598	198	182	352	4	125	186	238	13	250	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	25	712	236	217	419	5	149	221	283	15	298	8
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	862	386	238	590	7	302	267	342	67	543	14
Arrive On Green	0.23	0.26	0.26	0.15	0.17	0.17	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1587	3353	1500	1587	3394	40	1010	704	902	20	1431	37
Grp Volume(v), veh/h	25	712	236	217	207	217	149	0	504	321	0	0
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1758	1010	0	1606	1487	0	0
Q Serve(g_s), s	0.8	12.7	8.8	8.5	7.4	7.4	2.4	0.0	18.0	0.8	0.0	0.0
Cycle Q Clear(g_c), s	0.8	12.7	8.8	8.5	7.4	7.4	21.1	0.0	18.0	18.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.56	0.05		0.02
Lane Grp Cap(c), veh/h	370	862	386	238	292	306	302	0	609	624	0	0
V/C Ratio(X)	0.07	0.83	0.61	0.91	0.71	0.71	0.49	0.00	0.83	0.51	0.00	0.00
Avail Cap(c_a), veh/h	370	954	427	238	583	611	302	0	609	624	0	0
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	0.00
Uniform Delay (d), s/veh	18.9	22.2	20.7	26.5	24.6	24.6	20.3	0.0	17.8	15.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	5.6	2.2	35.2	3.2	3.0	5.7	0.0	12.2	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	0.3	6.5	3.8	6.1	3.6	3.8	3.0	0.0	9.9	4.7	0.0	0.0
LnGrp Delay(d),s/veh	19.0	27.7	22.9	61.7	27.8	27.7	26.0	0.0	30.0	18.0	0.0	0.0
LnGrp LOS	B	C	C	E	C	C	C		C	B		
Approach Vol, veh/h		973			641			653			321	
Approach Delay, s/veh		26.3			39.2			29.1			18.0	
Approach LOS		C			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.5	14.0	20.8		28.5	19.3	15.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		24.0	9.5	18.0		24.0	5.5	22.0				
Max Q Clear Time (g_c+I1), s		23.1	10.5	14.7		20.8	2.8	9.4				
Green Ext Time (p_c), s		0.5	0.0	1.6		1.7	0.2	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			29.2									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	19.5
Intersection LOS	C


Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	117	276	3	0	13	165	96	0	3	32	17
Future Vol, veh/h	0	117	276	3	0	13	165	96	0	3	32	17
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	133	314	3	0	15	188	109	0	3	36	19
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	24.5	15.2	10.9
HCM LOS	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	6%	30%	5%	58%
Vol Thru, %	62%	70%	60%	8%
Vol Right, %	33%	1%	35%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	396	274	308
LT Vol	3	117	13	180
Through Vol	32	276	165	26
RT Vol	17	3	96	102
Lane Flow Rate	59	450	311	350
Geometry Grp	1	1	1	1
Degree of Util (X)	0.114	0.747	0.514	0.604
Departure Headway (Hd)	6.936	5.973	5.945	6.209
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	515	608	604	581
Service Time	5.009	3.973	3.995	4.257
HCM Lane V/C Ratio	0.115	0.74	0.515	0.602
HCM Control Delay	10.9	24.5	15.2	18.3
HCM Lane LOS	B	C	C	C
HCM 95th-tile Q	0.4	6.6	2.9	4

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	180	26	102
Future Vol, veh/h	0	180	26	102
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	205	30	116
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	18.3
HCM LOS	C
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 19: Amethyst Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	772	61	88	416	15	74	216	163	58	236	75
Future Volume (veh/h)	69	772	61	88	416	15	74	216	163	58	236	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	76	848	67	97	457	16	81	237	179	64	259	82
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	916	410	119	958	34	99	595	506	82	419	133
Arrive On Green	0.06	0.27	0.27	0.08	0.29	0.29	0.06	0.34	0.34	0.05	0.33	0.33
Sat Flow, veh/h	1587	3353	1500	1587	3305	116	1587	1765	1500	1587	1286	407
Grp Volume(v), veh/h	76	848	67	97	231	242	81	237	179	64	0	341
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1744	1587	1765	1500	1587	0	1693
Q Serve(g_s), s	3.2	16.8	2.3	4.1	7.8	7.8	3.4	7.0	4.2	2.7	0.0	11.6
Cycle Q Clear(g_c), s	3.2	16.8	2.3	4.1	7.8	7.8	3.4	7.0	4.2	2.7	0.0	11.6
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	93	916	410	119	486	506	99	595	506	82	0	552
V/C Ratio(X)	0.82	0.93	0.16	0.81	0.48	0.48	0.82	0.40	0.35	0.78	0.00	0.62
Avail Cap(c_a), veh/h	128	916	410	128	486	506	128	595	506	174	0	552
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	0.00	1.00
Uniform Delay (d), s/veh	31.9	24.2	18.9	31.2	20.0	20.0	31.7	17.4	8.1	32.1	0.0	19.5
Incr Delay (d2), s/veh	24.5	14.9	0.2	30.0	0.7	0.7	26.1	2.0	1.9	15.0	0.0	5.1
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	2.0	9.7	1.0	2.8	3.7	3.9	2.2	3.8	2.5	1.5	0.0	6.2
LnGrp Delay(d),s/veh	56.4	39.1	19.1	61.1	20.7	20.7	57.8	19.4	10.0	47.1	0.0	24.6
LnGrp LOS	E	D	B	E	C	C	E	B	B	D		C
Approach Vol, veh/h		991			570			497			405	
Approach Delay, s/veh		39.1			27.6			22.3			28.2	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.0	27.6	9.7	23.2	8.8	26.8	8.5	24.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	20.3	5.5	18.7	5.5	22.3	5.5	18.7				
Max Q Clear Time (g_c+I1), s	4.7	9.0	6.1	18.8	5.4	13.6	5.2	9.8				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	1.1	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			31.2									
HCM 2010 LOS			C									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 20: Amethyst Road & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	104	218	156	50	84	50	115	405	79	158	366	59
Future Volume (veh/h)	104	218	156	50	84	50	115	405	79	158	366	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	106	222	159	51	86	51	117	413	81	161	373	60
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	162	309	263	77	126	75	169	1152	515	197	1210	541
Arrive On Green	0.10	0.18	0.18	0.05	0.12	0.12	0.11	0.34	0.34	0.12	0.36	0.36
Sat Flow, veh/h	1587	1765	1500	1587	1039	616	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	106	222	159	51	0	137	117	413	81	161	373	60
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1587	0	1656	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	3.7	6.9	3.9	1.8	0.0	4.6	4.1	5.4	2.2	5.8	4.7	1.6
Cycle Q Clear(g_c), s	3.7	6.9	3.9	1.8	0.0	4.6	4.1	5.4	2.2	5.8	4.7	1.6
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	162	309	263	77	0	201	169	1152	515	197	1210	541
V/C Ratio(X)	0.65	0.72	0.61	0.67	0.00	0.68	0.69	0.36	0.16	0.82	0.31	0.11
Avail Cap(c_a), veh/h	162	546	464	150	0	512	205	1152	515	232	1210	541
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	22.7	10.3	27.2	0.0	24.5	25.1	14.3	13.3	24.9	13.4	12.4
Incr Delay (d2), s/veh	9.1	3.1	2.2	9.5	0.0	4.0	7.4	0.9	0.7	17.7	0.7	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	2.0	3.6	2.2	1.0	0.0	2.3	2.2	2.6	1.0	3.5	2.2	0.7
LnGrp Delay(d),s/veh	34.3	25.8	12.6	36.8	0.0	28.5	32.5	15.2	13.9	42.6	14.0	12.8
LnGrp LOS	C	C	B	D		C	C	B	B	D	B	B
Approach Vol, veh/h		487			188			611			594	
Approach Delay, s/veh		23.3			30.8			18.3			21.7	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	24.5	7.3	14.7	10.7	25.5	10.4	11.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	20.0	5.5	18.0	7.5	21.0	5.5	18.0				
Max Q Clear Time (g_c+I1), s	7.8	7.4	3.8	8.9	6.1	6.7	5.7	6.6				
Green Ext Time (p_c), s	0.0	2.4	0.0	1.3	0.5	1.9	0.0	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			21.9									
HCM 2010 LOS			C									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 21: El Evado Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	121	750	56	48	377	78	71	226	120	198	282	95
Future Volume (veh/h)	121	750	56	48	377	78	71	226	120	198	282	95
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	133	824	62	53	414	86	78	248	132	218	310	104
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	890	398	68	809	362	96	773	346	385	1384	719
Arrive On Green	0.07	0.27	0.27	0.04	0.24	0.24	0.06	0.23	0.23	0.24	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	133	824	62	53	414	86	78	248	132	218	310	104
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	5.5	19.7	2.0	2.7	8.8	2.0	4.0	5.1	6.1	9.9	4.9	3.2
Cycle Q Clear(g_c), s	5.5	19.7	2.0	2.7	8.8	2.0	4.0	5.1	6.1	9.9	4.9	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	890	398	68	809	362	96	773	346	385	1384	719
V/C Ratio(X)	1.25	0.93	0.16	0.78	0.51	0.24	0.81	0.32	0.38	0.57	0.22	0.14
Avail Cap(c_a), veh/h	106	895	401	106	895	401	106	773	346	395	1384	719
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	38.4	29.5	13.7	39.1	27.0	7.2	38.2	26.3	26.7	27.4	15.7	12.0
Incr Delay (d2), s/veh	170.9	15.1	0.2	17.6	0.5	0.3	33.7	1.1	3.2	1.8	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	7.4	11.0	1.1	1.5	4.1	1.5	2.7	2.5	2.8	4.6	2.4	1.4
LnGrp Delay(d),s/veh	209.3	44.6	13.9	56.6	27.5	7.6	71.9	27.4	29.9	29.2	16.0	12.4
LnGrp LOS	F	D	B	E	C	A	E	C	C	C	B	B
Approach Vol, veh/h		1019			553			458			632	
Approach Delay, s/veh		64.2			27.2			35.7			20.0	
Approach LOS		E			C			D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.5	23.5	8.0	26.4	9.5	38.5	10.0	24.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5	19.0	5.5	22.0	5.5	34.0	5.5	22.0				
Max Q Clear Time (g_c+I1), s	11.9	8.1	4.7	21.7	6.0	6.9	7.5	10.8				
Green Ext Time (p_c), s	1.9	1.3	0.2	0.2	0.0	2.8	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			41.1									
HCM 2010 LOS			D									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 22: Amargosa Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	848	99	57	529	86	97	230	55	150	227	75
Future Volume (veh/h)	161	848	99	57	529	86	97	230	55	150	227	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	183	964	112	65	601	98	110	261	62	170	258	85
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	1038	465	82	761	341	172	776	181	193	749	241
Arrive On Green	0.13	0.31	0.31	0.05	0.23	0.23	0.11	0.29	0.29	0.12	0.30	0.30
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	2700	630	1587	2496	804
Grp Volume(v), veh/h	183	964	112	65	601	98	110	160	163	170	171	172
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1654	1587	1676	1623
Q Serve(g_s), s	8.8	21.8	4.4	3.2	13.2	4.2	5.2	5.9	6.1	8.2	6.2	6.5
Cycle Q Clear(g_c), s	8.8	21.8	4.4	3.2	13.2	4.2	5.2	5.9	6.1	8.2	6.2	6.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.50
Lane Grp Cap(c), veh/h	213	1038	465	82	761	341	172	482	475	193	503	487
V/C Ratio(X)	0.86	0.93	0.24	0.79	0.79	0.29	0.64	0.33	0.34	0.88	0.34	0.35
Avail Cap(c_a), veh/h	213	1049	469	112	835	374	172	482	475	193	503	487
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	33.2	26.2	20.2	36.7	28.5	25.0	33.4	22.0	22.0	33.8	21.3	21.4
Incr Delay (d2), s/veh	28.0	13.7	0.3	23.5	4.7	0.5	7.6	1.9	2.0	34.6	1.8	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	5.5	12.0	1.8	1.9	6.6	1.8	2.6	3.0	3.0	5.4	3.1	3.2
LnGrp Delay(d),s/veh	61.1	39.9	20.4	60.2	33.2	25.5	41.0	23.8	24.0	68.4	23.2	23.4
LnGrp LOS	E	D	C	E	C	C	D	C	C	E	C	C
Approach Vol, veh/h		1259			764			433			513	
Approach Delay, s/veh		41.3			34.5			28.3			38.3	
Approach LOS		D			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	27.0	8.5	28.7	13.0	28.0	15.0	22.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	22.5	5.5	24.5	8.5	23.5	10.5	19.5				
Max Q Clear Time (g_c+I1), s	10.2	8.1	5.2	23.8	7.2	8.5	10.8	15.2				
Green Ext Time (p_c), s	0.0	1.7	0.2	0.4	0.3	1.5	0.0	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			37.1									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions AM Peak Hour
 26: US-395 & Crossroads

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	32	53	22	28	51	57	606	51	82	481	79
Future Volume (veh/h)	70	32	53	22	28	51	57	606	51	82	481	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	76	35	58	24	30	55	62	659	55	89	523	86
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	93	154	96	63	116	105	1335	416	133	984	440
Arrive On Green	0.07	0.16	0.16	0.03	0.11	0.11	0.06	0.28	0.28	0.08	0.29	0.29
Sat Flow, veh/h	1681	598	991	3261	559	1025	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	76	0	93	24	0	85	62	659	55	89	523	86
Grp Sat Flow(s),veh/h/ln	1681	0	1590	1630	0	1584	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	1.7	0.0	2.1	0.3	0.0	2.0	1.4	4.5	1.1	2.0	5.1	1.7
Cycle Q Clear(g_c), s	1.7	0.0	2.1	0.3	0.0	2.0	1.4	4.5	1.1	2.0	5.1	1.7
Prop In Lane	1.00		0.62	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	0	248	96	0	180	105	1335	416	133	984	440
V/C Ratio(X)	0.63	0.00	0.38	0.25	0.00	0.47	0.59	0.49	0.13	0.67	0.53	0.20
Avail Cap(c_a), veh/h	792	0	1398	623	0	949	664	4850	1510	878	3803	1701
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	17.7	0.0	14.9	18.6	0.0	16.3	17.9	11.9	10.6	17.6	11.6	10.4
Incr Delay (d2), s/veh	5.3	0.0	0.9	1.4	0.0	1.9	5.2	0.3	0.1	5.7	0.4	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	1.0	0.0	1.0	0.1	0.0	0.9	0.8	2.0	0.5	1.1	2.4	0.7
LnGrp Delay(d),s/veh	23.0	0.0	15.8	20.0	0.0	18.2	23.1	12.2	10.8	23.3	12.0	10.6
LnGrp LOS	C		B	B		B	C	B	B	C	B	B
Approach Vol, veh/h		169			109			776			698	
Approach Delay, s/veh		19.0			18.6			12.9			13.3	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	15.4	5.7	10.6	7.0	16.0	7.3	8.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5	39.5	7.5	34.5	15.5	44.5	18.5	23.5				
Max Q Clear Time (g_c+I1), s	4.0	6.5	2.3	4.1	3.4	7.1	3.7	4.0				
Green Ext Time (p_c), s	0.2	4.4	0.0	0.5	0.1	3.5	0.1	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			14.0									
HCM 2010 LOS			B									

Intersection

Int Delay, s/veh 3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	6	951	812	182	98	2
Future Vol, veh/h	6	951	812	182	98	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	200	-	-	225	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	980	837	188	101	2



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	837	0	419
Stage 1	-	-	837
Stage 2	-	-	503
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	793	-	583
Stage 1	-	-	385
Stage 2	-	-	573
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	793	-	583
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	385
Stage 2	-	-	569

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	74
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	793	-	-	-	143	583
HCM Lane V/C Ratio	0.008	-	-	-	0.707	0.004
HCM Control Delay (s)	9.6	-	-	-	75.3	11.2
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	4.1	0

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	919	0	0	774	12	0	0	0	104	0	227
Future Volume (veh/h)	119	919	0	0	774	12	0	0	0	104	0	227
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1667	1765	0	0	1765	1765				1667	0	1765
Adj Flow Rate, veh/h	121	938	0	0	790	12				106	0	232
Adj No. of Lanes	1	2	0	0	2	1				1	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	2	2	0	0	2	2				2	0	2
Cap, veh/h	150	1993	0	0	1333	596				320	0	302
Arrive On Green	0.09	0.59	0.00	0.00	0.40	0.40				0.20	0.00	0.20
Sat Flow, veh/h	1587	3441	0	0	3441	1500				1587	0	1500
Grp Volume(v), veh/h	121	938	0	0	790	12				106	0	232
Grp Sat Flow(s),veh/h/ln	1587	1676	0	0	1676	1500				1587	0	1500
Q Serve(g_s), s	3.3	6.9	0.0	0.0	8.2	0.2				2.5	0.0	6.4
Cycle Q Clear(g_c), s	3.3	6.9	0.0	0.0	8.2	0.2				2.5	0.0	6.4
Prop In Lane	1.00		0.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	150	1993	0	0	1333	596				320	0	302
V/C Ratio(X)	0.81	0.47	0.00	0.00	0.59	0.02				0.33	0.00	0.77
Avail Cap(c_a), veh/h	378	2775	0	0	1635	731				522	0	493
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	19.6	5.0	0.0	0.0	10.5	8.1				15.1	0.0	16.6
Incr Delay (d2), s/veh	9.6	0.2	0.0	0.0	0.4	0.0				0.6	0.0	4.1
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	1.8	3.2	0.0	0.0	3.8	0.2				1.1	0.0	5.4
LnGrp Delay(d),s/veh	29.2	5.2	0.0	0.0	10.9	8.1				15.7	0.0	20.7
LnGrp LOS	C	A			B	A				B		C
Approach Vol, veh/h		1059			802						338	
Approach Delay, s/veh		8.0			10.8						19.1	
Approach LOS		A			B						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				30.7		13.4	8.7	22.0				
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s				36.5		14.5	10.5	21.5				
Max Q Clear Time (g_c+I1), s				8.9		8.4	5.3	10.2				
Green Ext Time (p_c), s				12.7		0.6	0.1	7.3				
Intersection Summary												
HCM 2010 Ctrl Delay			10.7									
HCM 2010 LOS			B									

Intersection

Int Delay, s/veh 7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	5	0	238	0	0	0	303	684	0	0	738	16
Future Vol, veh/h	5	0	238	0	0	0	303	684	0	0	738	16
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	-	-	-	-	-	-	300	-	-	-	-	250
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	245	0	0	0	312	705	0	0	761	16

























Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2091	2091	761	2214	2091	705	761	0	-	-	-	0
Stage 1	761	761	-	1330	1330	-	-	-	-	-	-	-
Stage 2	1330	1330	-	884	761	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	38	52	405	31	52	436	851	-	0	0	-	-
Stage 1	398	414	-	191	224	-	-	-	0	0	-	-
Stage 2	191	224	-	340	414	-	-	-	0	0	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	27	33	405	9	33	436	851	-	-	-	-	-
Mov Cap-2 Maneuver	27	33	-	9	33	-	-	-	-	-	-	-
Stage 1	252	414	-	121	142	-	-	-	-	-	-	-
Stage 2	121	142	-	134	414	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	49.6	0	3.6	0
HCM LOS	E	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	851	-	314	-	-
HCM Lane V/C Ratio	0.367	-	0.798	-	-
HCM Control Delay (s)	11.7	-	49.6	0	-
HCM Lane LOS	B	-	E	A	-
HCM 95th %tile Q(veh)	1.7	-	6.5	-	-
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 4: US-395 & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	484	309	254	538	140	269	664	102	140	600	49
Future Volume (veh/h)	102	484	309	254	538	140	269	664	102	140	600	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	105	499	319	262	555	144	277	685	105	144	619	51
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	150	646	289	327	708	317	292	1245	557	174	995	445
Arrive On Green	0.09	0.19	0.19	0.11	0.21	0.21	0.18	0.37	0.37	0.11	0.30	0.30
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	105	499	319	262	555	144	277	685	105	144	619	51
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	5.4	11.9	10.4	7.4	13.2	5.1	14.5	13.6	4.0	7.5	13.4	2.1
Cycle Q Clear(g_c), s	5.4	11.9	10.4	7.4	13.2	5.1	14.5	13.6	4.0	7.5	13.4	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	646	289	327	708	317	292	1245	557	174	995	445
V/C Ratio(X)	0.70	0.77	1.10	0.80	0.78	0.45	0.95	0.55	0.19	0.83	0.62	0.11
Avail Cap(c_a), veh/h	150	836	374	361	995	445	292	1245	557	217	995	445
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	37.0	32.2	13.9	36.4	31.4	15.3	34.0	20.9	17.9	36.7	25.5	21.6
Incr Delay (d2), s/veh	13.5	3.4	77.3	11.2	2.8	1.0	38.9	1.8	0.7	19.1	2.9	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	2.9	5.8	11.5	3.5	6.4	2.7	9.5	6.6	1.7	4.2	6.6	0.9
LnGrp Delay(d),s/veh	50.5	35.6	91.2	47.7	34.2	16.3	72.9	22.7	18.6	55.8	28.5	22.1
LnGrp LOS	D	D	F	D	C	B	E	C	B	E	C	C
Approach Vol, veh/h		923			961			1067			814	
Approach Delay, s/veh		56.5			35.2			35.3			32.9	
Approach LOS		E			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.7	35.8	14.0	20.7	20.0	29.5	12.5	22.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	29.0	10.5	21.0	15.5	25.0	6.5	25.0				
Max Q Clear Time (g_c+I1), s	9.5	15.6	9.4	13.9	16.5	15.4	7.4	15.2				
Green Ext Time (p_c), s	0.1	4.4	0.1	2.3	0.0	2.6	0.0	2.6				
Intersection Summary												
HCM 2010 Ctrl Delay			40.0									
HCM 2010 LOS			D									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 6: US-395 & Dos Palmas Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	32	43	14	31	75	34	870	26	84	920	157
Future Volume (veh/h)	123	32	43	14	31	75	34	870	26	84	920	157
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	131	34	46	15	33	80	36	926	28	89	979	167
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	471	400	210	47	114	66	1593	713	110	1442	246
Arrive On Green	0.10	0.27	0.27	0.10	0.10	0.10	0.04	0.48	0.48	0.07	0.50	0.50
Sat Flow, veh/h	1587	1765	1500	1240	458	1111	1587	3353	1500	1587	2866	489
Grp Volume(v), veh/h	131	34	46	15	0	113	36	926	28	89	572	574
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1240	0	1569	1587	1676	1500	1587	1676	1678
Q Serve(g_s), s	5.8	1.0	1.7	0.8	0.0	5.0	1.6	14.3	0.7	4.0	18.4	18.5
Cycle Q Clear(g_c), s	5.8	1.0	1.7	1.8	0.0	5.0	1.6	14.3	0.7	4.0	18.4	18.5
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	161	471	400	210	0	161	66	1593	713	110	843	844
V/C Ratio(X)	0.81	0.07	0.11	0.07	0.00	0.70	0.55	0.58	0.04	0.81	0.68	0.68
Avail Cap(c_a), veh/h	189	863	734	464	0	482	122	1593	713	166	843	844
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.5	19.6	19.8	30.1	0.0	31.1	33.6	13.6	10.0	32.8	13.4	13.4
Incr Delay (d2), s/veh	20.5	0.1	0.1	0.1	0.0	5.5	6.9	1.6	0.1	15.7	4.4	4.4
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	3.5	0.5	0.7	0.3	0.0	2.4	0.8	6.9	0.3	2.2	9.4	9.5
LnGrp Delay(d),s/veh	52.0	19.7	20.0	30.3	0.0	36.5	40.5	15.2	10.2	48.5	17.8	17.8
LnGrp LOS	D	B	B	C		D	D	B	B	D	B	B
Approach Vol, veh/h		211			128			990			1235	
Approach Delay, s/veh		39.8			35.8			16.0			20.0	
Approach LOS		D			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	38.5		23.6	7.5	40.5	11.8	11.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	34.0		35.0	5.5	36.0	8.5	22.0				
Max Q Clear Time (g_c+I1), s	6.0	16.3		3.7	3.6	20.5	7.8	7.0				
Green Ext Time (p_c), s	0.0	5.4		0.7	0.0	5.9	0.0	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			20.9									
HCM 2010 LOS			C									













SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 7: US-395 & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	74	33	44	97	163	78	723	72	215	666	79
Future Volume (veh/h)	54	74	33	44	97	163	78	723	72	215	666	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	56	77	34	46	101	170	81	753	75	224	694	82
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	477	405	406	160	269	99	1121	502	269	1482	663
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.06	0.33	0.33	0.17	0.44	0.44
Sat Flow, veh/h	1042	1765	1500	1206	592	997	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	56	77	34	46	0	271	81	753	75	224	694	82
Grp Sat Flow(s),veh/h/ln	1042	1765	1500	1206	0	1589	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	3.0	2.0	1.0	1.8	0.0	9.0	3.0	11.5	2.1	8.2	8.7	1.9
Cycle Q Clear(g_c), s	12.0	2.0	1.0	3.8	0.0	9.0	3.0	11.5	2.1	8.2	8.7	1.9
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	477	405	406	0	429	99	1121	502	269	1482	663
V/C Ratio(X)	0.23	0.16	0.08	0.11	0.00	0.63	0.82	0.67	0.15	0.83	0.47	0.12
Avail Cap(c_a), veh/h	469	856	727	665	0	770	173	1121	502	332	1482	663
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.5	16.7	16.3	18.1	0.0	19.2	27.7	17.1	13.9	24.0	11.7	9.9
Incr Delay (d2), s/veh	0.5	0.2	0.1	0.1	0.0	1.5	15.1	3.2	0.6	13.7	1.1	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	0.9	1.0	0.4	0.6	0.0	4.1	1.7	5.8	0.9	4.6	4.2	0.9
LnGrp Delay(d),s/veh	24.9	16.8	16.4	18.2	0.0	20.7	42.8	20.3	14.6	37.7	12.8	10.2
LnGrp LOS	C	B	B	B		C	D	C	B	D	B	B
Approach Vol, veh/h		167			317			909			1000	
Approach Delay, s/veh		19.5			20.4			21.8			18.2	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.6	24.5		20.7	8.2	30.9		20.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	20.0		29.0	6.5	26.0		29.0				
Max Q Clear Time (g_c+I1), s	10.2	13.5		14.0	5.0	10.7		11.0				
Green Ext Time (p_c), s	0.3	2.5		2.2	0.0	4.4		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay			19.9									
HCM 2010 LOS			B									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 8: US-395 & La Mesa Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								↑↑			↑↑	
Traffic Volume (veh/h)	0	0	0	0	0	0	0	903	0	0	755	0
Future Volume (veh/h)	0	0	0	0	0	0	0	903	0	0	755	0
Number							5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln							0	1765	0	0	1765	0
Adj Flow Rate, veh/h							0	951	0	0	795	0
Adj No. of Lanes							0	2	0	0	2	0
Peak Hour Factor							0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %							0	2	0	0	2	0
Cap, veh/h							0	3101	0	0	3101	0
Arrive On Green							0.00	0.93	0.00	0.00	0.93	0.00
Sat Flow, veh/h							0	3529	0	0	3529	0
Grp Volume(v), veh/h							0	951	0	0	795	0
Grp Sat Flow(s),veh/h/ln							0	1676	0	0	1676	0
Q Serve(g_s), s							0.0	1.8	0.0	0.0	1.4	0.0
Cycle Q Clear(g_c), s							0.0	1.8	0.0	0.0	1.4	0.0
Prop In Lane							0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h							0	3101	0	0	3101	0
V/C Ratio(X)							0.00	0.31	0.00	0.00	0.26	0.00
Avail Cap(c_a), veh/h							0	3101	0	0	3101	0
HCM Platoon Ratio							1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)							0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh							0.0	0.2	0.0	0.0	0.2	0.0
Incr Delay (d2), s/veh							0.0	0.3	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh							0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln							0.0	0.8	0.0	0.0	0.6	0.0
LnGrp Delay(d),s/veh							0.0	0.5	0.0	0.0	0.4	0.0
LnGrp LOS								A			A	
Approach Vol, veh/h								951			795	
Approach Delay, s/veh								0.5			0.4	
Approach LOS								A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6						
Phs Duration (G+Y+Rc), s		60.0				60.0						
Change Period (Y+Rc), s		4.5				4.5						
Max Green Setting (Gmax), s		55.5				55.5						
Max Q Clear Time (g_c+I1), s		3.8				3.4						
Green Ext Time (p_c), s		15.8				15.8						
Intersection Summary												
HCM 2010 Ctrl Delay											0.5	
HCM 2010 LOS											A	

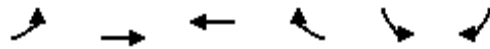
SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 9: US-395 & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	277	76	87	244	142	153	695	203	155	603	20
Future Volume (veh/h)	33	277	76	87	244	142	153	695	203	155	603	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	35	292	80	92	257	149	161	732	214	163	635	21
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	456	204	113	577	258	193	1389	621	193	1372	45
Arrive On Green	0.04	0.14	0.14	0.07	0.17	0.17	0.12	0.41	0.41	0.12	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3312	109
Grp Volume(v), veh/h	35	292	80	92	257	149	161	732	214	163	321	335
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1745
Q Serve(g_s), s	1.5	5.8	3.4	4.0	4.8	4.5	6.9	11.5	6.8	7.0	9.7	9.7
Cycle Q Clear(g_c), s	1.5	5.8	3.4	4.0	4.8	4.5	6.9	11.5	6.8	7.0	9.7	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	56	456	204	113	577	258	193	1389	621	193	694	723
V/C Ratio(X)	0.63	0.64	0.39	0.81	0.45	0.58	0.84	0.53	0.34	0.85	0.46	0.46
Avail Cap(c_a), veh/h	125	1389	621	125	1389	621	193	1389	621	193	694	723
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	33.3	28.6	27.6	32.0	26.0	13.0	30.1	15.4	14.0	30.1	14.9	14.9
Incr Delay (d2), s/veh	10.9	1.5	1.2	29.9	0.5	2.0	26.0	1.4	1.5	27.7	2.2	2.1
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	0.8	2.8	1.5	2.7	2.3	2.0	4.4	5.6	3.1	4.6	4.9	5.1
LnGrp Delay(d),s/veh	44.2	30.1	28.8	61.9	26.5	15.0	56.1	16.8	15.5	57.9	17.1	17.0
LnGrp LOS	D	C	C	E	C	B	E	B	B	E	B	B
Approach Vol, veh/h		407			498			1107			819	
Approach Delay, s/veh		31.1			29.6			22.3			25.2	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	33.5	9.5	14.0	13.0	33.5	7.0	16.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	29.0	5.5	29.0	8.5	29.0	5.5	29.0				
Max Q Clear Time (g_c+I1), s	9.0	13.5	6.0	7.8	8.9	11.7	3.5	6.8				
Green Ext Time (p_c), s	0.0	4.5	0.0	1.7	0.0	3.1	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			25.7									
HCM 2010 LOS			C									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 10: Palmdale Road (SR-18) & Cantina Street



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	4	751	816	145	179	21		
Future Volume (veh/h)	4	751	816	145	179	21		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1569	1765		
Adj Flow Rate, veh/h	4	799	868	154	190	22		
Adj No. of Lanes	1	2	2	1	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	9	1498	1172	524	1071	554		
Arrive On Green	0.01	0.45	0.35	0.35	0.37	0.37		
Sat Flow, veh/h	1587	3441	3441	1500	2898	1500		
Grp Volume(v), veh/h	4	799	868	154	190	22		
Grp Sat Flow(s),veh/h/ln	1587	1676	1676	1500	1449	1500		
Q Serve(g_s), s	0.1	8.5	11.1	3.6	2.2	0.5		
Cycle Q Clear(g_c), s	0.1	8.5	11.1	3.6	2.2	0.5		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	9	1498	1172	524	1071	554		
V/C Ratio(X)	0.47	0.53	0.74	0.29	0.18	0.04		
Avail Cap(c_a), veh/h	178	2252	1567	701	1071	554		
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	24.3	9.8	14.0	11.5	10.4	9.9		
Incr Delay (d2), s/veh	34.6	0.3	1.3	0.3	0.4	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	0.1	3.9	5.3	1.5	0.9	0.5		
LnGrp Delay(d),s/veh	58.9	10.1	15.3	11.9	10.8	10.0		
LnGrp LOS	E	B	B	B	B	B		
Approach Vol, veh/h		803	1022		212			
Approach Delay, s/veh		10.4	14.8		10.7			
Approach LOS		B	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				26.4		22.6	4.8	21.6
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				32.9		18.1	5.5	22.9
Max Q Clear Time (g_c+I1), s				10.5		4.2	2.1	13.1
Green Ext Time (p_c), s				4.8		0.6	1.5	4.0
Intersection Summary								
HCM 2010 Ctrl Delay			12.6					
HCM 2010 LOS			B					

Intersection

Int Delay, s/veh 4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	12	96	35	49	72	10	28	11	26	3	10	15
Future Vol, veh/h	12	96	35	49	72	10	28	11	26	3	10	15
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	122	44	62	91	13	35	14	33	4	13	19

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	104	0	0	166	0	0	411	402	144	419	418	97
Stage 1	-	-	-	-	-	-	174	174	-	222	222	-
Stage 2	-	-	-	-	-	-	237	228	-	197	196	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1488	-	-	1412	-	-	551	537	903	544	526	959
Stage 1	-	-	-	-	-	-	828	755	-	780	720	-
Stage 2	-	-	-	-	-	-	766	715	-	805	739	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1488	-	-	1412	-	-	506	506	903	491	496	959
Mov Cap-2 Maneuver	-	-	-	-	-	-	506	506	-	491	496	-
Stage 1	-	-	-	-	-	-	819	747	-	771	686	-
Stage 2	-	-	-	-	-	-	702	681	-	753	731	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	2.9	11.8	10.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	614	1488	-	-	1412	-	-	668
HCM Lane V/C Ratio	0.134	0.01	-	-	0.044	-	-	0.053
HCM Control Delay (s)	11.8	7.4	0	-	7.7	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.2

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵	↵
Traffic Vol, veh/h	0	22	137	45	0	36	89	14	0	44	54	41
Future Vol, veh/h	0	22	137	45	0	36	89	14	0	44	54	41
Peak Hour Factor	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	140	46	0	37	91	14	0	45	55	42
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	10.1	9.4	9
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	75%	0%	86%	0%	73%
Vol Right, %	0%	0%	100%	0%	25%	0%	14%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	54	41	22	182	36	103	17	66
LT Vol	44	0	0	22	0	36	0	17	0
Through Vol	0	54	0	0	137	0	89	0	48
RT Vol	0	0	41	0	45	0	14	0	18
Lane Flow Rate	45	55	42	22	186	37	105	17	67
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.078	0.088	0.058	0.037	0.275	0.063	0.162	0.031	0.108
Departure Headway (Hd)	6.239	5.736	5.03	6.001	5.326	6.13	5.532	6.365	5.767
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	569	618	703	592	669	579	641	557	625
Service Time	4.034	3.53	2.825	3.787	3.111	3.923	3.325	4.165	3.467
HCM Lane V/C Ratio	0.079	0.089	0.06	0.037	0.278	0.064	0.164	0.031	0.107
HCM Control Delay	9.6	9.1	8.1	9	10.2	9.3	9.4	9.4	9.2
HCM Lane LOS	A	A	A	A	B	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.2	0.1	1.1	0.2	0.6	0.1	0.4

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		1	1	
Traffic Vol, veh/h	0	17	48	18
Future Vol, veh/h	0	17	48	18
Peak Hour Factor	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	17	49	18
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.2
HCM LOS	A

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	8	101	6	0	46	133	129	0	1	27	39
Future Vol, veh/h	0	8	101	6	0	46	133	129	0	1	27	39
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	105	6	0	48	139	134	0	1	28	41
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	9.2	9.2	8.8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	19%	0%	100%	85%	0%	100%	26%	0%	100%
Vol Right, %	0%	0%	81%	0%	0%	15%	0%	0%	74%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	18	48	8	67	40	46	89	173	107	21
LT Vol	1	0	0	8	0	0	46	0	0	107	0
Through Vol	0	18	9	0	67	34	0	89	44	0	21
RT Vol	0	0	39	0	0	6	0	0	129	0	0
Lane Flow Rate	1	19	50	8	70	41	48	92	181	111	22
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.002	0.032	0.077	0.015	0.113	0.065	0.079	0.14	0.247	0.195	0.036
Departure Headway (Hd)	6.587	6.087	5.518	6.275	5.775	5.669	5.94	5.44	4.919	6.286	5.786
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	547	592	653	565	614	625	599	654	724	565	612
Service Time	4.287	3.787	3.218	4.074	3.574	3.468	3.718	3.218	2.697	4.085	3.585
HCM Lane V/C Ratio	0.002	0.032	0.077	0.014	0.114	0.066	0.08	0.141	0.25	0.196	0.036
HCM Control Delay	9.3	9	8.7	9.2	9.3	8.9	9.2	9.1	9.3	10.6	8.8
HCM Lane LOS	A	A	A	A	A	A	A	A	A	B	A
HCM 95th-tile Q	0	0.1	0.2	0	0.4	0.2	0.3	0.5	1	0.7	0.1

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↘	↕	
Traffic Vol, veh/h	0	107	32	6
Future Vol, veh/h	0	107	32	6
Peak Hour Factor	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	111	33	6
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	10.1
HCM LOS	B

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵	
Traffic Vol, veh/h	0	17	148	25	0	41	114	9	0	15	44	32
Future Vol, veh/h	0	17	148	25	0	41	114	9	0	15	44	32
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	18	161	27	0	45	124	10	0	16	48	35
Number of Lanes	0	1	1	0	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	10.3	9.6	8.9
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	27%	0%
Vol Thru, %	0%	100%	31%	0%	86%	0%	93%	73%	64%
Vol Right, %	0%	0%	69%	0%	14%	0%	7%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	29	47	17	173	41	123	45	51
LT Vol	15	0	0	17	0	41	0	12	0
Through Vol	0	29	15	0	148	0	114	33	33
RT Vol	0	0	32	0	25	0	9	0	18
Lane Flow Rate	16	32	51	18	188	45	134	48	55
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.029	0.053	0.077	0.031	0.283	0.075	0.205	0.082	0.087
Departure Headway (Hd)	6.485	5.981	5.496	6.013	5.409	6.067	5.513	6.112	5.724
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	555	602	655	590	658	585	644	590	630
Service Time	4.188	3.684	3.199	3.803	3.2	3.862	3.308	3.812	3.424
HCM Lane V/C Ratio	0.029	0.053	0.078	0.031	0.286	0.077	0.208	0.081	0.087
HCM Control Delay	9.4	9	8.7	9	10.4	9.4	9.7	9.4	9
HCM Lane LOS	A	A	A	A	B	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.2	0.1	1.2	0.2	0.8	0.3	0.3

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			←↑→	
Traffic Vol, veh/h	0	12	65	18
Future Vol, veh/h	0	12	65	18
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	13	71	20
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.2
HCM LOS	A

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	14	212	46	0	105	324	0	0	58	55	76
Future Vol, veh/h	0	14	212	46	0	105	324	0	0	58	55	76
Peak Hour Factor	0.92	0.99	0.99	0.99	0.92	0.99	0.99	0.99	0.92	0.99	0.99	0.99
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	14	214	46	0	106	327	0	0	59	56	77
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	10.9	10.2	10.4
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	19%	0%	100%	61%	0%	100%	100%	0%	100%
Vol Right, %	0%	0%	81%	0%	0%	39%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	37	94	14	141	117	105	162	162	28	49
LT Vol	58	0	0	14	0	0	105	0	0	28	0
Through Vol	0	37	18	0	141	71	0	162	162	0	49
RT Vol	0	0	76	0	0	46	0	0	0	0	0
Lane Flow Rate	59	37	95	14	143	118	106	164	164	28	50
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.118	0.069	0.164	0.027	0.255	0.202	0.198	0.282	0.203	0.058	0.095
Departure Headway (Hd)	7.246	6.746	6.182	6.933	6.433	6.157	6.705	6.205	4.471	7.393	6.893
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	494	530	578	516	557	581	535	578	799	483	518
Service Time	5.004	4.504	3.94	4.686	4.186	3.91	4.456	3.956	2.222	5.158	4.658
HCM Lane V/C Ratio	0.119	0.07	0.164	0.027	0.257	0.203	0.198	0.284	0.205	0.058	0.097
HCM Control Delay	11	10	10.2	9.9	11.4	10.5	11.1	11.4	8.4	10.6	10.4
HCM Lane LOS	B	A	B	A	B	B	B	B	A	B	B
HCM 95th-tile Q	0.4	0.2	0.6	0.1	1	0.7	0.7	1.2	0.8	0.2	0.3

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕↵	
Traffic Vol, veh/h	0	28	74	20
Future Vol, veh/h	0	28	74	20
Peak Hour Factor	0.92	0.99	0.99	0.99
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	28	75	20
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	10.3
HCM LOS	B






















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 16: Topaz Road & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	479	4	80	579	147	5	30	48	94	34	25
Future Volume (veh/h)	42	479	4	80	579	147	5	30	48	94	34	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	44	499	4	83	603	153	5	31	50	98	35	26
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	711	318	208	797	202	509	536	456	580	640	544
Arrive On Green	0.04	0.21	0.21	0.13	0.30	0.30	0.01	0.30	0.30	0.07	0.36	0.36
Sat Flow, veh/h	1587	3353	1500	1587	2651	671	1587	1765	1500	1587	1765	1500
Grp Volume(v), veh/h	44	499	4	83	381	375	5	31	50	98	35	26
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1646	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.7	8.6	0.1	3.0	12.9	12.9	0.1	0.8	0.9	2.5	0.8	0.7
Cycle Q Clear(g_c), s	1.7	8.6	0.1	3.0	12.9	12.9	0.1	0.8	0.9	2.5	0.8	0.7
Prop In Lane	1.00		1.00	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	68	711	318	208	504	495	509	536	456	580	640	544
V/C Ratio(X)	0.65	0.70	0.01	0.40	0.76	0.76	0.01	0.06	0.11	0.17	0.05	0.05
Avail Cap(c_a), veh/h	165	1554	695	216	831	816	638	536	456	616	640	544
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	29.5	22.8	12.7	24.9	19.8	19.8	14.9	15.4	5.7	12.5	13.0	12.9
Incr Delay (d2), s/veh	10.0	1.3	0.0	1.2	2.3	2.4	0.0	0.2	0.5	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	0.9	4.1	0.1	1.4	6.3	6.2	0.1	0.4	0.7	1.1	0.4	0.3
LnGrp Delay(d),s/veh	39.5	24.1	12.8	26.1	22.1	22.2	14.9	15.6	6.2	12.7	13.1	13.1
LnGrp LOS	D	C	B	C	C	C	B	B	A	B	B	B
Approach Vol, veh/h		547			839			86			159	
Approach Delay, s/veh		25.3			22.6			10.1			12.8	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.6	23.5	12.7	17.8	4.9	27.2	7.2	23.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	19.0	8.5	29.0	5.5	19.0	6.5	31.0				
Max Q Clear Time (g_c+I1), s	4.5	2.9	5.0	10.6	2.1	2.8	3.7	14.9				
Green Ext Time (p_c), s	0.0	0.4	1.5	2.6	0.0	0.4	0.0	3.9				
Intersection Summary												
HCM 2010 Ctrl Delay			21.9									
HCM 2010 LOS			C									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 17: Cobalt Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	829	55	137	786	13	50	44	111	21	49	27
Future Volume (veh/h)	42	829	55	137	786	13	50	44	111	21	49	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	43	855	57	141	810	13	52	45	114	22	51	28
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	973	435	161	956	15	620	176	447	166	356	174
Arrive On Green	0.11	0.29	0.29	0.10	0.28	0.28	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1587	3353	1500	1587	3377	54	1241	443	1123	245	896	438
Grp Volume(v), veh/h	43	855	57	141	402	421	52	0	159	101	0	0
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1755	1241	0	1567	1579	0	0
Q Serve(g_s), s	1.6	15.6	1.8	5.6	14.5	14.5	0.0	0.0	4.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	15.6	1.8	5.6	14.5	14.5	1.3	0.0	4.4	2.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.72	0.22		0.28
Lane Grp Cap(c), veh/h	172	973	435	161	475	497	620	0	623	697	0	0
V/C Ratio(X)	0.25	0.88	0.13	0.88	0.85	0.85	0.08	0.00	0.26	0.15	0.00	0.00
Avail Cap(c_a), veh/h	172	1020	456	161	536	561	620	0	623	697	0	0
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	0.00
Uniform Delay (d), s/veh	26.2	21.7	16.8	28.4	21.7	21.7	12.0	0.0	12.9	12.4	0.0	0.0
Incr Delay (d2), s/veh	0.8	8.7	0.1	37.9	11.0	10.6	0.3	0.0	1.0	0.4	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	0.7	8.3	0.8	4.2	8.2	8.5	0.6	0.0	2.0	1.2	0.0	0.0
LnGrp Delay(d),s/veh	26.9	30.3	16.9	66.3	32.7	32.2	12.3	0.0	13.9	12.8	0.0	0.0
LnGrp LOS	C	C	B	E	C	C	B		B	B		
Approach Vol, veh/h		955			964			211			101	
Approach Delay, s/veh		29.4			37.4			13.5			12.8	
Approach LOS		C			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	11.0	23.1		30.0	11.4	22.6				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		25.5	6.5	19.5		25.5	5.5	20.5				
Max Q Clear Time (g_c+I1), s		6.4	7.6	17.6		4.5	3.6	16.5				
Green Ext Time (p_c), s		1.5	0.0	1.0		1.6	0.1	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			30.6									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	37	146	1	0	15	195	71	0	0	8	8
Future Vol, veh/h	0	37	146	1	0	15	195	71	0	0	8	8
Peak Hour Factor	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	39	154	1	0	16	205	75	0	0	8	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.2	9.8	8.1
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	20%	5%	33%
Vol Thru, %	50%	79%	69%	15%
Vol Right, %	50%	1%	25%	52%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	184	281	123
LT Vol	0	37	15	41
Through Vol	8	146	195	18
RT Vol	8	1	71	64
Lane Flow Rate	17	194	296	129
Geometry Grp	1	1	1	1
Degree of Util (X)	0.023	0.25	0.359	0.173
Departure Headway (Hd)	4.911	4.646	4.371	4.8
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	725	771	822	744
Service Time	2.967	2.684	2.404	2.845
HCM Lane V/C Ratio	0.023	0.252	0.36	0.173
HCM Control Delay	8.1	9.2	9.8	8.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.1	1	1.6	0.6

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	41	18	64
Future Vol, veh/h	0	41	18	64
Peak Hour Factor	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	43	19	67
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.9
HCM LOS	A
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 19: Amethyst Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	707	74	152	854	51	94	156	78	40	237	84
Future Volume (veh/h)	63	707	74	152	854	51	94	156	78	40	237	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	66	736	77	158	890	53	98	162	81	42	247	88
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	838	375	182	1010	60	118	623	529	62	395	141
Arrive On Green	0.05	0.25	0.25	0.11	0.31	0.31	0.07	0.35	0.35	0.04	0.32	0.32
Sat Flow, veh/h	1587	3353	1500	1587	3216	192	1587	1765	1500	1587	1243	443
Grp Volume(v), veh/h	66	736	77	158	464	479	98	162	81	42	0	335
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1731	1587	1765	1500	1587	0	1687
Q Serve(g_s), s	3.0	15.6	3.0	7.2	19.4	19.4	4.5	4.8	1.7	1.9	0.0	12.5
Cycle Q Clear(g_c), s	3.0	15.6	3.0	7.2	19.4	19.4	4.5	4.8	1.7	1.9	0.0	12.5
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	80	838	375	182	527	544	118	623	529	62	0	536
V/C Ratio(X)	0.82	0.88	0.21	0.87	0.88	0.88	0.83	0.26	0.15	0.68	0.00	0.63
Avail Cap(c_a), veh/h	118	884	395	182	527	544	118	623	529	139	0	536
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	0.00	1.00
Uniform Delay (d), s/veh	34.8	26.7	21.9	32.2	24.1	24.1	33.8	17.1	6.6	35.1	0.0	21.5
Incr Delay (d2), s/veh	24.3	9.7	0.3	32.8	15.9	15.5	37.0	1.0	0.6	12.1	0.0	5.4
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	1.9	8.3	1.3	4.8	11.2	11.5	3.2	2.5	0.8	1.1	0.0	6.6
LnGrp Delay(d),s/veh	59.1	36.4	22.2	65.0	39.9	39.5	70.8	18.1	7.2	47.2	0.0	26.9
LnGrp LOS	E	D	C	E	D	D	E	B	A	D		C
Approach Vol, veh/h		879			1101			341				377
Approach Delay, s/veh		36.8			43.3			30.6				29.2
Approach LOS		D			D			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.4	30.6	13.0	23.0	10.0	28.0	8.3	27.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	22.5	8.5	19.5	5.5	23.5	5.5	22.5				
Max Q Clear Time (g_c+I1), s	3.9	6.8	9.2	17.6	6.5	14.5	5.0	21.4				
Green Ext Time (p_c), s	0.0	1.1	0.0	0.9	0.0	1.1	0.0	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			37.6									
HCM 2010 LOS			D									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 20: Amethyst Road & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	95	75	23	127	36	123	340	21	42	338	56
Future Volume (veh/h)	39	95	75	23	127	36	123	340	21	42	338	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	43	104	82	25	140	40	135	374	23	46	371	62
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	294	249	46	199	57	166	1367	611	74	1174	525
Arrive On Green	0.04	0.17	0.17	0.03	0.15	0.15	0.10	0.41	0.41	0.05	0.35	0.35
Sat Flow, veh/h	1587	1765	1500	1587	1321	377	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	43	104	82	25	0	180	135	374	23	46	371	62
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1587	0	1698	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	1.4	2.7	1.6	0.8	0.0	5.2	4.3	3.8	0.5	1.5	4.2	1.4
Cycle Q Clear(g_c), s	1.4	2.7	1.6	0.8	0.0	5.2	4.3	3.8	0.5	1.5	4.2	1.4
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	294	249	46	0	256	166	1367	611	74	1174	525
V/C Ratio(X)	0.61	0.35	0.33	0.54	0.00	0.70	0.81	0.27	0.04	0.62	0.32	0.12
Avail Cap(c_a), veh/h	170	618	525	170	0	594	170	1367	611	170	1174	525
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	19.0	8.4	24.6	0.0	20.7	22.5	10.2	9.2	24.1	12.2	11.3
Incr Delay (d2), s/veh	8.1	0.7	0.8	9.4	0.0	3.5	25.0	0.5	0.1	8.1	0.7	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	0.8	1.4	1.0	0.5	0.0	2.6	3.0	1.9	0.2	0.8	2.0	0.7
LnGrp Delay(d),s/veh	32.2	19.7	9.1	34.0	0.0	24.2	47.5	10.7	9.3	32.2	12.9	11.8
LnGrp LOS	C	B	A	C		C	D	B	A	C	B	B
Approach Vol, veh/h		229			205			532			479	
Approach Delay, s/veh		18.3			25.4			19.9			14.6	
Approach LOS		B			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	25.5	6.0	13.1	9.9	22.5	6.8	12.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	18.0	5.5	18.0	5.5	18.0	5.5	18.0				
Max Q Clear Time (g_c+I1), s	3.5	5.8	2.8	4.7	6.3	6.2	3.4	7.2				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.7	0.0	1.8	0.2	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			18.7									
HCM 2010 LOS			B									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 21: El Evado Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	673	77	139	922	175	98	379	66	168	291	99
Future Volume (veh/h)	128	673	77	139	922	175	98	379	66	168	291	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	131	687	79	142	941	179	100	387	67	171	297	101
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	156	823	368	285	1094	489	122	765	342	285	1108	644
Arrive On Green	0.10	0.25	0.25	0.18	0.33	0.33	0.08	0.23	0.23	0.18	0.33	0.33
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	131	687	79	142	941	179	100	387	67	171	297	101
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	8.7	20.9	3.5	8.7	28.2	6.0	6.7	10.8	3.9	10.6	7.0	4.4
Cycle Q Clear(g_c), s	8.7	20.9	3.5	8.7	28.2	6.0	6.7	10.8	3.9	10.6	7.0	4.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	156	823	368	285	1094	489	122	765	342	285	1108	644
V/C Ratio(X)	0.84	0.84	0.21	0.50	0.86	0.37	0.82	0.51	0.20	0.60	0.27	0.16
Avail Cap(c_a), veh/h	214	1108	496	288	1265	566	170	765	342	333	1108	644
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	47.6	38.5	20.0	39.7	33.9	10.3	48.8	36.2	33.5	40.5	26.4	18.8
Incr Delay (d2), s/veh	18.5	4.2	0.3	1.3	5.6	0.5	19.0	2.4	1.3	2.2	0.6	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	4.6	10.1	1.8	3.9	13.9	3.6	3.6	5.3	1.7	4.8	3.3	1.9
LnGrp Delay(d),s/veh	66.0	42.7	20.3	41.1	39.5	10.7	67.8	38.5	34.8	42.7	27.0	19.3
LnGrp LOS	E	D	C	D	D	B	E	D	C	D	C	B
Approach Vol, veh/h		897			1262			554			569	
Approach Delay, s/veh		44.1			35.6			43.4			30.4	
Approach LOS		D			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.8	29.0	23.8	30.8	12.8	40.0	15.1	39.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.5	24.5	19.5	35.5	11.5	35.5	14.5	40.5				
Max Q Clear Time (g_c+I1), s	12.6	12.8	10.7	22.9	8.7	9.0	10.7	30.2				
Green Ext Time (p_c), s	1.8	1.9	4.3	3.5	0.0	2.6	0.1	4.8				
Intersection Summary												
HCM 2010 Ctrl Delay			38.3									
HCM 2010 LOS			D									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 22: Amargosa Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	812	124	131	978	92	159	320	80	164	360	186
Future Volume (veh/h)	92	812	124	131	978	92	159	320	80	164	360	186
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	98	864	132	139	1040	98	169	340	85	174	383	198
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	970	434	187	1121	502	203	702	173	203	566	289
Arrive On Green	0.07	0.29	0.29	0.12	0.33	0.33	0.13	0.26	0.26	0.13	0.26	0.26
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	2667	658	1587	2151	1097
Grp Volume(v), veh/h	98	864	132	139	1040	98	169	212	213	174	297	284
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1649	1587	1676	1571
Q Serve(g_s), s	5.4	22.0	6.1	7.6	26.7	4.2	9.3	9.5	9.8	9.6	14.2	14.5
Cycle Q Clear(g_c), s	5.4	22.0	6.1	7.6	26.7	4.2	9.3	9.5	9.8	9.6	14.2	14.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		0.70
Lane Grp Cap(c), veh/h	116	970	434	187	1121	502	203	441	434	203	441	414
V/C Ratio(X)	0.85	0.89	0.30	0.74	0.93	0.20	0.83	0.48	0.49	0.86	0.67	0.69
Avail Cap(c_a), veh/h	116	1033	462	187	1145	512	204	441	434	204	441	414
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	40.9	30.4	24.7	38.1	28.7	21.2	38.0	27.7	27.8	38.1	29.5	29.6
Incr Delay (d2), s/veh	41.3	9.4	0.4	14.7	12.7	0.2	24.2	3.7	3.9	28.2	8.0	8.9
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	3.7	11.5	2.6	4.1	14.3	1.8	5.4	4.9	4.9	5.8	7.5	7.3
LnGrp Delay(d),s/veh	82.2	39.8	25.1	52.8	41.3	21.3	62.1	31.5	31.8	66.3	37.5	38.5
LnGrp LOS	F	D	C	D	D	C	E	C	C	E	D	D
Approach Vol, veh/h		1094			1277			594			755	
Approach Delay, s/veh		41.8			41.1			40.3			44.5	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	28.0	15.0	30.3	15.9	28.0	11.0	34.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	23.5	9.5	27.5	11.5	23.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s	11.6	11.8	9.6	24.0	11.3	16.5	7.4	28.7				
Green Ext Time (p_c), s	0.0	2.2	0.0	1.8	0.1	1.9	0.0	1.1				
Intersection Summary												
HCM 2010 Ctrl Delay			41.9									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Conditions PM Peak Hour
 26: US-395 & Crossroads

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	56	124	69	53	104	130	570	101	154	518	166
Future Volume (veh/h)	135	56	124	69	53	104	130	570	101	154	518	166
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	147	61	135	75	58	113	141	620	110	167	563	180
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	101	224	210	84	164	183	1182	368	217	890	398
Arrive On Green	0.11	0.21	0.21	0.06	0.16	0.16	0.11	0.25	0.25	0.13	0.27	0.27
Sat Flow, veh/h	1681	490	1084	3261	536	1044	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	147	0	196	75	0	171	141	620	110	167	563	180
Grp Sat Flow(s),veh/h/ln	1681	0	1573	1630	0	1580	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	4.3	0.0	5.7	1.1	0.0	5.2	4.1	5.7	3.0	4.9	7.5	5.1
Cycle Q Clear(g_c), s	4.3	0.0	5.7	1.1	0.0	5.2	4.1	5.7	3.0	4.9	7.5	5.1
Prop In Lane	1.00		0.69	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	0	326	210	0	248	183	1182	368	217	890	398
V/C Ratio(X)	0.77	0.00	0.60	0.36	0.00	0.69	0.77	0.52	0.30	0.77	0.63	0.45
Avail Cap(c_a), veh/h	711	0	1130	481	0	700	711	3176	989	810	2408	1077
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	21.9	0.0	18.2	22.8	0.0	20.2	22.0	16.6	15.6	21.4	16.5	15.6
Incr Delay (d2), s/veh	6.3	0.0	1.8	1.0	0.0	3.4	6.6	0.4	0.4	5.7	0.7	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	2.3	0.0	2.6	0.5	0.0	2.5	2.3	2.5	1.3	2.6	3.5	2.2
LnGrp Delay(d),s/veh	28.1	0.0	20.0	23.8	0.0	23.6	28.7	17.0	16.1	27.1	17.2	16.4
LnGrp LOS	C		C	C		C	C	B	B	C	B	B
Approach Vol, veh/h		343			246			871			910	
Approach Delay, s/veh		23.5			23.7			18.7			18.9	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	17.0	7.8	15.0	10.0	18.0	10.3	12.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	24.5	33.5	7.5	36.5	21.5	36.5	21.5	22.5				
Max Q Clear Time (g_c+I1), s	6.9	7.7	3.1	7.7	6.1	9.5	6.3	7.2				
Green Ext Time (p_c), s	0.4	4.1	0.1	1.2	0.3	4.0	0.3	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			20.0									
HCM 2010 LOS			B									

EXISTING PLUS PROJECT CONDITIONS

Intersection

Int Delay, s/veh 11.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↗
Traffic Vol, veh/h	3	916	635	83	153	5
Future Vol, veh/h	3	916	635	83	153	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	225	150	0
Veh in Median Storage, #	0	0	-	0	-	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	1029	713	93	172	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	806	0	0
Stage 1	-	-	713
Stage 2	-	-	521
Critical Hdwy	4.14	-	6.84
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuver	814	-	~ 169
Stage 1	-	-	447
Stage 2	-	-	561
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	814	-	~ 168
Mov Cap-2 Maneuver	-	-	~ 168
Stage 1	-	-	445
Stage 2	-	-	561

Approach	EB	WB	SB
HCM Control Delay, s	0	0	127.3
HCM LOS			F






















Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn	SBLn2
Capacity (veh/h)	814	-	-	-	168	639
HCM Lane V/C Ratio	0.004	-	-	-	1.023	0.009
HCM Control Delay (s)	9.4	-	-	-	131.1	10.7
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	8.3	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Plus Project Phase 1&2 AM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	954	58	69	581	7	41	2	45	46	3	92
Future Volume (veh/h)	54	954	58	69	581	7	41	2	45	46	3	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1765	1765	1800	1765	1800	1700	1765	1765
Adj Flow Rate, veh/h	60	1060	64	77	646	8	46	2	50	51	3	102
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	1597	714	120	1633	731	196	19	89	0	216	183
Arrive On Green	0.06	0.48	0.48	0.07	0.49	0.49	0.12	0.12	0.12	0.00	0.12	0.12
Sat Flow, veh/h	1587	3353	1500	1681	3353	1500	547	154	730	0	1765	1500
Grp Volume(v), veh/h	60	1060	64	77	646	8	98	0	0	0	3	102
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1681	1676	1500	1431	0	0	0	1765	1500
Q Serve(g_s), s	1.5	9.9	1.0	1.8	5.0	0.1	1.7	0.0	0.0	0.0	0.1	2.6
Cycle Q Clear(g_c), s	1.5	9.9	1.0	1.8	5.0	0.1	2.6	0.0	0.0	0.0	0.1	2.6
Prop In Lane	1.00		1.00	1.00		1.00	0.47		0.51	0.00		1.00
Lane Grp Cap(c), veh/h	96	1597	714	120	1633	731	304	0	0	0	216	183
V/C Ratio(X)	0.63	0.66	0.09	0.64	0.40	0.01	0.32	0.00	0.00	0.00	0.01	0.56
Avail Cap(c_a), veh/h	369	3239	1449	267	2993	1339	799	0	0	0	1316	1119
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	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	8.2	5.9	18.5	6.7	5.4	16.8	0.0	0.0	0.0	15.8	16.9
Incr Delay (d2), s/veh	6.5	0.5	0.1	5.6	0.2	0.0	0.6	0.0	0.0	0.0	0.0	2.6
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	0.8	4.5	0.4	1.0	2.3	0.0	1.1	0.0	0.0	0.0	0.0	1.2
LnGrp Delay(d),s/veh	25.3	8.7	5.9	24.1	6.8	5.4	17.4	0.0	0.0	0.0	15.8	19.5
LnGrp LOS	C	A	A	C	A	A	B				B	B
Approach Vol, veh/h		1184			731			98			105	
Approach Delay, s/veh		9.4			8.6			17.4			19.4	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	0.0	9.5	7.4	24.0		9.5	7.0	24.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax),s	6.5	19.5	6.5	39.5		30.5	9.5	36.5				
Max Q Clear Time (g_c+I1),s	0.0	4.6	3.8	11.9		4.6	3.5	7.0				
Green Ext Time (p_c), s	0.0	0.4	0.0	7.6		0.3	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			10.0									
HCM 2010 LOS			A									

Intersection

























Int Delay, s/veh 8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	21	0	217	0	0	0	119	772	0	0	565	36
Future Vol, veh/h	21	0	217	0	0	0	119	772	0	0	565	36
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	-	-	-	-	-	-	300	-	-	-	-	250
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	0	236	0	0	0	129	839	0	0	614	39

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	1711	1711	614	1849
Stage 1	614	614	-	1097
Stage 2	1097	1097	-	752
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	71	91	492	57
Stage 1	479	483	-	258
Stage 2	258	289	-	402
Platoon blocked, %				
Mov Cap-1 Maneuver	63	78	492	27
Mov Cap-2 Maneuver	63	78	-	27
Stage 1	413	483	-	222
Stage 2	222	249	-	209

Approach	EB	WB	NB	SB
HCM Control Delay	56.8	0	1.3	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn	WBLn1	SBT	SBR
Capacity (veh/h)	934	-	307	-	-	-
HCM Lane V/C Ratio	0.138	-	0.843	-	-	-
HCM Control Delay (s)	9.5	-	56.8	0	-	-
HCM Lane LOS	A	-	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	7.3	-	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	554	428	140	334	91	319	706	178	124	471	45
Future Volume (veh/h)	109	554	428	140	334	91	319	706	178	124	471	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	120	609	470	154	367	100	351	776	196	136	518	49
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	764	342	207	477	214	408	1423	637	163	905	405
Arrive On Green	0.16	0.23	0.23	0.07	0.14	0.14	0.26	0.42	0.42	0.10	0.27	0.27
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	120	609	470	154	367	100	351	776	196	136	518	49
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	7.2	17.8	13.1	5.4	10.9	4.9	21.9	18.0	9.0	8.7	13.8	2.6
Cycle Q Clear(g_c), s	7.2	17.8	13.1	5.4	10.9	4.9	21.9	18.0	9.0	8.7	13.8	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	764	342	207	477	214	408	1423	637	163	905	405
V/C Ratio(X)	0.48	0.80	1.38	0.74	0.77	0.47	0.86	0.55	0.31	0.83	0.57	0.12
Avail Cap(c_a), veh/h	249	970	434	266	808	362	528	1423	637	283	905	405
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	39.9	37.8	12.3	47.2	42.8	24.8	36.7	22.4	19.8	45.6	32.7	28.6
Incr Delay (d2), s/veh	1.4	3.7	186.5	8.1	2.6	1.6	10.9	1.5	1.3	10.4	2.6	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	3.2	8.6	25.2	2.4	5.2	2.5	10.8	8.6	3.9	4.3	6.7	1.1
LnGrp Delay(d),s/veh	41.3	41.5	198.8	55.3	45.5	26.4	47.6	23.9	21.0	56.0	35.3	29.2
LnGrp LOS	D	D	F	E	D	C	D	C	C	E	D	C
Approach Vol, veh/h		1199			621			1323			703	
Approach Delay, s/veh		103.1			44.8			29.7			38.9	
Approach LOS		F			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.2	48.5	11.9	28.1	31.2	32.5	20.8	19.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	44.0	9.5	30.0	34.5	28.0	14.5	25.0				
Max Q Clear Time (g_c+I1), s	10.7	20.0	7.4	19.8	23.9	15.8	9.2	12.9				
Green Ext Time (p_c), s	0.2	5.5	0.1	3.8	0.8	2.4	0.1	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			56.7									
HCM 2010 LOS			E									



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	79	87	179	1128	1016	24		
Future Volume (veh/h)	79	87	179	1128	1016	24		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00				1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h	1765	1765	1667	1765	1765	1765		
Adj Flow Rate, veh/h	86	95	195	1226	1104	26		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	167	149	198	2442	1735	776		
Arrive On Green	0.10	0.10	0.12	0.73	0.52	0.52		
Sat Flow, veh/h	1681	1500	1587	3441	3441	1500		
Grp Volume(v), veh/h	86	95	195	1226	1104	26		
Grp Sat Flow(s), veh/h	1681	1500	1587	1676	1676	1500		
Q Serve(g_s), s	2.5	3.2	6.4	8.2	12.4	0.4		
Cycle Q Clear(g_c), s	2.5	3.2	6.4	8.2	12.4	0.4		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	167	149	198	2442	1735	776		
V/C Ratio(X)	0.52	0.64	0.99	0.50	0.64	0.03		
Avail Cap(c_a), veh/h	580	517	198	2442	1735	776		
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	22.6	22.6	22.8	3.0	9.1	6.2		
Incr Delay (d2), s/veh	2.5	4.5	59.8	0.7	1.8	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	2.8	6.0	3.8	6.1	0.2			
LnGrp Delay(d),s/veh	24.8	27.1	82.6	3.8	10.9	6.3		
LnGrp LOS	C	C	F	A	B	A		
Approach Vol, veh/h	181			1421	1130			
Approach Delay, s/veh	26.0			14.6	10.7			
Approach LOS	C			B	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		4.5		9.7	11.0	31.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		38.0		18.0	6.5	27.0		
Max Q Clear Time (g_c+I), s		11.2		5.2	8.4	14.4		
Green Ext Time (p_c), s		8.9		0.4	0.0	5.5		
Intersection Summary								
HCM 2010 Ctrl Delay			13.8					
HCM 2010 LOS			B					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	73	39	53	35	28	237	17	901	21	150	926	91
Future Volume (veh/h)	73	39	53	35	28	237	17	901	21	150	926	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	180	41	55	36	29	247	18	939	22	156	965	95
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	713	606	342	34	292	118	1045	467	161	1045	103
Arrive On Green	0.13	0.40	0.40	0.21	0.21	0.21	0.07	0.31	0.31	0.10	0.34	0.34
Sat Flow, veh/h	1587	1765	1500	1222	160	1364	1587	3353	1500	1587	3084	304
Grp Volume(v), veh/h	80	41	55	36	0	276	18	939	22	156	525	535
Grp Sat Flow(s), veh/h	1587	1765	1500	1222	0	1524	1587	1676	1500	1587	1676	1711
Q Serve(g_s), s	8.2	1.0	1.7	1.8	0.0	12.8	0.8	19.8	0.8	7.2	22.2	22.2
Cycle Q Clear(g_c), s	8.2	1.0	1.7	2.8	0.0	12.8	0.8	19.8	0.8	7.2	22.2	22.2
Prop In Lane	1.00	1.00	1.00	1.00	0.89	1.00	1.00	1.00	1.00	1.00	0.18	0.18
Lane Grp Cap(c), veh/h	204	713	606	342	0	326	118	1045	467	161	568	580
V/C Ratio(X)	0.88	0.06	0.09	0.11	0.00	0.85	0.15	0.90	0.05	0.97	0.92	0.92
Avail Cap(c_a), veh/h	204	861	732	445	0	454	118	1045	467	161	568	580
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.4	13.4	13.6	24.3	0.0	27.8	32.0	24.3	17.7	33.0	23.5	23.5
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.1	0.0	10.2	0.6	12.1	0.2	60.9	23.0	22.7
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	0.5	0.7	0.6	0.0	6.3	0.4	10.9	0.3	5.9	13.8	14.1	14.1
LnGrp Delay(d), s/veh	13.5	13.5	13.7	24.5	0.0	38.0	32.6	36.4	17.9	93.9	46.5	46.2
LnGrp LOS	E	B	B	C		D	C	D	B	F	D	D
Approach Vol, veh/h		276			312			979			1216	
Approach Delay, s/veh		46.8			36.4			35.9			52.4	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+R), s	27.5			34.3	10.0	29.5	14.0	20.3				
Change Period (Y+R), s	4.5			4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	23.0			36.0	5.5	25.0	9.5	22.0				
Max Q Clear Time (g_c+I), s	11.8			3.7	2.8	24.2	10.2	14.8				
Green Ext Time (p_c), s	0.0	0.7		0.3	0.0	0.5	0.0	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			44.2									
HCM 2010 LOS			D									



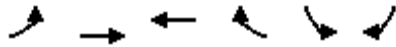
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	71	102	86	85	85	340	51	531	34	273	647	87
Future Volume (veh/h)	71	102	86	85	85	340	51	531	34	273	647	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	75	107	91	89	89	358	54	559	36	287	681	92
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	660	561	482	115	463	76	972	435	206	1247	558
Arrive On Green	0.37	0.37	0.37	0.37	0.37	0.37	0.05	0.29	0.29	0.13	0.37	0.37
Sat Flow, veh/h	887	1765	1500	1114	308	1238	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	75	107	91	89	0	447	54	559	36	287	681	92
Grp Sat Flow(s), veh/h	887	1765	1500	1114	0	1546	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	5.3	2.6	2.6	3.8	0.0	16.7	2.2	9.3	1.1	8.5	10.5	2.7
Cycle Q Clear(g_c), s	22.0	2.6	2.6	6.4	0.0	16.7	2.2	9.3	1.1	8.5	10.5	2.7
Prop In Lane	1.00	1.00	1.00	1.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	216	660	561	482	0	579	76	972	435	206	1247	558
V/C Ratio(X)	0.35	0.16	0.16	0.18	0.00	0.77	0.71	0.57	0.08	1.39	0.55	0.16
Avail Cap(c_a), veh/h	277	781	664	558	0	684	133	972	435	206	1247	558
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.7	13.7	13.7	15.8	0.0	18.0	30.8	19.8	16.9	28.5	16.2	13.8
Incr Delay (d2), s/veh	0.1	0.1	0.1	0.2	0.0	4.6	11.7	2.5	0.4	20.0	1.7	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	1.3	1.1	1.2	0.0	7.8	1.2	4.6	0.5	15.3	5.1	1.2	1.2
LnGrp Delay(d), s/veh	13.8	13.8	13.8	16.0	0.0	22.7	42.4	22.3	17.3	23.5	17.9	14.4
LnGrp LOS	C	B	B	B		C	D	C	B	F	B	B
Approach Vol, veh/h	273			536			649			1060		
Approach Delay, s/veh	17.9			21.5			23.7			75.7		
Approach LOS	B			C			C			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	23.5			29.0	7.6	28.9		29.0				
Change Period (Y+R), s	4.5			4.5	4.5	4.5		4.5				
Max Green Setting (G_max), s	19.0			29.0	5.5	22.0		29.0				
Max Q Clear Time (G+Y+R), s	11.3			24.0	4.2	12.5		18.7				
Green Ext Time (p_c), s	2.0			0.5	0.0	3.0		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay			44.5									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	3	0	0	0	0	5	0	657	0	12	823	2
Future Volume (veh/h)	3	0	0	0	0	5	0	657	0	12	823	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1800	1765	1800	1800	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	3	0	0	0	0	6	0	730	0	13	914	2
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	0	0	0	0	17	118	2821	0	694	2888	6
Arrive On Green	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.84	0.00	0.84	0.84	0.84
Sat Flow, veh/h	923	0	0	0	0	1500	607	3441	0	723	3432	8
Grp Volume(v), veh/h	3	0	0	0	0	6	0	730	0	13	446	470
Grp Sat Flow(s), veh/h	923	0	0	0	0	1500	607	1676	0	723	1676	1763
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.2	0.0	2.7	0.0	0.2	3.5	3.5
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.0	0.0	0.2	0.0	2.7	0.0	2.9	3.5	3.5
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	128	0	0	0	0	17	118	2821	0	694	1411	1484
V/C Ratio(X)	0.02	0.00	0.00	0.00	0.00	0.35	0.00	0.26	0.00	0.02	0.32	0.32
Avail Cap(c_a), veh/h	559	0	0	0	0	478	118	2821	0	694	1411	1484
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	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	0.0	0.0	0.0	30.0	0.0	1.0	0.0	1.3	1.0	1.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	11.4	0.0	0.2	0.0	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	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.3	0.0	0.1	1.7	1.8
LnGrp Delay(d),s/veh	30.3	0.0	0.0	0.0	0.0	41.4	0.0	1.2	0.0	1.3	1.6	1.6
LnGrp LOS	C					D		A		A	A	A
Approach Vol, veh/h		3			6			730			929	
Approach Delay, s/veh		30.3			41.4			1.2			1.6	
Approach LOS		C			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.0		5.2		56.0		5.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		51.5		19.5		51.5		19.5				
Max Q Clear Time (g_c+I1), s		11.3		2.4		5.5		2.2				
Green Ext Time (p_c), s		4.8		0.0		5.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				1.6								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	40	240	126	149	162	102	65	496	65	131	652	16
Future Volume (veh/h)	40	240	126	149	162	102	65	496	65	131	652	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	43	255	134	159	172	109	69	528	69	139	694	17
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	459	206	168	680	304	124	1423	637	124	1420	35
Arrive On Green	0.04	0.14	0.14	0.11	0.20	0.20	0.08	0.42	0.42	0.08	0.42	0.42
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3345	82
Grp Volume(v), veh/h	43	255	134	159	172	109	69	528	69	139	348	363
Grp Sat Flow(s), veh/h/ln	1667	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1750
Q Serve(g_s), s	1.9	5.0	6.0	7.0	3.0	3.3	3.0	7.6	2.0	5.5	10.6	10.7
Cycle Q Clear(g_c), s	9	5.0	6.0	7.0	3.0	3.3	3.0	7.6	2.0	5.5	10.6	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	64	459	206	168	680	304	124	1423	637	124	712	743
V/C Ratio(X)	0.67	0.56	0.65	0.94	0.25	0.36	0.56	0.37	0.11	1.13	0.49	0.49
Avail Cap(c_a), veh/h	146	1376	615	168	1423	637	124	1423	637	124	712	743
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	30.5	28.5	28.9	31.4	23.7	13.4	31.4	13.9	12.3	32.6	14.8	14.8
Incr Delay (d2), s/veh	1.5	1.1	3.5	53.0	0.2	0.7	5.5	0.7	0.3	118.7	2.4	2.3
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	2.4	2.7	5.5	1.4	1.7	1.5	3.7	0.9	6.4	5.4	5.6	
LnGrp Delay(d), s/veh	15.0	29.5	32.4	84.4	23.9	14.1	37.0	14.6	12.6	151.2	17.2	17.1
LnGrp LOS	D	C	C	F	C	B	D	B	B	F	B	B
Approach Vol, veh/h		432			440			666			850	
Approach Delay, s/veh		32.0			43.3			16.7			39.1	
Approach LOS		C			D			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	10.0	34.5	12.0	14.2	10.0	34.5	7.4	18.8				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	30.0	30.0	7.5	29.0	5.5	30.0	6.5	30.0				
Max Q Clear Time (g+1), s	19.6	9.0	8.0	5.0	12.7	3.9	5.3					
Green Ext Time (p_c), s	0.0	3.1	0.0	1.7	0.0	3.4	0.0	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			32.3									
HCM 2010 LOS			C									



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	4	823	586	61	69	6		
Future Volume (veh/h)	4	823	586	61	69	6		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	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		
Adj Sat Flow, veh/h	1767	1765	1765	1765	1569	1765		
Adj Flow Rate, veh/h	4	904	644	67	76	7		
Adj No. of Lanes	1	2	2	1	2	1		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	16	1273	922	412	1250	647		
Arrive On Green	0.01	0.38	0.27	0.27	0.43	0.43		
Sat Flow, veh/h	1587	3441	3441	1500	2898	1500		
Grp Volume(v), veh/h	4	904	644	67	76	7		
Grp Sat Flow(s), veh/h	1587	3441	3441	1500	1449	1500		
Q Serve(g_s), s	0.1	10.9	8.2	1.6	0.7	0.1		
Cycle Q Clear(g_c), s	0.1	10.9	8.2	1.6	0.7	0.1		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	16	1273	922	412	1250	647		
V/C Ratio(X)	0.25	0.71	0.70	0.16	0.06	0.01		
Avail Cap(c_a), veh/h	16	1273	922	412	1250	647		
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	12.5	15.5	13.1	7.9	7.7		
Incr Delay (d2), s/veh	8.1	0.7	1.0	0.2	0.1	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	0.0	5.2	3.9	0.7	0.3	0.1		
LnGrp Delay(d),s/veh	1.4	13.3	16.4	13.3	8.0	7.8		
LnGrp LOS	C	B	B	B	A	A		
Approach Vol, veh/h		908	711		83			
Approach Delay, s/veh		13.4	16.1		8.0			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				22.5		25.0	5.0	17.6
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				30.5		20.5	5.5	20.5
Max Q Clear Time (g_c+I1), s				12.9		2.7	2.1	10.2
Green Ext Time (p_c), s				5.2		0.2	0.0	2.9
Intersection Summary								
HCM 2010 Ctrl Delay			14.3					
HCM 2010 LOS			B					

Intersection

Int Delay, s/veh 10.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	161	36	92	187	7	100	13	136	17	20	14
Future Vol, veh/h	9	161	36	92	187	7	100	13	136	17	20	14
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	196	44	112	228	9	122	16	166	21	24	17

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	237	0	0	240
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1330	-	-	1327
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1330	-	-	1327
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	2.6	27.5	18.9
HCM LOS			D	C

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	454	1330	-	-	1327	-	-	321
HCM Lane V/C Ratio	0.669	0.008	-	-	0.085	-	-	0.194
HCM Control Delay (s)	27.5	7.7	0	-	8	0	-	18.9
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	4.8	0	-	-	0.3	-	-	0.7

Intersection

Intersection Delay, s/veh 19.6
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↶	↷	↶	↷
Traffic Vol, veh/h	28	138	83	80	119	13	125	131	181	91	114	31
Future Vol, veh/h	28	138	83	80	119	13	125	131	181	91	114	31
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	179	108	104	155	17	162	170	235	118	148	40
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay	26.7	17.5	17.5	18.1
HCM LOS	D	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	62%	0%	90%	0%	79%
Vol Right, %	0%	0%	100%	0%	38%	0%	10%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	125	131	181	28	221	80	132	91	145
LT Vol	125	0	0	28	0	80	0	91	0
Through Vol	0	131	0	0	138	0	119	0	114
RT Vol	0	0	181	0	83	0	13	0	31
Lane Flow Rate	162	170	235	36	287	104	171	118	188
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.402	0.397	0.502	0.095	0.687	0.277	0.429	0.313	0.463
Departure Headway (Hd)	8.92	8.405	7.683	9.398	8.614	9.595	9.009	9.525	8.85
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	404	429	468	381	419	374	399	377	407
Service Time	6.677	6.162	5.44	7.159	6.375	7.361	6.774	7.291	6.616
HCM Lane V/C Ratio	0.401	0.396	0.502	0.094	0.685	0.278	0.429	0.313	0.462
HCM Control Delay	17.6	16.6	18	13.1	28.4	16	18.4	16.6	19.1
HCM Lane LOS	C	C	C	B	D	C	C	C	C
HCM 95th-tile Q	1.9	1.9	2.8	0.3	5	1.1	2.1	1.3	2.4

Intersection

Intersection Delay, s/veh
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑		↵	↑↑		↵	↑↑		↵	↑↑	
Traffic Vol, veh/h	41	134	20	20	105	171	9	107	67	204	83	43
Future Vol, veh/h	41	134	20	20	105	171	9	107	67	204	83	43
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	179	27	27	140	228	12	143	89	272	111	57
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	12.8	16	13	17.9
HCM LOS	B	C	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	35%	0%	100%	69%	0%	100%	17%	0%	100%	39%
Vol Right, %	0%	0%	65%	0%	0%	31%	0%	0%	83%	0%	0%	61%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	71	103	41	89	65	20	70	206	204	55	71
LT Vol	9	0	0	41	0	0	20	0	0	204	0	0
Through Vol	0	71	36	0	89	45	0	70	35	0	55	28
RT Vol	0	0	67	0	0	20	0	0	171	0	0	43
Lane Flow Rate	12	95	137	55	119	86	27	93	275	272	74	94
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.028	0.210	0.285	0.128	0.261	0.184	0.060	0.197	0.536	0.601	0.152	0.183
Departure Headway (Hd)	8.439	7.939	7.482	8.398	7.898	7.682	8.111	7.611	7.037	7.936	7.436	7.01
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	424	452	479	426	454	466	441	471	514	454	482	511
Service Time	6.196	5.696	5.246	6.156	5.656	5.439	5.864	5.364	4.783	5.689	5.189	4.763
HCM Lane V/C Ratio	0.028	0.210	0.286	0.129	0.262	0.185	0.061	0.197	0.535	0.599	0.154	0.184
HCM Control Delay	11.4	12.8	13.2	12.4	13.4	12.2	11.4	12.2	17.7	22	11.5	11.3
HCM Lane LOS	B	B	B	B	B	B	B	B	C	C	B	B
HCM 95th-tile Q	0.1	0.8	1.2	0.4	1	0.7	0.2	0.7	3.1	3.8	0.5	0.7

Intersection

Intersection Delay, ~~99.8~~
 Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Traffic Vol, veh/h	66	271	35	101	213	74	12	218	86	71	148	31
Future Vol, veh/h	66	271	35	101	213	74	12	218	86	71	148	31
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	308	40	115	242	84	14	248	98	81	168	35
Number of Lanes	1	1	0	1	1	0	1	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	41.4	32.8	18.9	18.9
HCM LOS	E	D	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	49%	0%
Vol Thru, %	0%	100%	46%	0%	89%	0%	74%	51%	70%
Vol Right, %	0%	0%	54%	0%	11%	0%	26%	0%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	145	159	66	306	101	287	145	105
LT Vol	12	0	0	66	0	101	0	71	0
Through Vol	0	145	73	0	271	0	213	74	74
RT Vol	0	0	86	0	35	0	74	0	31
Lane Flow Rate	14	165	180	75	348	115	326	165	119
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.038	0.432	0.452	0.198	0.861	0.303	0.798	0.453	0.312
Departure Headway (Hd)	9.94	9.42	9.02	6.50	8.91	9.50	7.80	5.89	9.42
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	359	381	398	377	407	378	411	363	379
Service Time	7.72	7.20	6.81	7.29	6.69	7.28	6.58	7.69	7.21
HCM Lane V/C Ratio	0.039	0.433	0.452	0.199	0.855	0.304	0.793	0.455	0.314
HCM Control Delay	13.1	19.2	19.1	14.6	47.2	16.4	38.6	20.7	16.5
HCM Lane LOS	B	C	C	B	E	C	E	C	C
HCM 95th-tile Q	0.1	2.1	2.3	0.7	8.4	1.3	7	2.3	1.3

Intersection

Intersection Delay, s/c/h
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵↵		↵	↵↵		↵	↵↵		↵	↵↵	
Traffic Vol, veh/h	70	349	84	83	250	98	90	147	102	101	125	79
Future Vol, veh/h	70	349	84	83	250	98	90	147	102	101	125	79
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	86	431	104	102	309	121	111	181	126	125	154	98
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	29.8	22.9	19.6	18.6
HCM LOS	D	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	32%	0%	100%	58%	0%	100%	46%	0%	100%	35%
Vol Right, %	0%	0%	68%	0%	0%	42%	0%	0%	54%	0%	0%	65%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	98	151	70	233	200	83	167	181	101	83	121
LT Vol	90	0	0	70	0	0	83	0	0	101	0	0
Through Vol	0	98	49	0	233	116	0	167	83	0	83	42
RT Vol	0	0	102	0	0	84	0	0	98	0	0	79
Lane Flow Rate	111	121	186	86	287	247	102	206	224	125	103	149
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.326	0.338	0.496	0.24	0.758	0.632	0.291	0.555	0.581	0.369	0.291	0.402
Departure Headway (Hd)	0.549	0.049	9.576	9.997	9.497	9.203	0.217	9.717	9.338	0.666	0.166	9.707
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	340	357	375	359	379	391	350	370	385	337	353	369
Service Time	8.341	7.841	7.368	7.783	7.283	6.989	8.005	7.505	7.127	8.458	7.958	7.5
HCM Lane V/C Ratio	0.326	0.339	0.496	0.24	0.757	0.632	0.291	0.557	0.582	0.371	0.292	0.404
HCM Control Delay	18.4	17.9	21.5	15.9	36.8	26.6	17.2	24.1	24.4	19.6	17.1	18.9
HCM Lane LOS	C	C	C	C	E	D	C	C	C	C	C	C
HCM 95th-tile Q	1.4	1.5	2.7	0.9	6.1	4.2	1.2	3.2	3.5	1.7	1.2	1.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	474	474	9	49	290	78	9	56	111	146	45	53
Future Volume (veh/h)	474	474	9	49	290	78	9	56	111	146	45	53
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	34	521	10	54	319	86	10	62	122	160	49	58
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	755	338	79	626	166	539	576	489	607	711	605
Arrive On Green	0.04	0.23	0.23	0.05	0.24	0.24	0.01	0.33	0.33	0.09	0.40	0.40
Sat Flow, veh/h	1587	3353	1500	1587	2622	696	1587	1765	1500	1587	1765	1500
Grp Volume(v), veh/h	34	521	10	54	202	203	10	62	122	160	49	58
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1642	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.2	8.3	0.2	1.9	6.1	6.3	0.2	1.4	2.4	3.6	1.0	1.4
Cycle Q Clear(g_c), s	1.2	8.3	0.2	1.9	6.1	6.3	0.2	1.4	2.4	3.6	1.0	1.4
Prop In Lane	1.00	1.00	1.00	1.00	0.42	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	58	755	338	79	400	392	539	576	489	607	711	605
V/C Ratio(X)	0.59	0.69	0.03	0.68	0.51	0.52	0.02	0.11	0.25	0.26	0.07	0.10
Avail Cap(c_a), veh/h	150	1669	747	177	863	845	668	576	489	668	711	605
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	20.7	10.8	27.2	19.2	19.3	12.8	13.7	7.0	9.9	10.7	10.8	10.8
Incr Delay (d2), s/veh	1.1	0.0	9.8	1.0	1.1	0.0	0.4	1.2	0.2	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	4.0	0.1	1.1	2.9	2.9	0.1	0.7	1.5	1.5	0.5	0.6	0.6
LnGrp Delay(d), s/veh	21.9	10.9	37.0	20.2	20.3	12.8	14.1	8.2	10.1	10.9	11.1	11.1
LnGrp LOS	D	C	B	D	C	C	B	B	A	B	B	B
Approach Vol, veh/h	565			459			194			267		
Approach Delay, s/veh	22.6			22.2			10.3			10.5		
Approach LOS	C			C			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	23.5	7.4	17.6	5.2	28.0	6.6	18.4					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	19.0	6.5	29.0	5.5	21.0	5.5	30.0					
Max Q Clear Time (g_c+1), s	11.4	3.9	10.3	2.2	3.4	3.2	8.3					
Green Ext Time (p_c), s	0.5	0.0	2.8	0.0	0.3	0.0	1.9					
Intersection Summary												
HCM 2010 Ctrl Delay			18.7									
HCM 2010 LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↕	↖
Traffic Volume (veh/h)	23	646	203	182	406	4	130	186	238	13	250	10
Future Volume (veh/h)	23	646	203	182	406	4	130	186	238	13	250	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	27	769	242	217	483	5	155	221	283	15	298	12
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	351	894	400	235	658	7	290	264	338	66	518	20
Arrive On Green	0.22	0.27	0.27	0.15	0.19	0.19	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	3353	1500	1587	3400	35	1006	704	902	18	1383	54
Grp Volume(v), veh/h	27	769	242	217	238	250	155	0	504	325	0	0
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1758	1006	0	1606	1455	0	0
Q Serve(g_s), s	0.9	14.0	9.0	8.6	8.6	8.6	3.0	0.0	18.3	0.9	0.0	0.0
Cycle Q Clear(g_c), s	0.9	14.0	9.0	8.6	8.6	8.6	22.3	0.0	18.3	19.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.56	0.05		0.04
Lane Grp Cap(c), veh/h	351	894	400	235	324	340	290	0	601	604	0	0
V/C Ratio(X)	0.08	0.86	0.61	0.92	0.73	0.73	0.53	0.00	0.84	0.54	0.00	0.00
Avail Cap(c_a), veh/h	351	942	421	235	576	604	290	0	601	604	0	0
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	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	19.8	22.4	20.6	26.9	24.3	24.3	21.4	0.0	18.3	15.5	0.0	0.0
Incr Delay (d2), s/veh	0.1	7.9	2.3	38.1	3.2	3.1	6.9	0.0	13.1	3.4	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	7.4	3.9	6.3	4.3	4.5	3.2	0.0	10.2	4.9	0.0	0.0	0.0
LnGrp Delay(d),s/veh	19.9	30.2	22.8	65.0	27.5	27.4	28.3	0.0	31.4	18.9	0.0	0.0
LnGrp LOS	B	C	C	E	C	C	C		C	B		
Approach Vol, veh/h	1038			705			659			325		
Approach Delay, s/veh	28.2			39.0			30.7			18.9		
Approach LOS	C			D			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.5	14.0	21.6		28.5	18.7	16.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		24.0	9.5	18.0		24.0	5.5	22.0				
Max Q Clear Time (g_c+I), s		24.3	10.6	16.0		21.3	2.9	10.6				
Green Ext Time (p_c), s		0.0	0.0	1.1		0.5	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay	30.5											
HCM 2010 LOS	C											

Intersection

Intersection Delay, s/veh 23
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	119	299	6	13	191	96	6	32	17	180	26	105
Future Vol, veh/h	119	299	6	13	191	96	6	32	17	180	26	105
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	135	340	7	15	217	109	7	36	19	205	30	119
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	30.6	17.4	11.4	20
HCM LOS	D	C	B	C

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	11%	28%	4%	58%
Vol Thru, %	58%	71%	64%	8%
Vol Right, %	31%	1%	32%	34%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	424	300	311
LT Vol	6	119	13	180
Through Vol	32	299	191	26
RT Vol	17	6	96	105
Lane Flow Rate	62	482	341	353
Geometry Grp	1	1	1	1
Degree of Util (X)	0.127	0.815	0.581	0.632
Departure Headway (Hd)	7.288	6.086	6.134	6.441
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	489	593	586	558
Service Time	5.373	4.137	4.191	4.496
HCM Lane V/C Ratio	0.127	0.813	0.582	0.633
HCM Control Delay	11.4	30.6	17.4	20
HCM Lane LOS	B	D	C	C
HCM 95th-tile Q	0.4	8.2	3.7	4.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	76	811	63	88	460	15	77	216	163	58	236	83
Future Volume (veh/h)	76	811	63	88	460	15	77	216	163	58	236	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	84	891	69	97	505	16	85	237	179	64	259	91
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	103	913	408	119	937	30	104	598	509	81	405	142
Arrive On Green	0.06	0.27	0.27	0.08	0.28	0.28	0.07	0.34	0.34	0.05	0.32	0.32
Sat Flow, veh/h	1587	3353	1500	1587	3318	105	1587	1765	1500	1587	1249	439
Grp Volume(v), veh/h	84	891	69	97	255	266	85	237	179	64	0	350
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1746	1587	1765	1500	1587	0	1687
Q Serve(g_s), s	3.6	18.1	2.4	4.1	8.8	8.9	3.6	7.0	4.2	2.7	0.0	12.1
Cycle Q Clear(g_c), s	3.6	18.1	2.4	4.1	8.8	8.9	3.6	7.0	4.2	2.7	0.0	12.1
Prop In Lane	1.00	1.00	1.00	1.00	0.06	1.00	1.00	1.00	1.00	1.00	0.26	0.26
Lane Grp Cap(c), veh/h	103	913	408	119	474	493	104	598	509	81	0	548
V/C Ratio(X)	0.81	0.98	0.17	0.81	0.54	0.54	0.81	0.40	0.35	0.79	0.00	0.64
Avail Cap(c_a), veh/h	127	913	408	127	474	493	127	598	509	173	0	548
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	0.00	1.00
Uniform Delay (d), s/veh	27.1	24.8	19.1	31.3	20.8	20.9	31.7	17.3	8.1	32.2	0.0	19.8
Incr Delay (d2), s/veh	27.1	24.0	0.2	30.1	1.2	1.2	27.3	2.0	1.9	15.1	0.0	5.6
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	11.3	1.0	2.8	4.2	4.4	2.4	3.7	2.5	1.5	0.0	6.5	6.5
LnGrp Delay(d), s/veh	28.8	48.8	19.3	61.4	22.1	22.0	59.0	19.3	10.0	47.3	0.0	25.4
LnGrp LOS	E	D	B	E	C	C	E	B	A	D		C
Approach Vol, veh/h	1044			618			501			414		
Approach Delay, s/veh	47.6			28.2			22.7			28.8		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	27.8	9.7	23.2	9.0	26.8	9.0	23.9					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	20.3	5.5	18.7	5.5	22.3	5.5	18.7					
Max Q Clear Time (g+I), s	19.0	6.1	20.1	5.6	14.1	5.6	10.9					
Green Ext Time (p_c), s	0.0	1.3	0.0	0.0	0.0	1.1	0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			35.1									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑		↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	232	232	163	50	100	50	123	405	79	158	366	62
Future Volume (veh/h)	232	232	163	50	100	50	123	405	79	158	366	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	108	237	166	51	102	51	126	413	81	161	373	63
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	157	320	272	76	145	72	169	1142	511	196	1199	536
Arrive On Green	0.10	0.18	0.18	0.05	0.13	0.13	0.11	0.34	0.34	0.12	0.36	0.36
Sat Flow, veh/h	1587	1765	1500	1587	1111	556	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	237	166	51	0	153	126	413	81	161	373	63	
Grp Sat Flow(s), veh/h	1667	1765	1500	1587	0	1667	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	3.9	7.5	4.1	1.9	0.0	5.2	4.5	5.4	2.2	5.8	4.7	1.7
Cycle Q Clear(g_c), s	3.9	7.5	4.1	1.9	0.0	5.2	4.5	5.4	2.2	5.8	4.7	1.7
Prop In Lane	1.00	1.00	1.00	1.00	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	320	272	76	0	217	169	1142	511	196	1199	536	
V/C Ratio(X)	0.69	0.74	0.61	0.67	0.00	0.70	0.74	0.36	0.16	0.82	0.31	0.12
Avail Cap(c_a), veh/h	541	460	149	0	511	203	1142	511	230	1199	536	
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	10.3	27.5	0.0	24.5	25.5	14.6	13.5	25.1	13.6	12.7	
Incr Delay (d2), s/veh	3.4	2.2	9.6	0.0	4.1	11.4	0.9	0.7	18.1	0.7	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	
%ile BackOfQ(50%), veh	3.9	2.3	1.0	0.0	2.6	2.5	2.7	1.0	3.5	2.3	0.7	
LnGrp Delay(d), s/veh	26.1	12.5	37.1	0.0	28.6	36.9	15.5	14.2	43.2	14.3	13.1	
LnGrp LOS	D	C	B	D		C	D	B	B	D	B	B
Approach Vol, veh/h	511			204			620		597			
Approach Delay, s/veh	24.1			30.7			19.6		22.0			
Approach LOS	C			C			B		C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	24.5	7.3	15.1	10.8	25.5	10.3	12.2					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	20.0	5.5	18.0	7.5	21.0	5.5	18.0					
Max Q Clear Time (g_c+1), s	17.4	3.9	9.5	6.5	6.7	5.9	7.2					
Green Ext Time (p_c), s	0.0	2.1	0.0	1.2	0.0	1.9	0.0	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay	22.7											
HCM 2010 LOS	C											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	771	771	65	48	400	78	81	226	120	198	282	105
Future Volume (veh/h)	771	771	65	48	400	78	81	226	120	198	282	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	143	847	71	53	440	86	89	248	132	218	310	115
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	888	397	67	809	362	105	767	343	392	1373	714
Arrive On Green	0.07	0.26	0.26	0.04	0.24	0.24	0.07	0.23	0.23	0.25	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	143	847	71	53	440	86	89	248	132	218	310	115
Grp Sat Flow(s), veh/h	1667	1765	1500	1587	1667	1500	1587	1765	1500	1587	1667	1500
Q Serve(g_s), s	5.5	20.6	2.3	2.7	9.5	2.0	4.6	5.1	6.2	10.0	5.0	3.6
Cycle Q Clear(g_c), s	5.5	20.6	2.3	2.7	9.5	2.0	4.6	5.1	6.2	10.0	5.0	3.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	105	888	397	67	809	362	105	767	343	392	1373	714
V/C Ratio(X)	1.36	0.95	0.18	0.79	0.54	0.24	0.85	0.32	0.38	0.56	0.23	0.16
Avail Cap(c_a), veh/h	105	888	397	105	888	397	105	767	343	392	1373	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(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	30.0	19.8	0.2	18.3	0.6	0.3	43.8	1.1	3.2	1.7	0.4	0.5
Incr Delay (d2), s	1.5	19.8	0.2	18.3	0.6	0.3	43.8	1.1	3.2	1.7	0.4	0.5
Initial Q Delay(d3), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh	12.0	1.0	1.6	4.5	0.9	3.3	2.5	2.9	4.5	2.4	1.6	1.6
LnGrp Delay(d), s	30.3	49.8	13.9	57.7	28.1	7.5	82.2	27.8	30.3	29.0	16.3	12.8
LnGrp LOS	F	D	B	E	C	A	F	C	C	C	B	B
Approach Vol, veh/h	1061			579			469			643		
Approach Delay, s/veh	74.4			27.7			38.8			20.0		
Approach LOS	E			C			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	23.5	8.0	26.5	10.0	38.5	10.0	24.5					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	19.0	5.5	22.0	5.5	34.0	5.5	22.0					
Max Q Clear Time (G+Y+R), s	11.2	4.7	22.6	6.6	7.0	7.5	11.5					
Green Ext Time (p_c), s	1.3	0.0	0.0	0.0	2.2	0.0	2.0					
Intersection Summary												
HCM 2010 Ctrl Delay			45.8									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	213	864	101	57	547	86	100	230	55	150	227	78
Future Volume (veh/h)	213	864	101	57	547	86	100	230	55	150	227	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	185	982	115	65	622	98	114	261	62	170	258	89
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	213	1046	468	79	764	342	172	775	181	192	739	249
Arrive On Green	0.13	0.31	0.31	0.05	0.23	0.23	0.11	0.29	0.29	0.12	0.30	0.30
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	2700	630	1587	2464	830
Grp Volume(v), veh/h	85	982	115	65	622	98	114	160	163	170	174	173
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1500	1587	1676	1654	1587	1676	1618
Q Serve(g_s), s	9.0	22.3	4.5	3.2	13.8	4.2	5.4	5.9	6.1	8.3	6.3	6.6
Cycle Q Clear(g_c), s	9.0	22.3	4.5	3.2	13.8	4.2	5.4	5.9	6.1	8.3	6.3	6.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.38	1.00	0.51	0.51	0.51
Lane Grp Cap(c), veh/h	213	1046	468	79	764	342	172	481	475	192	503	485
V/C Ratio(X)	0.87	0.94	0.25	0.82	0.81	0.29	0.66	0.33	0.34	0.88	0.35	0.36
Avail Cap(c_a), veh/h	213	1048	469	111	834	373	172	481	475	192	503	485
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	26.2	20.1	36.9	28.7	25.0	33.6	22.0	22.1	33.9	21.4	21.5	21.5
Incr Delay (d2), s/veh	15.3	0.3	26.7	5.8	0.5	9.1	1.9	2.0	34.8	1.9	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	12.5	1.9	2.0	7.0	1.8	2.8	3.0	3.0	5.5	3.2	3.2	3.2
LnGrp Delay(d), s/veh	41.6	20.4	63.5	34.5	25.4	42.6	23.9	24.0	68.7	23.3	23.6	23.6
LnGrp LOS	E	D	C	E	C	C	D	C	C	E	C	C
Approach Vol, veh/h	1282			785			437			517		
Approach Delay, s/veh	42.8			35.7			28.8			38.3		
Approach LOS	D			D			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	27.0	8.4	28.9	13.0	28.0	15.0	22.4					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G), s	22.5	5.5	24.5	8.5	23.5	10.5	19.5					
Max Q Clear Time (G+Y+R), s	11.4	5.2	24.3	7.4	8.6	11.0	15.8					
Green Ext Time (p_c), s	1.4	0.0	0.1	0.0	1.5	0.0	1.5					
Intersection Summary												
HCM 2010 Ctrl Delay			38.2									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1071	6	0	698	0	46
Future Vol, veh/h	1071	6	0	698	0	46
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	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1164	7	0	759	0	50

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 586
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 454
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 454
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.9
HCM LOS			B

Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	454	-	-	-
HCM Lane V/C Ratio	0.11	-	-	-
HCM Control Delay (s)	13.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection

Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↕↕	↕↕	↗
Traffic Vol, veh/h	0	52	0	1196	993	49
Future Vol, veh/h	0	52	0	1196	993	49
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	-	-	-	0
Veh in Median Storage#	-	-	0	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	57	0	1300	1079	53

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 540	-	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	- 6.94	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	- 3.32	-	-
Pot Cap-1 Maneuver	0 486	0	-
Stage 1	0	- 0	-
Stage 2	0	- 0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	- 486	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.4	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR
Capacity (veh/h)	-	486	-	-
HCM Lane V/C Ratio	-	0.116	-	-
HCM Control Delay (s)	-	13.4	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	32	53	22	28	51	57	627	51	82	504	79
Future Volume (veh/h)	70	32	53	22	28	51	57	627	51	82	504	79
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	76	35	58	24	30	55	62	682	55	89	548	86
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	93	153	96	63	115	105	1364	425	132	1005	449
Arrive On Green	0.07	0.15	0.15	0.03	0.11	0.11	0.06	0.28	0.28	0.08	0.30	0.30
Sat Flow, veh/h	1681	598	991	3261	559	1025	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	76	0	93	24	0	85	62	682	55	89	548	86
Grp Sat Flow(s),veh/h/ln	1681	0	1590	1630	0	1584	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	1.7	0.0	2.1	0.3	0.0	2.0	1.4	4.7	1.1	2.0	5.4	1.7
Cycle Q Clear(g_c), s	1.7	0.0	2.1	0.3	0.0	2.0	1.4	4.7	1.1	2.0	5.4	1.7
Prop In Lane	1.00		0.62	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	120	0	246	96	0	178	105	1364	425	132	1005	449
V/C Ratio(X)	0.63	0.00	0.38	0.25	0.00	0.48	0.59	0.50	0.13	0.67	0.55	0.19
Avail Cap(c_a), veh/h	784	0	1383	617	0	939	657	4800	1494	869	3763	1684
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	17.9	0.0	15.0	18.8	0.0	16.5	18.1	11.9	10.6	17.8	11.6	10.3
Incr Delay (d2), s/veh	5.4	0.0	1.0	1.4	0.0	2.0	5.2	0.3	0.1	5.8	0.5	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	1.0	0.0	1.0	0.1	0.0	1.0	0.8	2.1	0.5	1.2	2.6	0.7
LnGrp Delay(d),s/veh	23.3	0.0	16.0	20.2	0.0	18.5	23.3	12.1	10.7	23.6	12.1	10.5
LnGrp LOS	C		B	C		B	C	B	B	C	B	B
Approach Vol, veh/h		169			109			799			723	
Approach Delay, s/veh		19.3			18.9			12.9			13.3	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.6	15.7	5.7	10.6	7.0	16.4	7.3	9.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5	39.5	7.5	34.5	15.5	44.5	18.5	23.5				
Max Q Clear Time (g_c+I1), s	4.5	6.7	2.3	4.1	3.4	7.4	3.7	4.0				
Green Ext Time (p_c), s	0.2	4.5	0.0	0.5	0.1	3.6	0.1	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			14.0									
HCM 2010 LOS			B									

Intersection

Int Delay, s/veh 5.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↗
Traffic Vol, veh/h	6	974	835	192	108	2
Future Vol, veh/h	6	974	835	192	108	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	200	-	-	225	150	0
Veh in Median Storage, #	0	0	-	0	-	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	1004	861	198	111	2

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1059	0	0
Stage 1	-	-	861
Stage 2	-	-	514
Critical Hdwy	4.14	-	6.84
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	2.22	-	3.52
Pot Cap-1 Maneuve	653	-	136
Stage 1	-	-	374
Stage 2	-	-	565
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuve	653	-	135
Mov Cap-2 Maneuver	-	-	135
Stage 1	-	-	371
Stage 2	-	-	565

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	97.6
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn	SBLn2
Capacity (veh/h)	653	-	-	-	135	573
HCM Lane V/C Ratio	0.009	-	-	-	0.825	0.004
HCM Control Delay (s)	10.6	-	-	-	99.2	11.3
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	5.2	0

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Existing Plus Project Phase 1&2 PM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	119	886	66	103	733	12	72	3	61	104	3	227
Future Volume (veh/h)	119	886	66	103	733	12	72	3	61	104	3	227
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1765	1765	1800	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	121	904	67	105	748	12	73	3	62	106	3	232
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	1	1	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	1232	551	132	1176	526	184	22	87	132	6	458
Arrive On Green	0.10	0.37	0.37	0.08	0.35	0.35	0.14	0.14	0.14	0.08	0.31	0.31
Sat Flow, veh/h	1587	3353	1500	1681	3353	1500	583	155	602	1587	19	1484
Grp Volume(v), veh/h	121	904	67	105	748	12	138	0	0	106	0	235
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1681	1676	1500	1340	0	0	1587	0	1503
Q Serve(g_s), s	4.1	12.9	1.6	3.4	10.3	0.3	4.1	0.0	0.0	3.6	0.0	7.1
Cycle Q Clear(g_c), s	4.1	12.9	1.6	3.4	10.3	0.3	5.3	0.0	0.0	3.6	0.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	0.53		0.45	1.00		0.99
Lane Grp Cap(c), veh/h	151	1232	551	132	1176	526	293	0	0	132	0	464
V/C Ratio(X)	0.80	0.73	0.12	0.79	0.64	0.02	0.47	0.00	0.00	0.80	0.00	0.51
Avail Cap(c_a), veh/h	331	1978	885	229	1735	776	610	0	0	303	0	996
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	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.4	15.1	11.5	24.9	14.9	11.7	22.3	0.0	0.0	24.8	0.0	15.6
Incr Delay (d2), s/veh	9.3	0.9	0.1	10.2	0.6	0.0	1.2	0.0	0.0	10.7	0.0	0.9
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	2.2	6.0	0.7	2.0	4.8	0.1	2.1	0.0	0.0	2.0	0.0	3.0
LnGrp Delay(d),s/veh	33.8	16.0	11.6	35.2	15.5	11.7	23.5	0.0	0.0	35.6	0.0	16.4
LnGrp LOS	C	B	B	D	B	B	C			D		B
Approach Vol, veh/h		1092			865			138			341	
Approach Delay, s/veh		17.7			17.8			23.5			22.4	
Approach LOS		B			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	9.1	12.4	8.8	24.7		21.5	9.7	23.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax),s	10.5	21.5	7.5	32.5		36.5	11.5	28.5				
Max Q Clear Time (g_c+I1),s	5.6	7.3	5.4	14.9		9.1	6.1	12.3				
Green Ext Time (p_c), s	0.1	0.6	0.0	5.4		1.6	0.1	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.7									
HCM 2010 LOS			B									

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	5	0	245	0	0	0	309	707	0	0	761	16
Future Vol, veh/h	5	0	245	0	0	0	309	707	0	0	761	16
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	-	-	-	-	-	-	300	-	-	-	-	250
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	253	0	0	0	319	729	0	0	785	16

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	2152	2152	785	2287
Stage 1	785	785	-	1367
Stage 2	1367	1367	-	920
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	35	48	393	28
Stage 1	386	404	-	182
Stage 2	182	215	-	325
Platoon blocked, %				
Mov Cap-1 Maneuver	24	29	393	7
Mov Cap-2 Maneuver	24	29	-	7
Stage 1	236	404	-	111
Stage 2	111	132	-	116

Approach	EB	WB	NB	SB
HCM Control Delay	59.8	0	3.7	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn	WBLn1	SBT	SBR
Capacity (veh/h)	822	-	301	-	-	-
HCM Lane V/C Ratio	0.388	-	0.856	-	-	-
HCM Control Delay (s)	12.1	-	59.8	0	-	-
HCM Lane LOS	B	-	F	A	-	-
HCM 95th %tile Q(veh)	1.8	-	7.5	-	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	531	325	298	577	140	285	688	136	140	623	56
Future Volume (veh/h)	107	531	325	298	577	140	285	688	136	140	623	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	110	547	335	307	595	144	294	709	140	144	642	58
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	165	681	305	351	740	331	284	1203	538	173	968	433
Arrive On Green	0.10	0.20	0.20	0.12	0.22	0.22	0.18	0.36	0.36	0.11	0.29	0.29
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	110	547	335	307	595	144	294	709	140	144	642	58
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	5.8	13.5	11.3	9.0	14.6	5.2	15.5	14.9	5.7	7.7	14.6	2.5
Cycle Q Clear(g_c), s	5.8	13.5	11.3	9.0	14.6	5.2	15.5	14.9	5.7	7.7	14.6	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	165	681	305	351	740	331	284	1203	538	173	968	433
V/C Ratio(X)	0.67	0.80	1.10	0.87	0.80	0.44	1.03	0.59	0.26	0.83	0.66	0.13
Avail Cap(c_a), veh/h	165	813	364	351	968	433	284	1203	538	211	968	433
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	37.4	32.9	14.3	37.4	32.0	15.4	35.5	22.6	19.6	37.8	27.1	22.8
Incr Delay (d2), s/veh	9.9	5.0	77.8	20.8	3.8	0.9	62.7	2.1	1.2	20.3	3.6	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	3.0	6.7	12.3	4.6	7.1	2.7	11.7	7.2	2.5	4.3	7.2	1.1
LnGrp Delay(d),s/veh	47.2	37.8	92.1	58.2	35.8	16.3	98.2	24.7	20.8	58.1	30.7	23.4
LnGrp LOS	D	D	F	E	D	B	F	C	C	E	C	C
Approach Vol, veh/h		992			1046			1143			844	
Approach Delay, s/veh		57.2			39.7			43.1			34.9	
Approach LOS		E			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	35.6	15.0	22.1	20.0	29.5	13.5	23.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	15	29.0	10.5	21.0	15.5	25.0	6.5	25.0				
Max Q Clear Time (g_c+I1),s	9.7	16.9	11.0	15.5	17.5	16.6	7.8	16.6				
Green Ext Time (p_c), s	0.1	3.7	0.0	2.1	0.0	2.5	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			44.0									
HCM 2010 LOS			D									



Movement	EBL	EBR	NBL	NBT	SBT	SBR			
Lane Configurations	↖	↗	↖	↑↑	↑↑	↗			
Traffic Volume (veh/h)	103	144	213	1006	1196	33			
Future Volume (veh/h)	103	144	213	1006	1196	33			
Number	7	14	5	2	6	16			
Initial Q (Qb), veh	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00	1.00				1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h	1765	1765	1667	1765	1765	1765			
Adj Flow Rate, veh/h	112	157	232	1093	1300	36			
Adj No. of Lanes	1	1	1	2	2	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	2	2	2	2			
Cap, veh/h	250	223	177	2242	1563	699			
Arrive On Green	0.15	0.15	0.11	0.67	0.47	0.47			
Sat Flow, veh/h	1681	1500	1587	3441	3441	1500			
Grp Volume(v), veh/h	112	157	232	1093	1300	36			
Grp Sat Flow(s), veh/h	1681	1500	1587	1676	1676	1500			
Q Serve(g_s), s	3.0	4.9	5.5	7.9	16.7	0.6			
Cycle Q Clear(g_c), s	3.0	4.9	5.5	7.9	16.7	0.6			
Prop In Lane	1.00	1.00	1.00			1.00			
Lane Grp Cap(c), veh/h	250	223	177	2242	1563	699			
V/C Ratio(X)	0.45	0.70	1.31	0.49	0.83	0.05			
Avail Cap(c_a), veh/h	613	547	177	2242	1563	699			
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	20.0	20.0	21.9	4.0	11.5	7.2			
Incr Delay (d2), s/veh	1.3	4.0	174.5	0.8	5.3	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	4.2	10.9	3.7	8.7	0.3				
LnGrp Delay(d),s/veh	20.4	24.0	196.4	4.8	16.8	7.3			
LnGrp LOS	C	C	F	A	B	A			
Approach Vol, veh/h	269		1325		1336				
Approach Delay, s/veh	27.5		38.3		16.6				
Approach LOS	C		D		B				
Timer	1	2	3	4	5	6	7	8	
Assigned Phs	2		4		5		6		
Phs Duration (G+Y+Rc), s	7.5		11.8		10.0		27.5		
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		
Max Green Setting (Gmax), s	33.0		18.0		5.5		23.0		
Max Q Clear Time (g_c+I1), s	19.9		6.9		7.5		18.7		
Green Ext Time (p_c), s	7.2		0.6		0.0		2.9		
Intersection Summary									
HCM 2010 Ctrl Delay			26.9						
HCM 2010 LOS			C						



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	30	32	43	14	31	108	34	1013	26	116	1059	163
Future Volume (veh/h)	30	32	43	14	31	108	34	1013	26	116	1059	163
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	138	34	46	15	33	115	36	1078	28	123	1127	173
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	510	434	232	43	151	109	1479	662	150	1362	208
Arrive On Green	0.11	0.29	0.29	0.13	0.13	0.13	0.07	0.44	0.44	0.09	0.47	0.47
Sat Flow, veh/h	1587	1765	1500	1240	346	1206	1587	3353	1500	1587	2916	446
Grp Volume(v), veh/h	38	34	46	15	0	148	36	1078	28	123	647	653
Grp Sat Flow(s), veh/h	1587	1765	1500	1240	0	1552	1587	1676	1500	1587	1676	1686
Q Serve(g_s), s	6.6	1.1	1.7	0.8	0.0	7.1	1.7	20.4	0.8	5.9	25.8	26.0
Cycle Q Clear(g_c), s	6.6	1.1	1.7	1.9	0.0	7.1	1.7	20.4	0.8	5.9	25.8	26.0
Prop In Lane	1.00	1.00	1.00	1.00	0.78	1.00	1.00	1.00	1.00	1.00	0.26	0.26
Lane Grp Cap(c), veh/h	167	510	434	232	0	195	109	1479	662	150	783	787
V/C Ratio(X)	0.83	0.07	0.11	0.06	0.00	0.76	0.33	0.73	0.04	0.82	0.83	0.83
Avail Cap(c_a), veh/h	175	801	681	430	0	443	113	1479	662	154	783	787
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.8	19.9	20.1	30.8	0.0	32.6	34.2	17.7	12.3	34.2	17.8	17.9
Incr Delay (d2), s/veh	25.6	0.1	0.1	0.1	0.0	6.0	1.7	3.2	0.1	27.5	9.7	9.9
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	0.5	0.7	0.3	0.0	3.4	0.8	10.1	0.4	3.7	14.0	14.1	14.1
LnGrp Delay(d), s/veh	19.4	19.9	20.2	30.9	0.0	38.6	35.9	20.9	12.4	61.8	27.5	27.8
LnGrp LOS	E	B	C	C		D	D	C	B	E	C	C
Approach Vol, veh/h	218			163			1142			1423		
Approach Delay, s/veh	45.0			37.9			21.2			30.6		
Approach LOS	D			D			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+R), s	38.5			26.8	9.8	40.5	12.6	14.2				
Change Period (Y+R), s	4.5			4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	34.0			35.0	5.5	36.0	8.5	22.0				
Max Q Clear Time (g_c+1), s	12.4			3.7	3.7	28.0	8.6	9.1				
Green Ext Time (p_c), s	0.0	5.1		0.3	0.0	4.5	0.0	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay	28.4											
HCM 2010 LOS	C											



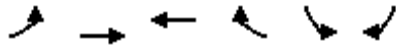
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	74	74	33	44	97	251	78	771	72	283	731	85
Future Volume (veh/h)	74	74	33	44	97	251	78	771	72	283	731	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	64	77	34	46	101	261	81	803	75	295	761	89
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	545	463	443	135	349	99	1007	451	298	1427	638
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.06	0.30	0.30	0.19	0.43	0.43
Sat Flow, veh/h	959	1765	1500	1206	437	1129	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	77	34	46	0	362	81	803	75	295	761	89	
Grp Sat Flow(s), veh/h	959	1765	1500	1206	0	1566	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	4.3	2.1	1.1	1.9	0.0	13.8	3.4	14.7	2.5	12.3	11.2	2.4
Cycle Q Clear(g_c), s	18.1	2.1	1.1	4.0	0.0	13.8	3.4	14.7	2.5	12.3	11.2	2.4
Prop In Lane	1.00		1.00	1.00		0.72	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	205	545	463	443	0	484	99	1007	451	298	1427	638
V/C Ratio(X)	0.31	0.14	0.07	0.10	0.00	0.75	0.81	0.80	0.17	0.99	0.53	0.14
Avail Cap(c_a), veh/h	327	769	654	596	0	682	155	1007	451	298	1427	638
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	16.6	16.3	18.1	0.0	20.7	30.8	21.4	17.1	27.0	14.2	11.7
Incr Delay (d2), s/veh	0.9	0.1	0.1	0.1	0.0	2.9	16.7	6.5	0.8	49.1	1.4	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	1.0	0.5	0.6	0.0	6.3	1.9	7.6	1.1	9.4	5.5	1.1	
LnGrp Delay(d), s/veh	29.7	16.7	16.3	18.2	0.0	23.5	47.5	28.0	17.9	76.1	15.6	12.1
LnGrp LOS	C	B	B	B		C	D	C	B	E	B	B
Approach Vol, veh/h		175			408			959			1145	
Approach Delay, s/veh		21.4			22.9			28.8			30.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	17.0	24.5		25.1	8.7	32.8		25.1				
Change Period (Y+R), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (G_max), s	20.0	29.0		29.0	6.5	26.0		29.0				
Max Q Clear Time (G+Y+R), s	11.3	20.1		20.1	5.4	13.2		15.8				
Green Ext Time (p_c), s	0.0	1.6		0.4	0.0	3.9		1.9				
Intersection Summary												
HCM 2010 Ctrl Delay		28.3										
HCM 2010 LOS		C										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	3	0	0	0	0	7	0	941	0	14	803	3
Future Volume (veh/h)	3	0	0	0	0	7	0	941	0	14	803	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1800	1765	1800	1800	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	3	0	0	0	0	7	0	991	0	15	845	3
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	0	0	0	0	19	2	2590	0	30	2934	10
Arrive On Green	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.77	0.00	0.02	0.86	0.86
Sat Flow, veh/h	889	0	0	0	0	1500	1681	3441	0	1681	3427	12
Grp Volume(v), veh/h	3	0	0	0	0	7	0	991	0	15	413	435
Grp Sat Flow(s), veh/h	889	0	0	0	0	1500	1681	1676	0	1681	1676	1763
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.3	0.0	6.5	0.0	0.6	3.2	3.2
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.0	0.0	0.3	0.0	6.5	0.0	0.6	3.2	3.2
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	116	0	0	0	0	19	2	2590	0	30	1435	1509
V/C Ratio(X)	0.03	0.00	0.00	0.00	0.00	0.37	0.00	0.38	0.00	0.49	0.29	0.29
Avail Cap(c_a), veh/h	116	0	0	0	0	394	135	2590	0	135	1435	1509
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	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	0.0	0.0	0.0	33.6	0.0	2.5	0.0	33.4	0.9	0.9
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	11.5	0.0	0.4	0.0	11.8	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	0.0	0.0	0.0	0.0	0.0	0.2	0.0	3.0	0.0	0.4	1.6	1.7
LnGrp Delay(d),s/veh	33.9	0.0	0.0	0.0	0.0	45.1	0.0	3.0	0.0	45.2	1.4	1.4
LnGrp LOS	C					D		A		D	A	A
Approach Vol, veh/h		3			7			991			863	
Approach Delay, s/veh		33.9			45.1			3.0			2.2	
Approach LOS		C			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	57.5			5.4	0.0	63.2		5.4				
Change Period (Y+R), s	4.5			4.5	4.5	4.5		4.5				
Max Green Setting (G_max), s	53.0			18.0	5.5	53.0		18.0				
Max Q Clear Time (g_c+I), s	11.5			2.5	0.0	5.2		2.3				
Green Ext Time (p_c), s	0.0	7.2		0.0	0.0	5.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				2.8								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	33	277	76	87	244	156	153	718	203	180	626	20
Future Volume (veh/h)	33	277	76	87	244	156	153	718	203	180	626	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	35	292	80	92	257	164	161	756	214	189	659	21
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	456	204	113	577	258	193	1389	621	193	1374	44
Arrive On Green	0.04	0.14	0.14	0.07	0.17	0.17	0.12	0.41	0.41	0.12	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3317	106
Grp Volume(v), veh/h	35	292	80	92	257	164	161	756	214	189	333	347
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1746
Q Serve(g_s), s	1.5	5.8	3.4	4.0	4.8	5.0	6.9	11.9	6.8	8.3	10.2	10.2
Cycle Q Clear(g_c), s	5.5	5.8	3.4	4.0	4.8	5.0	6.9	11.9	6.8	8.3	10.2	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	56	456	204	113	577	258	193	1389	621	193	694	723
V/C Ratio(X)	0.63	0.64	0.39	0.81	0.45	0.64	0.84	0.54	0.34	0.98	0.48	0.48
Avail Cap(c_a), veh/h	125	1389	621	125	1389	621	193	1389	621	193	694	723
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	30.8	28.6	27.6	32.0	26.0	13.1	30.1	15.5	14.0	30.7	15.0	15.0
Incr Delay (d2), s/veh	10.9	1.5	1.2	29.9	0.5	2.6	26.0	1.5	1.5	59.0	2.4	2.3
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	0.0	1.2	1.5	2.7	2.3	2.2	4.4	5.8	3.1	6.8	5.2	5.4
LnGrp Delay(d), s/veh	4.2	30.1	28.8	61.9	26.5	15.7	56.1	17.0	15.5	89.7	17.4	17.3
LnGrp LOS	D	C	C	E	C	B	E	B	B	F	B	B
Approach Vol, veh/h		407			513			1131			869	
Approach Delay, s/veh		31.1			29.4			22.3			33.1	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	13.0	33.5	9.5	14.0	13.0	33.5	7.0	16.5				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gr), s	29.0	29.0	5.5	29.0	8.5	29.0	5.5	29.0				
Max Q Clear Time (t0+I), s	13.9	6.0	7.8	8.9	12.2	3.5	7.0					
Green Ext Time (p_c), s	0.0	4.6	0.0	1.7	0.0	3.2	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			28.0									
HCM 2010 LOS			C									



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↵	↑↑	↑↑	↵	↵↵	↵		
Traffic Volume (veh/h)	7	829	896	145	179	24		
Future Volume (veh/h)	7	829	896	145	179	24		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h	1767	1765	1765	1765	1569	1765		
Adj Flow Rate, veh/h	7	882	953	154	190	26		
Adj No. of Lanes	1	2	2	1	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	15	1560	1231	551	1035	536		
Arrive On Green	0.01	0.47	0.37	0.37	0.36	0.36		
Sat Flow, veh/h	1587	3441	3441	1500	2898	1500		
Grp Volume(v), veh/h	7	882	953	154	190	26		
Grp Sat Flow(s), veh/h	1587	3441	3441	1500	2898	1500		
Q Serve(g_s), s	0.2	9.7	12.7	3.7	2.3	0.6		
Cycle Q Clear(g_c), s	0.2	9.7	12.7	3.7	2.3	0.6		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	15	1560	1231	551	1035	536		
V/C Ratio(X)	0.48	0.57	0.77	0.28	0.18	0.05		
Avail Cap(c_a), veh/h	15	2177	1515	678	1035	536		
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	25.0	9.8	14.2	11.3	11.2	10.7		
Incr Delay (d2), s/veh	2.0	0.3	2.1	0.3	0.4	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	4.5	6.2	1.5	1.0	0.6		
LnGrp Delay(d),s/veh	17.0	10.2	16.2	11.6	11.6	10.8		
LnGrp LOS	D	B	B	B	B	B		
Approach Vol, veh/h		889	1107		216			
Approach Delay, s/veh		10.4	15.6		11.5			
Approach LOS		B	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				28.1		22.6	5.0	23.1
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				32.9		18.1	5.5	22.9
Max Q Clear Time (g_c+I1), s				11.7		4.3	2.2	14.7
Green Ext Time (p_c), s				5.4		0.6	0.0	3.9
Intersection Summary								
HCM 2010 Ctrl Delay			13.1					
HCM 2010 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	15	122	38	49	99	10	31	11	26	3	10	18
Future Vol, veh/h	15	122	38	49	99	10	31	11	26	3	10	18
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	154	48	62	125	13	39	14	33	4	13	23

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	138	0	0	202
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-2.218	-
Pot Cap-1 Maneuver	446	-	-	1370
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	446	-	-	1370
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.6	2.4	12.8	11.1
HCM LOS			B	B

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)		548	1446	-	-	1370	-	632
HCM Lane V/C Ratio		0.157	0.013	-	-	-0.045	-	-0.062
HCM Control Delay (s)		12.8	7.5	0	-	7.8	0	11.1
HCM Lane LOS		B	A	A	-	A	A	B
HCM 95th %tile Q(veh)		0.6	0	-	-	0.1	-	0.2

Intersection

Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Vol, veh/h	22	176	74	36	129	14	92	54	41	17	48	18
Future Vol, veh/h	22	176	74	36	129	14	92	54	41	17	48	18
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	180	76	37	132	14	94	55	42	17	49	18
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay	12.1	10.5	10	9.9
HCM LOS	B	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	70%	0%	90%	0%	73%
Vol Right, %	0%	0%	100%	0%	30%	0%	10%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	92	54	41	22	250	36	143	17	66
LT Vol	92	0	0	22	0	36	0	17	0
Through Vol	0	54	0	0	176	0	129	0	48
RT Vol	0	0	41	0	74	0	14	0	18
Lane Flow Rate	94	55	42	22	255	37	146	17	67
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.176	0.095	0.064	0.04	0.404	0.068	0.245	0.034	0.118
Departure Headway (Hd)	6.739	6.234	5.526	6.414	5.703	6.617	6.044	7.012	6.311
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	532	575	648	559	633	541	594	510	568
Service Time	4.479	3.973	3.265	4.148	3.436	4.354	3.781	4.758	4.056
HCM Lane V/C Ratio	0.177	0.096	0.065	0.039	0.403	0.068	0.246	0.033	0.118
HCM Control Delay	10.9	9.6	8.6	9.4	12.3	9.8	10.7	10	9.9
HCM Lane LOS	B	A	A	A	B	A	B	A	A
HCM 95th-tile Q	0.6	0.3	0.2	0.1	2	0.2	1	0.1	0.4

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕		↵	↕		↵	↕	
Traffic Vol, veh/h	8	105	16	46	138	170	4	34	39	136	32	6
Future Vol, veh/h	8	105	16	46	138	170	4	34	39	136	32	6
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	109	17	48	144	177	4	35	41	142	33	6
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	9.5	10	9.2	11
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	23%	0%	100%	69%	0%	100%	21%	0%	100%	64%
Vol Right, %	0%	0%	77%	0%	0%	31%	0%	0%	79%	0%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	23	50	8	70	51	46	92	216	136	21	17
LT Vol	4	0	0	8	0	0	46	0	0	136	0	0
Through Vol	0	23	11	0	70	35	0	92	46	0	21	11
RT Vol	0	0	39	0	0	16	0	0	170	0	0	6
Lane Flow Rate	4	24	52	8	73	53	48	96	225	142	22	17
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.008	0.042	0.085	0.015	0.124	0.087	0.083	0.152	0.324	0.259	0.038	0.028
Departure Headway (Hd)	6.844	6.344	5.802	6.624	6.124	5.904	6.228	5.728	5.177	6.588	6.088	5.836
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	523	565	618	541	586	607	579	630	700	545	589	614
Service Time	4.58	4.08	3.538	4.356	3.856	3.636	3.928	3.428	2.877	4.32	3.82	3.568
HCM Lane V/C Ratio	0.008	0.042	0.084	0.015	0.125	0.087	0.083	0.152	0.321	0.261	0.037	0.028
HCM Control Delay	9.6	9.4	9.1	9.5	9.7	9.2	9.5	9.5	10.3	11.6	9.1	8.7
HCM Lane LOS	A	A	A	A	A	A	A	A	B	B	A	A
HCM 95th-tile Q	0	0.1	0.3	0	0.4	0.3	0.3	0.5	1.4	1	0.1	0.1

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗			↕	
Traffic Vol, veh/h	17	187	25	41	154	9	15	44	32	12	65	18
Future Vol, veh/h	17	187	25	41	154	9	15	44	32	12	65	18
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	203	27	45	167	10	16	48	35	13	71	20
Number of Lanes	1	1	0	1	1	0	1	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.4	10.5	9.2	9.5
HCM LOS	B	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	27%	0%
Vol Thru, %	0%	100%	31%	0%	88%	0%	94%	73%	64%
Vol Right, %	0%	0%	69%	0%	12%	0%	6%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	29	47	17	212	41	163	45	51
LT Vol	15	0	0	17	0	41	0	12	0
Through Vol	0	29	15	0	187	0	154	33	33
RT Vol	0	0	32	0	25	0	9	0	18
Lane Flow Rate	16	32	51	18	230	45	177	48	55
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.031	0.056	0.082	0.032	0.362	0.078	0.283	0.086	0.092
Departure Headway (Hd)	6.779	6.273	5.787	6.234	5.649	6.291	5.749	6.403	6.014
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	529	571	619	575	638	570	625	560	596
Service Time	4.511	4.005	3.52	3.96	3.375	4.02	3.478	4.137	3.747
HCM Lane V/C Ratio	0.03	0.056	0.082	0.031	0.361	0.079	0.283	0.086	0.092
HCM Control Delay	9.7	9.4	9	9.2	11.6	9.6	10.7	9.7	9.4
HCM Lane LOS	A	A	A	A	B	A	B	A	A
HCM 95th-tile Q	0.1	0.2	0.3	0.1	1.6	0.3	1.2	0.3	0.3

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵ ↑↑			↵ ↑↑			↵ ↑↑			↵ ↑↑		
Traffic Vol, veh/h	14	238	53	105	351	0	77	55	76	28	74	20
Future Vol, veh/h	14	238	53	105	351	0	77	55	76	28	74	20
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	240	54	106	355	0	78	56	77	28	75	20
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	11.5	10.7	10.8	10.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	19%	0%	100%	60%	0%	100%	100%	0%	100%	55%
Vol Right, %	0%	0%	81%	0%	0%	40%	0%	0%	0%	0%	0%	45%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	77	37	94	14	159	132	105	176	176	28	49	45
LT Vol	77	0	0	14	0	0	105	0	0	28	0	0
Through Vol	0	37	18	0	159	79	0	176	176	0	49	25
RT Vol	0	0	76	0	0	53	0	0	0	0	0	20
Lane Flow Rate	78	37	95	14	160	134	106	177	177	28	50	45
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.16	0.07	0.16	0.028	0.293	0.234	0.203	0.314	0.229	0.06	0.099	0.085
Departure Headway (Hd)	7.427	6.927	6.363	7.085	6.585	6.305	6.877	6.377	4.643	7.627	7.127	6.814
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	481	515	561	504	543	567	521	562	768	468	500	523
Service Time	5.199	4.699	4.135	4.85	4.35	4.07	4.636	4.136	2.402	5.405	4.905	4.592
HCM Lane V/C Ratio	0.162	0.072	0.169	0.028	0.295	0.236	0.203	0.315	0.23	0.06	0.10	0.086
HCM Control Delay	11.6	10.2	10.4	10.1	12.1	11	11.4	12.1	8.8	10.9	10.7	10.2
HCM Lane LOS	B	B	B	B	B	B	B	B	A	B	B	B
HCM 95th-tile Q	0.6	0.2	0.6	0.1	1.2	0.9	0.8	1.3	0.9	0.2	0.3	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	42	502	7	80	591	158	8	37	48	94	41	25
Future Volume (veh/h)	42	502	7	80	591	158	8	37	48	94	41	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	44	523	7	83	616	165	8	39	50	98	43	26
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	68	737	330	204	800	214	508	532	452	569	628	534
Arrive On Green	0.04	0.22	0.22	0.13	0.31	0.31	0.01	0.30	0.30	0.07	0.36	0.36
Sat Flow, veh/h	1587	3353	1500	1587	2618	700	1587	1765	1500	1587	1765	1500
Grp Volume(v), veh/h	44	523	7	83	394	387	8	39	50	98	43	26
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1641	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.7	9.1	0.2	3.0	13.5	13.5	0.2	1.0	0.9	2.6	1.0	0.7
Cycle Q Clear(g_c), s	1.7	9.1	0.2	3.0	13.5	13.5	0.2	1.0	0.9	2.6	1.0	0.7
Prop In Lane	1.00	1.00	1.00	1.00	0.43	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	68	737	330	204	512	501	508	532	452	569	628	534
V/C Ratio(X)	0.65	0.71	0.02	0.41	0.77	0.77	0.02	0.07	0.11	0.17	0.07	0.05
Avail Cap(c_a), veh/h	64	1542	690	214	824	807	630	532	452	604	628	534
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	20.7	22.7	12.5	25.3	19.9	19.9	15.0	15.7	6.0	12.9	13.4	13.3
Incr Delay (d2), s/veh	0.1	1.3	0.0	1.3	2.5	2.6	0.0	0.3	0.5	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	4.3	0.1	1.4	6.5	6.5	0.1	0.5	0.4	1.1	0.5	0.3	0.3
LnGrp Delay(d),s/veh	19.8	24.0	12.5	26.6	22.4	22.5	15.0	16.0	6.5	13.0	13.6	13.5
LnGrp LOS	D	C	B	C	C	C	B	B	A	B	B	B
Approach Vol, veh/h	574	864	97	167								
Approach Delay, s/veh	25.1	22.8	11.0	13.2								
Approach LOS	C	C	B	B								
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	23.5	12.6	18.4	5.2	26.9	7.2	23.8					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	19.0	8.5	29.0	5.5	19.0	6.5	31.0					
Max Q Clear Time (g_c+1), s	13.0	5.0	11.1	2.2	3.0	3.7	15.5					
Green Ext Time (p_c), s	0.0	0.2	0.0	2.8	0.0	0.2	3.8					
Intersection Summary												
HCM 2010 Ctrl Delay	22.0											
HCM 2010 LOS	C											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑		↖	↗			↕	
Traffic Volume (veh/h)	45	897	61	137	856	13	57	44	111	21	49	30
Future Volume (veh/h)	45	897	61	137	856	13	57	44	111	21	49	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	46	925	63	141	882	13	59	45	114	22	51	31
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	1004	449	159	1004	15	611	174	441	159	343	185
Arrive On Green	0.10	0.30	0.30	0.10	0.30	0.30	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1587	3353	1500	1587	3383	50	1238	443	1123	235	872	470
Grp Volume(v), veh/h	46	925	63	141	437	458	59	0	159	104	0	0
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1756	1238	0	1567	1577	0	0
Q Serve(g_s), s	1.7	17.3	2.0	5.7	16.1	16.1	0.0	0.0	4.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.7	17.3	2.0	5.7	16.1	16.1	1.5	0.0	4.5	2.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.72	0.21		0.30
Lane Grp Cap(c), veh/h	163	1004	449	159	497	521	611	0	615	687	0	0
V/C Ratio(X)	0.28	0.92	0.14	0.89	0.88	0.88	0.10	0.00	0.26	0.15	0.00	0.00
Avail Cap(c_a), veh/h	163	1007	450	159	529	554	611	0	615	687	0	0
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	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.9	22.0	16.6	28.9	21.7	21.7	12.4	0.0	13.3	12.8	0.0	0.0
Incr Delay (d2), s/veh	0.9	13.4	0.1	40.8	15.0	14.4	0.3	0.0	1.0	0.5	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	9.8	0.8	4.3	9.5	9.8	0.7	0.0	2.1	1.3	0.0	0.0	0.0
LnGrp Delay(d), s/veh	27.9	35.4	16.8	69.6	36.7	36.1	12.8	0.0	14.3	13.2	0.0	0.0
LnGrp LOS	C	D	B	E	D	D	B		B	B		
Approach Vol, veh/h	1034			1036			218			104		
Approach Delay, s/veh	33.9			40.9			13.9			13.2		
Approach LOS	C			D			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	30.0	11.0	23.9			30.0	11.2	23.8				
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5	6.5	19.5			25.5	5.5	20.5				
Max Q Clear Time (g_c+I1), s	16.5	7.7	19.3			4.6	3.7	18.1				
Green Ext Time (p_c), s	1.0	0.0	0.1			0.4	0.0	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			34.2									
HCM 2010 LOS			C									

Intersection

Intersection Delay, s/veh
 Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	178	4	15	228	71	3	8	8	41	18	67
Future Vol, veh/h	40	178	4	15	228	71	3	8	8	41	18	67
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	187	4	16	240	75	3	8	8	43	19	71
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.8	10.6	8.4	9.2
HCM LOS	A	B	A	A

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	16%	18%	5%	33%
Vol Thru, %	42%	80%	73%	14%
Vol Right, %	42%	2%	23%	53%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	222	314	126
LT Vol	3	40	15	41
Through Vol	8	178	228	18
RT Vol	8	4	71	67
Lane Flow Rate	20	234	331	133
Geometry Grp	1	1	1	1
Degree of Util (X)	0.029	0.305	0.410	0.183
Departure Headway (Hd)	5.184	4.706	4.461	4.969
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	685	762	803	718
Service Time	3.257	2.753	2.503	3.029
HCM Lane V/C Ratio	0.029	0.307	0.412	0.185
HCM Control Delay	8.4	9.8	10.6	9.2
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.1	1.3	2	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	73	762	77	152	911	51	97	156	78	40	237	94
Future Volume (veh/h)	73	762	77	152	911	51	97	156	78	40	237	94
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	76	794	80	158	949	53	101	162	81	42	247	98
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	868	388	180	1012	57	117	615	523	62	378	150
Arrive On Green	0.06	0.26	0.26	0.11	0.31	0.31	0.07	0.35	0.35	0.04	0.31	0.31
Sat Flow, veh/h	1587	3353	1500	1587	3229	180	1587	1765	1500	1587	1203	477
Grp Volume(v), veh/h	76	794	80	158	493	509	101	162	81	42	0	345
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1733	1587	1765	1500	1587	0	1680
Q Serve(g_s), s	3.5	17.2	3.1	7.3	21.4	21.4	4.7	4.9	1.8	2.0	0.0	13.3
Cycle Q Clear(g_c), s	3.5	17.2	3.1	7.3	21.4	21.4	4.7	4.9	1.8	2.0	0.0	13.3
Prop In Lane	1.00	1.00	1.00	1.00	0.10	1.00	1.00	1.00	1.00	1.00	0.28	0.28
Lane Grp Cap(c), veh/h	93	868	388	180	526	543	117	615	523	62	0	527
V/C Ratio(X)	0.81	0.92	0.21	0.88	0.94	0.94	0.87	0.26	0.15	0.68	0.00	0.65
Avail Cap(c_a), veh/h	117	873	391	180	526	543	117	615	523	138	0	527
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	0.00	1.00
Uniform Delay (d), s/veh	34.8	27.0	21.7	32.7	25.0	25.0	34.3	17.5	6.9	35.5	0.0	22.2
Incr Delay (d2), s/veh	28.6	14.0	0.3	35.1	24.7	24.1	45.1	1.0	0.6	12.3	0.0	6.2
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	1.9	9.6	1.3	5.0	13.5	13.8	3.5	2.6	1.1	1.1	0.0	7.0
LnGrp Delay(d), s/veh	38.4	41.0	22.0	67.8	49.7	49.1	79.5	18.5	7.5	47.9	0.0	28.4
LnGrp LOS	E	D	C	E	D	D	E	B	A	D		C
Approach Vol, veh/h		950			1160			344			387	
Approach Delay, s/veh		41.2			51.9			33.8			30.5	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	30.6	13.0	23.9	10.0	28.0	8.9	28.0					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gr), s	22.5	8.5	19.5	5.5	23.5	5.5	22.5					
Max Q Clear Time (g+1), s	11.9	9.3	19.2	6.7	15.3	5.5	23.4					
Green Ext Time (p_c), s	0.8	0.8	0.0	0.2	0.0	1.1	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			43.2									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	42	114	85	23	147	36	133	340	21	42	338	59
Future Volume (veh/h)	42	114	85	23	147	36	133	340	21	42	338	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	46	125	93	25	162	40	146	374	23	46	371	65
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	319	271	46	223	55	166	1344	601	74	1149	514
Arrive On Green	0.05	0.18	0.18	0.03	0.16	0.16	0.10	0.40	0.40	0.05	0.34	0.34
Sat Flow, veh/h	1587	1765	1500	1587	1367	338	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	46	125	93	25	0	202	146	374	23	46	371	65
Grp Sat Flow(s), veh/h	1587	1765	1500	1587	0	1705	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	1.5	3.3	1.9	0.8	0.0	5.9	4.8	3.9	0.5	1.5	4.3	1.6
Cycle Q Clear(g_c), s	1.5	3.3	1.9	0.8	0.0	5.9	4.8	3.9	0.5	1.5	4.3	1.6
Prop In Lane	1.00	1.00	1.00	1.00	0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	74	319	271	46	0	278	166	1344	601	74	1149	514
V/C Ratio(X)	0.62	0.39	0.34	0.54	0.00	0.73	0.88	0.28	0.04	0.62	0.32	0.13
Avail Cap(c_a), veh/h	166	605	514	166	0	584	166	1344	601	166	1149	514
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	19.0	8.3	25.1	0.0	20.9	23.2	10.6	9.6	24.6	12.8	11.9
Incr Delay (d2), s/veh	8.3	0.8	0.7	9.5	0.0	3.6	37.5	0.5	0.1	8.3	0.7	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	1.7	1.1	0.5	0.0	3.0	3.8	1.9	0.2	0.8	2.1	0.7	0.7
LnGrp Delay(d), s/veh	32.9	19.8	9.0	34.6	0.0	24.4	60.7	11.1	9.7	32.9	13.5	12.4
LnGrp LOS	C	B	A	C		C	E	B	A	C	B	B
Approach Vol, veh/h		264			227			543			482	
Approach Delay, s/veh		18.3			25.6			24.4			15.2	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	18.0	25.6	6.0	14.0	10.0	22.5	6.9	13.1				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	18.0	18.0	5.5	18.0	5.5	18.0	5.5	18.0				
Max Q Clear Time (g3+1), s	11.9	2.8	5.3	6.8	6.3	3.5	7.9					
Green Ext Time (p_c), s	0.0	1.7	0.0	0.7	0.0	1.8	0.0	0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			20.6									
HCM 2010 LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	702	702	90	139	952	175	111	379	66	168	291	112
Future Volume (veh/h)	702	702	90	139	952	175	111	379	66	168	291	112
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	144	716	92	142	971	179	113	387	67	171	297	114
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	169	843	377	289	1098	491	136	738	330	293	1069	638
Arrive On Green	0.11	0.25	0.25	0.18	0.33	0.33	0.09	0.22	0.22	0.18	0.32	0.32
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	716	92	142	971	179	113	387	67	171	297	114	
Grp Sat Flow(s), veh/h	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1500	
Q Serve(g_s), s	9.9	22.6	4.2	8.9	30.5	6.1	7.8	11.3	4.1	11.0	7.4	5.3
Cycle Q Clear(g_c), s	9.9	22.6	4.2	8.9	30.5	6.1	7.8	11.3	4.1	11.0	7.4	5.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	843	377	289	1098	491	136	738	330	293	1069	638	
V/C Ratio(X)	0.85	0.85	0.24	0.49	0.88	0.36	0.83	0.52	0.20	0.58	0.28	0.18
Avail Cap(c_a), veh/h	1069	478	289	1219	546	164	738	330	321	1069	638	
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	39.7	20.1	40.9	35.5	10.5	50.1	38.3	35.5	41.5	28.3	19.9	
Incr Delay (d2), s/veh	5.4	0.3	1.3	7.5	0.5	25.1	2.7	1.4	2.3	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	
%ile BackOfQ(50%), veh	11.1	2.1	4.0	15.3	3.7	4.4	5.5	1.8	5.0	3.5	2.3	
LnGrp Delay(d), s/veh	45.0	20.4	42.2	42.9	10.9	75.2	41.0	36.8	43.8	29.0	20.5	
LnGrp LOS	E	D	C	D	D	B	E	D	D	D	C	C
Approach Vol, veh/h	952			1292			567			582		
Approach Delay, s/veh	46.8			38.4			47.3			31.7		
Approach LOS	D			D			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	29.0	24.8	32.5	14.0	40.0	16.4	40.9					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	24.5	19.5	35.5	11.5	35.5	14.5	40.5					
Max Q Clear Time (G+Y+R), s	13.3	10.9	24.6	9.8	9.4	11.9	32.5					
Green Ext Time (p_c), s	1.9	0.2	3.4	0.0	2.1	0.1	3.9					
Intersection Summary												
HCM 2010 Ctrl Delay			41.1									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	835	835	127	131	1001	92	162	320	80	164	360	189
Future Volume (veh/h)	835	835	127	131	1001	92	162	320	80	164	360	189
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	101	888	135	139	1065	98	172	340	85	174	383	201
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	983	440	185	1131	506	203	698	172	203	560	290
Arrive On Green	0.07	0.29	0.29	0.12	0.34	0.34	0.13	0.26	0.26	0.13	0.26	0.26
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	2667	658	1587	2139	1107
Grp Volume(v), veh/h	888	135	139	1065	98	172	212	213	174	299	285	
Grp Sat Flow(s), veh/h	1676	1676	1500	1587	1676	1500	1587	1676	1649	1587	1676	1569
Q Serve(g_s), s	5.7	22.9	6.3	7.6	27.7	4.2	9.5	9.6	9.8	9.6	14.4	14.7
Cycle Q Clear(g_c), s	5.7	22.9	6.3	7.6	27.7	4.2	9.5	9.6	9.8	9.6	14.4	14.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	0.40	1.00	0.71			
Lane Grp Cap(c), veh/h	983	440	185	1131	506	203	439	432	203	439	411	
V/C Ratio(X)	0.88	0.90	0.31	0.75	0.94	0.19	0.85	0.48	0.49	0.86	0.68	0.69
Avail Cap(c_a), veh/h	1027	460	185	1139	510	203	439	432	203	439	411	
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	30.5	24.6	38.4	28.9	21.1	38.3	28.0	28.1	38.3	29.8	29.9	
Incr Delay (d2), s/veh	10.8	0.4	15.8	14.8	0.2	26.8	3.8	4.0	28.4	8.3	9.3	
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	
%ile BackOfQ(50%), veh	12.1	2.7	4.1	15.0	1.8	5.7	4.9	4.9	5.8	7.7	7.4	
LnGrp Delay(d), s/veh	41.3	25.0	54.2	43.7	21.3	65.0	31.8	32.1	66.8	38.0	39.2	
LnGrp LOS	F	D	C	D	D	C	E	C	C	E	D	D
Approach Vol, veh/h	1124			1302			597			758		
Approach Delay, s/veh	43.7			43.1			41.5			45.1		
Approach LOS	D			D			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	28.0	14.9	30.8	16.0	28.0	11.0	34.8					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	23.5	9.5	27.5	11.5	23.5	6.5	30.5					
Max Q Clear Time (t1+1), s	11.8	9.6	24.9	11.5	16.7	7.7	29.7					
Green Ext Time (p_c), s	1.7	0.0	1.5	0.0	1.8	0.0	0.6					
Intersection Summary												
HCM 2010 Ctrl Delay			43.4									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑		↑
Traffic Vol, veh/h	938	7	0	918	0	46
Future Vol, veh/h	938	7	0	918	0	46
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	-	-	-	0
Veh in Median Storage#	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1020	8	0	998	0	50

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 510
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 509
Stage 1	-	-	0 - 0
Stage 2	-	-	0 - 0
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 509
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	509	-	-	-
HCM Lane V/C Ratio	0.098	-	-	-
HCM Control Delay (s)	12.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.3	-	-	-

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↕↕	↕↕	↗
Traffic Vol, veh/h	0	60	0	1109	1178	68
Future Vol, veh/h	0	60	0	1109	1178	68
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	-	-	-	0
Veh in Median Storage#	-		-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	65	0	1205	1280	74

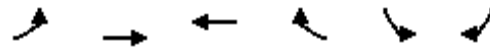
Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 640	-	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	- 6.94	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	- 3.32	-	-
Pot Cap-1 Maneuver	0 418	0	-
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	- 418	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.2	0	0
HCM LOS	C		



















Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR
Capacity (veh/h)	-	418	-	-
HCM Lane V/C Ratio	-	0.156	-	-
HCM Control Delay (s)	-	15.2	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.5	-	-

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	56	124	69	53	104	130	599	101	154	548	166
Future Volume (veh/h)	135	56	124	69	53	104	130	599	101	154	548	166
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	147	61	135	75	58	113	141	651	110	167	596	180
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	101	224	207	84	163	183	1230	383	217	923	413
Arrive On Green	0.11	0.21	0.21	0.06	0.16	0.16	0.11	0.26	0.26	0.13	0.28	0.28
Sat Flow, veh/h	1681	490	1084	3261	536	1044	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	147	0	196	75	0	171	141	651	110	167	596	180
Grp Sat Flow(s),veh/h/ln	1681	0	1573	1630	0	1580	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	4.4	0.0	5.9	1.1	0.0	5.3	4.2	6.1	3.1	5.0	8.2	5.1
Cycle Q Clear(g_c), s	4.4	0.0	5.9	1.1	0.0	5.3	4.2	6.1	3.1	5.0	8.2	5.1
Prop In Lane	1.00		0.69	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	192	0	325	207	0	247	183	1230	383	217	923	413
V/C Ratio(X)	0.77	0.00	0.60	0.36	0.00	0.69	0.77	0.53	0.29	0.77	0.65	0.44
Avail Cap(c_a), veh/h	694	0	1103	470	0	683	694	3101	965	791	2351	1052
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	22.4	0.0	18.7	23.4	0.0	20.8	22.6	16.7	15.6	21.9	16.6	15.5
Incr Delay (d2), s/veh	6.3	0.0	1.8	1.1	0.0	3.5	6.7	0.4	0.4	5.7	0.8	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	2.4	0.0	2.7	0.5	0.0	2.6	2.3	2.7	1.3	2.7	3.8	2.2
LnGrp Delay(d),s/veh	28.7	0.0	20.5	24.4	0.0	24.3	29.2	17.0	16.0	27.7	17.4	16.3
LnGrp LOS	C		C	C		C	C	B	B	C	B	B
Approach Vol, veh/h		343			246			902			943	
Approach Delay, s/veh		24.0			24.3			18.8			19.0	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.2	17.8	7.8	15.2	10.2	18.8	10.4	12.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax)	24.5	33.5	7.5	36.5	21.5	36.5	21.5	22.5				
Max Q Clear Time (g_c+l1)	7.9	8.1	3.1	7.9	6.2	10.2	6.4	7.3				
Green Ext Time (p_c), s	0.4	4.3	0.1	1.2	0.3	4.2	0.3	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			20.2									
HCM 2010 LOS			C									

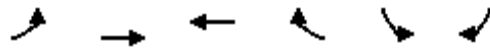
Existing Plus Project Phase 1 & 2
With Recommended Improvements





















Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↙	↕	↕	↘	↙	↘		
Traffic Volume (veh/h)	3	916	635	83	153	5		
Future Volume (veh/h)	3	916	635	83	153	5		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1667	1765		
Adj Flow Rate, veh/h	3	1029	713	93	172	6		
Adj No. of Lanes	1	2	2	1	1	1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	7	1790	1295	579	284	268		
Arrive On Green	0.00	0.53	0.39	0.39	0.18	0.18		
Sat Flow, veh/h	1587	3441	3441	1500	1587	1500		
Grp Volume(v), veh/h	3	1029	713	93	172	6		
Grp Sat Flow(s),veh/h/ln	1587	1676	1676	1500	1587	1500		
Q Serve(g_s), s	0.1	6.5	5.2	1.3	3.1	0.1		
Cycle Q Clear(g_c), s	0.1	6.5	5.2	1.3	3.1	0.1		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	7	1790	1295	579	284	268		
V/C Ratio(X)	0.46	0.57	0.55	0.16	0.61	0.02		
Avail Cap(c_a), veh/h	380	5726	4442	1987	1393	1317		
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	15.6	4.9	7.5	6.3	11.8	10.6		
Incr Delay (d2), s/veh	43.0	0.3	0.4	0.1	2.1	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	0.1	2.9	2.4	0.5	1.5	0.1		
LnGrp Delay(d),s/veh	58.6	5.2	7.9	6.4	13.9	10.6		
LnGrp LOS	E	A	A	A	B	B		
Approach Vol, veh/h		1032	806		178			
Approach Delay, s/veh		5.4	7.7		13.8			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				21.2		10.1	4.6	16.6
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				53.5		27.5	7.5	41.5
Max Q Clear Time (g_c+l1), s				8.5		5.1	2.1	7.2
Green Ext Time (p_c), s				7.7		0.5	0.0	4.9
Intersection Summary								
HCM 2010 Ctrl Delay			7.0					
HCM 2010 LOS			A					

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	21	0	217	0	0	0	119	772	0	0	565	36	
Future Volume (veh/h)	21	0	217	0	0	0	119	772	0	0	565	36	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
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		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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1800	1765	1800	1800	1765	1800	1667	1765	0	0	1765	1765	
Adj Flow Rate, veh/h	23	0	236	0	0	0	129	839	0	0	614	39	
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	0	1	1	
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, %	2	2	2	2	2	2	2	2	0	0	2	2	
Cap, veh/h	91	14	293	0	377	0	162	1078	0	0	743	632	
Arrive On Green	0.21	0.00	0.21	0.00	0.00	0.00	0.10	0.61	0.00	0.00	0.42	0.42	
Sat Flow, veh/h	70	64	1371	0	1765	0	1587	1765	0	0	1765	1500	
Grp Volume(v), veh/h	259	0	0	0	0	0	129	839	0	0	614	39	
Grp Sat Flow(s),veh/h/ln	1505	0	0	0	1765	0	1587	1765	0	0	1765	1500	
Q Serve(g_s), s	3.2	0.0	0.0	0.0	0.0	0.0	4.1	18.1	0.0	0.0	15.8	0.8	
Cycle Q Clear(g_c), s	8.4	0.0	0.0	0.0	0.0	0.0	4.1	18.1	0.0	0.0	15.8	0.8	
Prop In Lane	0.09		0.91	0.00		0.00	1.00		0.00	0.00		1.00	
Lane Grp Cap(c), veh/h	398	0	0	0	377	0	162	1078	0	0	743	632	
V/C Ratio(X)	0.65	0.00	0.00	0.00	0.00	0.00	0.80	0.78	0.00	0.00	0.83	0.06	
Avail Cap(c_a), veh/h	603	0	0	0	620	0	387	2168	0	0	1583	1346	
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	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	
Uniform Delay (d), s/veh	19.1	0.0	0.0	0.0	0.0	0.0	22.5	7.4	0.0	0.0	13.2	8.8	
Incr Delay (d2), s/veh	1.8	0.0	0.0	0.0	0.0	0.0	8.7	1.3	0.0	0.0	2.4	0.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	3.7	0.0	0.0	0.0	0.0	0.0	2.2	9.0	0.0	0.0	8.2	0.3	
LnGrp Delay(d),s/veh	20.9	0.0	0.0	0.0	0.0	0.0	31.2	8.7	0.0	0.0	15.6	8.9	
LnGrp LOS	C							C	A	B			A
Approach Vol, veh/h	259		0				968		653				
Approach Delay, s/veh	20.9		0.0				11.7		15.2				
Approach LOS	C						B		B				
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	2		4		5	6	8						
Phs Duration (G+Y+Rc), s	35.8		15.5		9.7	26.1	15.5						
Change Period (Y+Rc), s	4.5		4.5		4.5	4.5	4.5						
Max Green Setting (Gmax), s	63.0		18.0		12.5	46.0	18.0						
Max Q Clear Time (g_c+l1), s	20.1		10.4		6.1	17.8	0.0						
Green Ext Time (p_c), s	6.2		0.9		0.1	3.8	0.0						
Intersection Summary													
HCM 2010 Ctrl Delay			14.2										
HCM 2010 LOS			B										

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	554	428	140	334	91	319	706	178	124	471	45
Future Volume (veh/h)	109	554	428	140	334	91	319	706	178	124	471	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	120	609	470	154	367	100	351	776	196	136	518	49
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	764	742	207	477	214	424	1423	637	163	873	391
Arrive On Green	0.16	0.23	0.23	0.07	0.14	0.14	0.27	0.42	0.42	0.10	0.26	0.26
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	120	609	470	154	367	100	351	776	196	136	518	49
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	7.2	17.8	5.4	5.4	10.9	4.9	21.6	18.0	9.0	8.7	14.0	2.6
Cycle Q Clear(g_c), s	7.2	17.8	5.4	5.4	10.9	4.9	21.6	18.0	9.0	8.7	14.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	764	742	207	477	214	424	1423	637	163	873	391
V/C Ratio(X)	0.48	0.80	0.63	0.74	0.77	0.47	0.83	0.55	0.31	0.83	0.59	0.13
Avail Cap(c_a), veh/h	249	970	834	266	808	362	543	1423	637	283	873	391
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	39.9	37.8	8.0	47.2	42.8	24.8	35.8	22.4	19.8	45.6	33.5	29.3
Incr Delay (d2), s/veh	1.4	3.7	1.3	8.1	2.6	1.6	8.3	1.5	1.3	10.4	3.0	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	3.2	8.6	6.1	2.4	5.2	2.5	10.4	8.6	3.9	4.3	6.8	1.1
LnGrp Delay(d),s/veh	41.3	41.5	9.3	55.3	45.5	26.4	44.0	23.9	21.0	56.0	36.5	30.0
LnGrp LOS	D	D	A	E	D	C	D	C	C	E	D	C
Approach Vol, veh/h		1199			621			1323			703	
Approach Delay, s/veh		28.8			44.8			28.8			39.8	
Approach LOS		C			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.2	48.5	11.9	28.1	32.2	31.5	20.8	19.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	44.0	9.5	30.0	35.5	27.0	14.5	25.0				
Max Q Clear Time (g_c+I1), s	10.7	20.0	7.4	19.8	23.6	16.0	9.2	12.9				
Green Ext Time (p_c), s	0.2	5.5	0.1	3.8	0.8	2.3	0.1	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			33.4									
HCM 2010 LOS			C									



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↙	↕	↕	↘	↙	↘		
Traffic Volume (veh/h)	6	974	835	192	108	2		
Future Volume (veh/h)	6	974	835	192	108	2		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1667	1765		
Adj Flow Rate, veh/h	6	1004	861	198	111	2		
Adj No. of Lanes	1	2	2	1	1	1		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	13	1970	1498	670	234	221		
Arrive On Green	0.01	0.59	0.45	0.45	0.15	0.15		
Sat Flow, veh/h	1587	3441	3441	1500	1587	1500		
Grp Volume(v), veh/h	6	1004	861	198	111	2		
Grp Sat Flow(s),veh/h/ln	1587	1676	1676	1500	1587	1500		
Q Serve(g_s), s	0.1	6.0	6.5	2.9	2.2	0.0		
Cycle Q Clear(g_c), s	0.1	6.0	6.5	2.9	2.2	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	13	1970	1498	670	234	221		
V/C Ratio(X)	0.47	0.51	0.57	0.30	0.47	0.01		
Avail Cap(c_a), veh/h	351	5583	4397	1967	1146	1083		
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	16.8	4.1	7.0	6.0	13.3	12.4		
Incr Delay (d2), s/veh	24.0	0.2	0.4	0.2	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	0.1	2.7	2.9	1.2	1.1	0.0		
LnGrp Delay(d),s/veh	40.8	4.3	7.3	6.2	14.8	12.4		
LnGrp LOS	D	A	A	A	B	B		
Approach Vol, veh/h		1010	1059		113			
Approach Delay, s/veh		4.5	7.1		14.7			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				24.4		9.5	4.8	19.7
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				56.5		24.5	7.5	44.5
Max Q Clear Time (g_c+l1), s				8.0		4.2	2.1	8.5
Green Ext Time (p_c), s				7.4		0.3	0.0	6.7
Intersection Summary								
HCM 2010 Ctrl Delay			6.3					
HCM 2010 LOS			A					

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	245	0	0	0	309	707	0	0	761	16
Future Volume (veh/h)	5	0	245	0	0	0	309	707	0	0	761	16
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1800	1800	1765	1800	1667	1765	0	0	1765	1765
Adj Flow Rate, veh/h	5	0	253	0	0	0	319	729	0	0	785	16
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	43	4	282	0	338	0	313	1248	0	0	810	689
Arrive On Green	0.19	0.00	0.19	0.00	0.00	0.00	0.20	0.71	0.00	0.00	0.46	0.46
Sat Flow, veh/h	9	20	1473	0	1765	0	1587	1765	0	0	1765	1500
Grp Volume(v), veh/h	258	0	0	0	0	0	319	729	0	0	785	16
Grp Sat Flow(s),veh/h/ln	1502	0	0	0	1765	0	1587	1765	0	0	1765	1500
Q Serve(g_s), s	3.4	0.0	0.0	0.0	0.0	0.0	17.5	18.3	0.0	0.0	38.5	0.5
Cycle Q Clear(g_c), s	14.9	0.0	0.0	0.0	0.0	0.0	17.5	18.3	0.0	0.0	38.5	0.5
Prop In Lane	0.02		0.98	0.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	329	0	0	0	338	0	313	1248	0	0	810	689
V/C Ratio(X)	0.78	0.00	0.00	0.00	0.00	0.00	1.02	0.58	0.00	0.00	0.97	0.02
Avail Cap(c_a), veh/h	346	0	0	0	358	0	313	1253	0	0	815	693
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	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	0.0	0.0	0.0	0.0	35.6	6.5	0.0	0.0	23.4	13.1
Incr Delay (d2), s/veh	10.7	0.0	0.0	0.0	0.0	0.0	55.9	0.7	0.0	0.0	24.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	0.0	0.0	0.0	0.0	12.4	8.9	0.0	0.0	23.9	0.2
LnGrp Delay(d),s/veh	45.7	0.0	0.0	0.0	0.0	0.0	91.6	7.2	0.0	0.0	47.4	13.1
LnGrp LOS	D						F	A			D	B
Approach Vol, veh/h		258			0			1048			801	
Approach Delay, s/veh		45.7			0.0			32.9			46.7	
Approach LOS		D						C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		67.2		21.5	22.0	45.2		21.5				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		63.0		18.0	17.5	41.0		18.0				
Max Q Clear Time (g_c+l1), s		20.3		16.9	19.5	40.5		0.0				
Green Ext Time (p_c), s		4.9		0.2	0.0	0.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			39.7									
HCM 2010 LOS			D									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	531	325	298	577	140	285	688	136	140	623	56
Future Volume (veh/h)	107	531	325	298	577	140	285	688	136	140	623	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	110	547	335	307	595	144	294	709	140	144	642	58
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	659	563	372	739	331	284	1201	537	173	967	433
Arrive On Green	0.10	0.20	0.20	0.13	0.22	0.22	0.18	0.36	0.36	0.11	0.29	0.29
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	110	547	335	307	595	144	294	709	140	144	642	58
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	5.8	13.6	4.5	8.9	14.6	5.2	15.5	14.9	5.7	7.7	14.6	2.5
Cycle Q Clear(g_c), s	5.8	13.6	4.5	8.9	14.6	5.2	15.5	14.9	5.7	7.7	14.6	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	659	563	372	739	331	284	1201	537	173	967	433
V/C Ratio(X)	0.66	0.83	0.59	0.83	0.80	0.44	1.04	0.59	0.26	0.83	0.66	0.13
Avail Cap(c_a), veh/h	166	735	597	418	967	433	284	1201	537	211	967	433
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	37.3	33.4	8.3	36.8	32.0	15.4	35.6	22.6	19.7	37.8	27.1	22.8
Incr Delay (d2), s/veh	9.6	7.3	1.4	11.7	3.8	0.9	62.9	2.1	1.2	20.4	3.6	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	3.0	7.0	3.6	4.2	7.1	2.7	11.7	7.2	2.5	4.3	7.3	1.1
LnGrp Delay(d),s/veh	46.9	40.7	9.7	48.5	35.8	16.3	98.5	24.8	20.9	58.2	30.7	23.5
LnGrp LOS	D	D	A	D	D	B	F	C	C	E	C	C
Approach Vol, veh/h		992			1046			1143			844	
Approach Delay, s/veh		30.9			36.8			43.2			34.9	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	35.5	15.6	21.5	20.0	29.5	13.5	23.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	15.0	29.0	12.5	19.0	15.5	25.0	6.5	25.0				
Max Q Clear Time (g_c+I1), s	9.7	16.9	10.9	15.6	17.5	16.6	7.8	16.6				
Green Ext Time (p_c), s	0.1	3.7	0.2	1.5	0.0	2.5	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			36.8									
HCM 2010 LOS			D									

Project Opening Year Without Project Conditions

Intersection

Int Delay, s/veh 13.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘ ↗	↗ ↗	↗ ↗	↗ ↗	↘ ↗	↗ ↗
Traffic Vol, veh/h	3	953	657	81	154	5
Future Vol, veh/h	3	953	657	81	154	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	225	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	1071	738	91	173	6

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	738	0	369
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	864	-	628
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	864	-	628
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	155.3
HCM LOS			F



















Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	864	-	-	-	157	628
HCM Lane V/C Ratio	0.004	-	-	-	1.102	0.009
HCM Control Delay (s)	9.2	-	-	-	160	10.8
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	9.1	0

Notes

-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1046	0	0	635	7	0	0	0	49	0	98
Future Volume (veh/h)	57	1046	0	0	635	7	0	0	0	49	0	98
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1667	1765	0	0	1765	1765				1667	0	1765
Adj Flow Rate, veh/h	63	1162	0	0	706	8				54	0	109
Adj No. of Lanes	1	2	0	0	2	1				1	0	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	2	2	0	0	2	2				2	0	2
Cap, veh/h	97	2298	0	0	1746	781				172	0	162
Arrive On Green	0.06	0.69	0.00	0.00	0.52	0.52				0.11	0.00	0.11
Sat Flow, veh/h	1587	3441	0	0	3441	1500				1587	0	1500
Grp Volume(v), veh/h	63	1162	0	0	706	8				54	0	109
Grp Sat Flow(s),veh/h/ln	1587	1676	0	0	1676	1500				1587	0	1500
Q Serve(g_s), s	1.7	7.3	0.0	0.0	5.6	0.1				1.4	0.0	3.0
Cycle Q Clear(g_c), s	1.7	7.3	0.0	0.0	5.6	0.1				1.4	0.0	3.0
Prop In Lane	1.00		0.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	97	2298	0	0	1746	781				172	0	162
V/C Ratio(X)	0.65	0.51	0.00	0.00	0.40	0.01				0.31	0.00	0.67
Avail Cap(c_a), veh/h	492	4427	0	0	3041	1360				856	0	809
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	20.0	3.3	0.0	0.0	6.3	5.0				17.9	0.0	18.7
Incr Delay (d2), s/veh	7.1	0.2	0.0	0.0	0.2	0.0				1.0	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	3.3	0.0	0.0	2.6	0.1				0.6	0.0	2.7
LnGrp Delay(d),s/veh	27.0	3.5	0.0	0.0	6.5	5.0				19.0	0.0	23.4
LnGrp LOS	C	A			A	A				B		C
Approach Vol, veh/h		1225			714						163	
Approach Delay, s/veh		4.7			6.5						22.0	
Approach LOS		A			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				34.3		9.2	7.2	27.2				
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s				57.5		23.5	13.5	39.5				
Max Q Clear Time (g_c+I1), s				9.3		5.0	3.7	7.6				
Green Ext Time (p_c), s				17.6		0.4	0.1	15.1				
Intersection Summary												
HCM 2010 Ctrl Delay			6.6									
HCM 2010 LOS			A									

Intersection

Int Delay, s/veh 10.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑			↑	↕
Traffic Vol, veh/h	22	0	225	0	0	0	121	802	0	0	580	38
Future Vol, veh/h	22	0	225	0	0	0	121	802	0	0	580	38
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	-	-	-	-	-	-	300	-	-	-	-	250
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	0	245	0	0	0	132	872	0	0	630	41

























Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1765	1765	630	1888	1765	872	630	0	-	-	-	0
Stage 1	630	630	-	1135	1135	-	-	-	-	-	-	-
Stage 2	1135	1135	-	753	630	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	65	84	482	54	84	350	952	-	0	0	-	-
Stage 1	470	475	-	246	277	-	-	-	0	0	-	-
Stage 2	246	277	-	402	475	-	-	-	0	0	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	58	72	482	24	72	350	952	-	-	-	-	-
Mov Cap-2 Maneuver	58	72	-	24	72	-	-	-	-	-	-	-
Stage 1	405	475	-	212	239	-	-	-	-	-	-	-
Stage 2	212	239	-	198	475	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	72.9	0	1.2	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	952	-	292	-	-
HCM Lane V/C Ratio	0.138	-	0.919	-	-
HCM Control Delay (s)	9.4	-	72.9	0	-
HCM Lane LOS	A	-	F	A	-
HCM 95th %tile Q(veh)	0.5	-	8.7	-	-
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 4: US-395 & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	111	552	438	112	321	97	324	733	170	132	485	41
Future Volume (veh/h)	111	552	438	112	321	97	324	733	170	132	485	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	122	607	481	123	353	107	356	805	187	145	533	45
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	243	778	348	173	463	207	435	1428	639	173	873	391
Arrive On Green	0.15	0.23	0.23	0.06	0.14	0.14	0.27	0.43	0.43	0.11	0.26	0.26
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	122	607	481	123	353	107	356	805	187	145	533	45
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	7.3	17.6	12.7	4.3	10.5	5.3	21.7	18.8	8.5	9.3	14.5	2.4
Cycle Q Clear(g_c), s	7.3	17.6	12.7	4.3	10.5	5.3	21.7	18.8	8.5	9.3	14.5	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	778	348	173	463	207	435	1428	639	173	873	391
V/C Ratio(X)	0.50	0.78	1.38	0.71	0.76	0.52	0.82	0.56	0.29	0.84	0.61	0.12
Avail Cap(c_a), veh/h	243	1035	463	210	809	362	544	1428	639	283	873	391
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	40.2	37.3	11.2	47.9	43.0	24.8	35.2	22.5	19.5	45.3	33.7	29.2
Incr Delay (d2), s/veh	1.6	2.8	189.1	8.5	2.6	2.0	7.8	1.6	1.2	11.0	3.2	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	3.3	8.5	25.8	1.9	5.0	2.7	10.4	9.0	3.7	4.6	7.1	1.0
LnGrp Delay(d),s/veh	41.9	40.1	200.3	56.4	45.6	26.7	42.9	24.1	20.7	56.3	36.9	29.8
LnGrp LOS	D	D	F	E	D	C	D	C	C	E	D	C
Approach Vol, veh/h		1210			583			1348			723	
Approach Delay, s/veh		104.0			44.5			28.6			40.3	
Approach LOS		F			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.8	48.6	10.7	28.5	32.9	31.5	20.4	18.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	44.0	7.5	32.0	35.5	27.0	14.5	25.0				
Max Q Clear Time (g_c+I1), s	11.3	20.8	6.3	19.6	23.7	16.5	9.3	12.5				
Green Ext Time (p_c), s	0.2	6.9	0.0	4.4	4.7	2.3	2.6	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				56.8								
HCM 2010 LOS				E								
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 6: US-395 & Dos Palmas Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	178	41	56	37	30	224	18	838	22	135	877	91
Future Volume (veh/h)	178	41	56	37	30	224	18	838	22	135	877	91
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	185	43	58	39	31	233	19	873	23	141	914	95
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	703	597	332	37	279	119	1055	472	163	1048	109
Arrive On Green	0.13	0.40	0.40	0.21	0.21	0.21	0.08	0.31	0.31	0.10	0.34	0.34
Sat Flow, veh/h	1587	1765	1500	1217	179	1348	1587	3353	1500	1587	3066	319
Grp Volume(v), veh/h	185	43	58	39	0	264	19	873	23	141	500	509
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1217	0	1527	1587	1676	1500	1587	1676	1708
Q Serve(g_s), s	8.4	1.1	1.8	2.0	0.0	12.1	0.8	17.6	0.8	6.4	20.4	20.4
Cycle Q Clear(g_c), s	8.4	1.1	1.8	3.1	0.0	12.1	0.8	17.6	0.8	6.4	20.4	20.4
Prop In Lane	1.00		1.00	1.00		0.88	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	206	703	597	332	0	316	119	1055	472	163	573	584
V/C Ratio(X)	0.90	0.06	0.10	0.12	0.00	0.84	0.16	0.83	0.05	0.87	0.87	0.87
Avail Cap(c_a), veh/h	206	869	739	446	0	459	119	1055	472	163	573	584
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	13.6	13.8	24.7	0.0	27.8	31.6	23.2	17.4	32.3	22.6	22.6
Incr Delay (d2), s/veh	35.9	0.0	0.1	0.2	0.0	8.7	0.6	7.5	0.2	35.5	16.6	16.3
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	5.7	0.5	0.7	0.7	0.0	5.8	0.4	9.2	0.3	4.4	12.1	12.3
LnGrp Delay(d),s/veh	67.2	13.6	13.8	24.8	0.0	36.5	32.3	30.7	17.6	67.8	39.1	38.9
LnGrp LOS	E	B	B	C		D	C	C	B	E	D	D
Approach Vol, veh/h		286			303			915			1150	
Approach Delay, s/veh		48.3			35.0			30.4			42.5	
Approach LOS		D			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	27.5		33.6	10.0	29.5	14.0	19.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	23.0		36.0	5.5	25.0	9.5	22.0				
Max Q Clear Time (g_c+I1), s	8.4	19.6		3.8	2.8	22.4	10.4	14.1				
Green Ext Time (p_c), s	0.0	1.7		0.9	0.1	1.4	0.0	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			38.1									
HCM 2010 LOS			D									



















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 7: US-395 & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	108	91	90	90	286	54	525	36	240	635	87
Future Volume (veh/h)	70	108	91	90	90	286	54	525	36	240	635	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	74	114	96	95	95	301	57	553	38	253	668	92
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	642	546	464	136	431	79	988	442	209	1264	565
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.05	0.29	0.29	0.13	0.38	0.38
Sat Flow, veh/h	930	1765	1500	1102	373	1183	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	74	114	96	95	0	396	57	553	38	253	668	92
Grp Sat Flow(s),veh/h/ln	930	1765	1500	1102	0	1556	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	4.8	2.8	2.8	4.1	0.0	14.0	2.3	9.0	1.2	8.5	10.0	2.6
Cycle Q Clear(g_c), s	18.8	2.8	2.8	7.0	0.0	14.0	2.3	9.0	1.2	8.5	10.0	2.6
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	248	642	546	464	0	566	79	988	442	209	1264	565
V/C Ratio(X)	0.30	0.18	0.18	0.20	0.00	0.70	0.72	0.56	0.09	1.21	0.53	0.16
Avail Cap(c_a), veh/h	328	794	675	559	0	700	135	988	442	209	1264	565
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.5	13.9	13.9	16.3	0.0	17.5	30.2	19.2	16.5	28.0	15.6	13.3
Incr Delay (d2), s/veh	0.7	0.1	0.2	0.2	0.0	2.3	11.8	2.3	0.4	130.0	1.6	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	1.3	1.4	1.2	1.3	0.0	6.3	1.3	4.5	0.5	11.2	4.8	1.2
LnGrp Delay(d),s/veh	26.1	14.1	14.1	16.5	0.0	19.8	42.0	21.5	16.8	158.0	17.2	13.9
LnGrp LOS	C	B	B	B		B	D	C	B	F	B	B
Approach Vol, veh/h		284			491			648			1013	
Approach Delay, s/veh		17.2			19.2			23.0			52.1	
Approach LOS		B			B			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.0	23.5		28.0	7.7	28.8		28.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	8.5	19.0		29.0	5.5	22.0		29.0				
Max Q Clear Time (g_c+I1), s	10.5	11.0		20.8	4.3	12.0		16.0				
Green Ext Time (p_c), s	0.0	2.0		2.7	0.0	3.6		3.5				
Intersection Summary												
HCM 2010 Ctrl Delay			33.7									
HCM 2010 LOS			C									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 8: US-395 & La Mesa Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	667	0	0	836	0
Future Volume (veh/h)	0	0	0	0	0	0	0	667	0	0	836	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1800	1800	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	741	0	0	929	0
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	3	0	0	3	0	129	3084	0	129	3084	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.00	0.92	0.00
Sat Flow, veh/h	0	-79412	0	0	-79412	0	600	3441	0	715	3441	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	741	0	0	929	0
Grp Sat Flow(s),veh/h/ln	0	1765	0	0	1765	0	600	1676	0	715	1676	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.7	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.7	0.0
Prop In Lane	0.00		0.00	0.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	0	3	0	129	3084	0	129	3084	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.30	0.00
Avail Cap(c_a), veh/h	0	614	0	0	614	0	129	3084	0	129	3084	0
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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.8	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.5	0.0
LnGrp LOS								A			A	
Approach Vol, veh/h		0			0			741			929	
Approach Delay, s/veh		0.0			0.0			0.4			0.5	
Approach LOS								A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.0		0.0		56.0		0.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		51.5		19.5		51.5		19.5				
Max Q Clear Time (g_c+I1), s		3.3		0.0		3.7		0.0				
Green Ext Time (p_c), s		14.5		0.0		14.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			0.5									
HCM 2010 LOS			A									

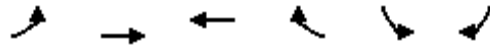
SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 9: US-395 & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	255	134	158	172	98	69	507	69	119	675	17
Future Volume (veh/h)	42	255	134	158	172	98	69	507	69	119	675	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	45	271	143	168	183	104	73	539	73	127	718	18
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	482	216	167	696	311	123	1412	632	123	1408	35
Arrive On Green	0.04	0.14	0.14	0.11	0.21	0.21	0.08	0.42	0.42	0.08	0.42	0.42
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3343	84
Grp Volume(v), veh/h	45	271	143	168	183	104	73	539	73	127	360	376
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1750
Q Serve(g_s), s	2.0	5.4	6.4	7.5	3.3	3.1	3.2	7.9	2.1	5.5	11.3	11.3
Cycle Q Clear(g_c), s	2.0	5.4	6.4	7.5	3.3	3.1	3.2	7.9	2.1	5.5	11.3	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	66	482	216	167	696	311	123	1412	632	123	706	737
V/C Ratio(X)	0.69	0.56	0.66	1.01	0.26	0.33	0.60	0.38	0.12	1.04	0.51	0.51
Avail Cap(c_a), veh/h	145	1365	611	167	1412	632	123	1412	632	123	706	737
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	33.7	28.4	28.9	31.9	23.7	13.3	31.8	14.2	12.5	32.9	15.2	15.2
Incr Delay (d2), s/veh	11.9	1.0	3.5	71.0	0.2	0.6	7.6	0.8	0.4	91.4	2.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	2.6	2.9	6.5	1.5	1.6	1.6	3.8	0.9	5.5	5.7	5.9
LnGrp Delay(d),s/veh	45.6	29.4	32.3	102.9	23.9	13.9	39.4	15.0	12.9	124.7	17.8	17.7
LnGrp LOS	D	C	C	F	C	B	D	B	B	F	B	B
Approach Vol, veh/h		459			455			685			863	
Approach Delay, s/veh		31.9			50.8			17.4			33.5	
Approach LOS		C			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	34.5	12.0	14.7	10.0	34.5	7.4	19.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	30.0	7.5	29.0	5.5	30.0	6.5	30.0				
Max Q Clear Time (g_c+I1), s	7.5	9.9	9.5	8.4	5.2	13.3	4.0	5.3				
Green Ext Time (p_c), s	0.0	3.2	0.0	1.8	0.0	3.5	0.0	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay				31.9								
HCM 2010 LOS				C								

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 10: Palmdale Road (SR-18) & Cantina Street



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	2	815	556	65	73	3		
Future Volume (veh/h)	2	815	556	65	73	3		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1569	1765		
Adj Flow Rate, veh/h	2	896	611	71	80	3		
Adj No. of Lanes	1	2	2	1	2	1		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	28	1265	888	397	1254	649		
Arrive On Green	0.02	0.38	0.26	0.26	0.43	0.43		
Sat Flow, veh/h	1587	3441	3441	1500	2898	1500		
Grp Volume(v), veh/h	2	896	611	71	80	3		
Grp Sat Flow(s),veh/h/ln	1587	1676	1676	1500	1449	1500		
Q Serve(g_s), s	0.1	10.8	7.8	1.7	0.8	0.1		
Cycle Q Clear(g_c), s	0.1	10.8	7.8	1.7	0.8	0.1		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	28	1265	888	397	1254	649		
V/C Ratio(X)	0.07	0.71	0.69	0.18	0.06	0.00		
Avail Cap(c_a), veh/h	184	2158	1451	649	1254	649		
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	22.9	12.5	15.7	13.4	7.8	7.6		
Incr Delay (d2), s/veh	1.1	0.7	1.0	0.2	0.1	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	0.0	5.0	3.7	0.7	0.3	0.1		
LnGrp Delay(d),s/veh	24.0	13.3	16.6	13.6	7.9	7.7		
LnGrp LOS	C	B	B	B	A	A		
Approach Vol, veh/h		898	682		83			
Approach Delay, s/veh		13.3	16.3		7.9			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				22.4		25.0	5.3	17.1
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				30.5		20.5	5.5	20.5
Max Q Clear Time (g_c+I1), s				12.8		2.8	2.1	9.8
Green Ext Time (p_c), s				5.1		0.2	1.7	2.8
Intersection Summary								
HCM 2010 Ctrl Delay			14.3					
HCM 2010 LOS			B					

Intersection

Int Delay, s/veh 11.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	152	36	98	176	7	103	14	144	18	21	12
Future Vol, veh/h	7	152	36	98	176	7	103	14	144	18	21	12
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	185	44	120	215	9	126	17	176	22	26	15

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	223	0	0	229	0	0	702	686	207	779	704	219
Stage 1	-	-	-	-	-	-	224	224	-	458	458	-
Stage 2	-	-	-	-	-	-	478	462	-	321	246	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1346	-	-	1339	-	-	353	370	833	313	361	821
Stage 1	-	-	-	-	-	-	779	718	-	583	567	-
Stage 2	-	-	-	-	-	-	568	565	-	691	703	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1346	-	-	1339	-	-	299	330	833	218	322	821
Mov Cap-2 Maneuver	-	-	-	-	-	-	299	330	-	218	322	-
Stage 1	-	-	-	-	-	-	773	712	-	578	509	-
Stage 2	-	-	-	-	-	-	476	507	-	528	697	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	2.8	27.8	19.3
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	466	1346	-	-	1339	-	-	314
HCM Lane V/C Ratio	0.683	0.006	-	-	0.089	-	-	0.198
HCM Control Delay (s)	27.8	7.7	0	-	8	0	-	19.3
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	5.1	0	-	-	0.3	-	-	0.7

Intersection	
Intersection Delay, s/veh	17.2
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	30	117	68	0	85	93	14	0	91	139	192
Future Vol, veh/h	0	30	117	68	0	85	93	14	0	91	139	192
Peak Hour Factor	0.92	0.77	0.77	0.77	0.92	0.77	0.77	0.77	0.92	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	39	152	88	0	110	121	18	0	118	181	249
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	20.1	15.7	16.4
HCM LOS	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	63%	0%	87%	0%	79%
Vol Right, %	0%	0%	100%	0%	37%	0%	13%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	91	139	192	30	185	85	107	97	154
LT Vol	91	0	0	30	0	85	0	97	0
Through Vol	0	139	0	0	117	0	93	0	121
RT Vol	0	0	192	0	68	0	14	0	33
Lane Flow Rate	118	181	249	39	240	110	139	126	200
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.282	0.405	0.51	0.099	0.559	0.284	0.334	0.315	0.464
Departure Headway (Hd)	8.592	8.078	7.359	9.148	8.372	9.261	8.653	9.015	8.344
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	421	448	494	392	430	387	415	399	432
Service Time	6.292	5.778	5.059	6.902	6.125	7.02	6.412	6.77	6.098
HCM Lane V/C Ratio	0.28	0.404	0.504	0.099	0.558	0.284	0.335	0.316	0.463
HCM Control Delay	14.6	16.2	17.5	12.9	21.3	15.7	15.7	15.9	18.2
HCM Lane LOS	B	C	C	B	C	C	C	C	C
HCM 95th-tile Q	1.1	1.9	2.9	0.3	3.3	1.2	1.4	1.3	2.4

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↶	↷	
Traffic Vol, veh/h	0	97	121	33
Future Vol, veh/h	0	97	121	33
Peak Hour Factor	0.92	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	126	157	43
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	17.3
HCM LOS	C

Intersection	
Intersection Delay, s/veh	14.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	43	138	14	0	21	107	147	0	8	106	71
Future Vol, veh/h	0	43	138	14	0	21	107	147	0	8	106	71
Peak Hour Factor	0.92	0.75	0.75	0.75	0.92	0.75	0.75	0.75	0.92	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	57	184	19	0	28	143	196	0	11	141	95
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	12.7	14.7	12.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	33%	0%	100%	77%	0%	100%	20%	0%	100%
Vol Right, %	0%	0%	67%	0%	0%	23%	0%	0%	80%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	8	71	106	43	92	60	21	71	183	196	59
LT Vol	8	0	0	43	0	0	21	0	0	196	0
Through Vol	0	71	35	0	92	46	0	71	36	0	59
RT Vol	0	0	71	0	0	14	0	0	147	0	0
Lane Flow Rate	11	94	142	57	123	80	28	95	244	261	78
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.025	0.205	0.29	0.132	0.266	0.17	0.063	0.2	0.475	0.57	0.16
Departure Headway (Hd)	8.33	7.83	7.363	8.301	7.801	7.638	8.08	7.58	7.017	7.846	7.346
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	429	458	488	432	460	469	443	474	514	460	488
Service Time	6.086	5.586	5.118	6.056	5.556	5.393	5.831	5.331	4.768	5.595	5.095
HCM Lane V/C Ratio	0.026	0.205	0.291	0.132	0.267	0.171	0.063	0.2	0.475	0.567	0.16
HCM Control Delay	11.3	12.6	13.1	12.3	13.4	12	11.4	12.2	16	20.5	11.5
HCM Lane LOS	B	B	B	B	B	B	B	B	C	C	B
HCM 95th-tile Q	0.1	0.8	1.2	0.5	1.1	0.6	0.2	0.7	2.5	3.5	0.6

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↘	↕	
Traffic Vol, veh/h	0	196	88	46
Future Vol, veh/h	0	196	88	46
Peak Hour Factor	0.92	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	261	117	61
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	16.8
HCM LOS	C

Intersection	
Intersection Delay, s/veh	28
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵	
Traffic Vol, veh/h	0	70	258	37	0	107	193	79	0	13	231	91
Future Vol, veh/h	0	70	258	37	0	107	193	79	0	13	231	91
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	80	293	42	0	122	219	90	0	15	263	103
Number of Lanes	0	1	1	0	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	39.2	30.4	19.8
HCM LOS	E	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	49%	0%
Vol Thru, %	0%	100%	46%	0%	87%	0%	71%	51%	70%
Vol Right, %	0%	0%	54%	0%	13%	0%	29%	0%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	154	168	70	295	107	272	154	112
LT Vol	13	0	0	70	0	107	0	75	0
Through Vol	0	154	77	0	258	0	193	79	79
RT Vol	0	0	91	0	37	0	79	0	33
Lane Flow Rate	15	175	191	80	335	122	309	174	127
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.041	0.459	0.48	0.213	0.842	0.326	0.766	0.481	0.333
Departure Headway (Hd)	9.969	9.449	9.055	9.645	9.038	9.65	8.924	9.932	9.459
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	358	380	397	371	399	372	405	361	379
Service Time	7.759	7.238	6.844	7.428	6.822	7.437	6.71	7.726	7.253
HCM Lane V/C Ratio	0.042	0.461	0.481	0.216	0.84	0.328	0.763	0.482	0.335
HCM Control Delay	13.2	20.1	20	15	45	17.1	35.7	21.7	16.9
HCM Lane LOS	B	C	C	B	E	C	E	C	C
HCM 95th-tile Q	0.1	2.3	2.5	0.8	7.9	1.4	6.4	2.5	1.4

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			←T	
Traffic Vol, veh/h	0	75	157	33
Future Vol, veh/h	0	75	157	33
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	85	178	38
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	19.7
HCM LOS	C

Intersection	
Intersection Delay, s/veh	24.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕↔			↵	↕↔			↵	↕↔	
Traffic Vol, veh/h	0	74	351	85	0	88	243	104	0	79	156	108
Future Vol, veh/h	0	74	351	85	0	88	243	104	0	79	156	108
Peak Hour Factor	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	91	433	105	0	109	300	128	0	98	193	133
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	31.6	24	21
HCM LOS	D	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	32%	0%	100%	58%	0%	100%	44%	0%	100%
Vol Right, %	0%	0%	68%	0%	0%	42%	0%	0%	56%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	79	104	160	74	234	202	88	162	185	107	89
LT Vol	79	0	0	74	0	0	88	0	0	107	0
Through Vol	0	104	52	0	234	117	0	162	81	0	89
RT Vol	0	0	108	0	0	85	0	0	104	0	0
Lane Flow Rate	98	128	198	91	289	249	109	200	228	132	109
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.294	0.369	0.542	0.258	0.776	0.65	0.317	0.556	0.61	0.4	0.316
Departure Headway (Hd)	10.847	10.347	9.875	10.307	9.807	9.512	10.511	10.011	9.617	10.902	10.402
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	333	349	367	351	373	382	343	362	377	332	347
Service Time	8.563	8.063	7.591	8.007	7.507	7.212	8.227	7.727	7.333	8.632	8.132
HCM Lane V/C Ratio	0.294	0.367	0.54	0.259	0.775	0.652	0.318	0.552	0.605	0.398	0.314
HCM Control Delay	18	19	23.7	16.6	39.3	28.2	18	24.6	26.3	20.7	17.9
HCM Lane LOS	C	C	C	C	E	D	C	C	D	C	C
HCM 95th-tile Q	1.2	1.7	3.1	1	6.4	4.4	1.3	3.2	3.9	1.9	1.3

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕	
Traffic Vol, veh/h	0	107	133	84
Future Vol, veh/h	0	107	133	84
Peak Hour Factor	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	132	164	104
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	19.7
HCM LOS	C





















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 16: Topaz Road & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	486	7	52	299	72	7	54	118	155	43	56
Future Volume (veh/h)	33	486	7	52	299	72	7	54	118	155	43	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	36	534	8	57	329	79	8	59	130	170	47	62
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	766	343	82	651	154	526	567	482	607	716	608
Arrive On Green	0.04	0.23	0.23	0.05	0.24	0.24	0.01	0.32	0.32	0.09	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	2691	638	1587	1765	1500	1587	1765	1500
Grp Volume(v), veh/h	36	534	8	57	203	205	8	59	130	170	47	62
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1652	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.3	8.6	0.2	2.1	6.2	6.3	0.2	1.4	2.7	3.9	1.0	1.5
Cycle Q Clear(g_c), s	1.3	8.6	0.2	2.1	6.2	6.3	0.2	1.4	2.7	3.9	1.0	1.5
Prop In Lane	1.00		1.00	1.00		0.39	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	60	766	343	82	406	400	526	567	482	607	716	608
V/C Ratio(X)	0.60	0.70	0.02	0.70	0.50	0.51	0.02	0.10	0.27	0.28	0.07	0.10
Avail Cap(c_a), veh/h	148	1644	735	174	850	838	657	567	482	657	716	608
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	28.0	20.9	11.0	27.6	19.3	19.4	13.3	14.1	7.3	10.1	10.7	10.9
Incr Delay (d2), s/veh	9.3	1.2	0.0	10.3	1.0	1.0	0.0	0.4	1.4	0.2	0.2	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	0.7	4.1	0.1	1.2	2.9	3.0	0.1	0.7	1.6	1.7	0.5	0.7
LnGrp Delay(d),s/veh	37.3	22.1	11.1	37.9	20.3	20.4	13.3	14.5	8.7	10.4	10.9	11.2
LnGrp LOS	D	C	B	D	C	C	B	B	A	B	B	B
Approach Vol, veh/h		578			465			197			279	
Approach Delay, s/veh		22.9			22.5			10.6			10.7	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	23.5	7.5	18.0	5.1	28.5	6.7	18.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	19.0	6.5	29.0	5.5	21.0	5.5	30.0				
Max Q Clear Time (g_c+I1), s	5.9	4.7	4.1	10.6	2.2	3.5	3.3	8.3				
Green Ext Time (p_c), s	0.1	0.9	0.5	2.9	0.0	1.0	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			18.9									
HCM 2010 LOS			B									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 17: Cobalt Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	634	210	193	373	4	133	197	252	14	265	7
Future Volume (veh/h)	22	634	210	193	373	4	133	197	252	14	265	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	26	755	250	230	444	5	158	235	300	17	315	8
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	368	887	397	236	616	7	259	265	338	64	475	12
Arrive On Green	0.23	0.26	0.26	0.15	0.18	0.18	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1587	3353	1500	1587	3396	38	994	705	900	14	1264	31
Grp Volume(v), veh/h	26	755	250	230	219	230	158	0	535	340	0	0
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1758	994	0	1606	1309	0	0
Q Serve(g_s), s	0.8	13.7	9.4	9.2	7.9	7.9	2.6	0.0	19.9	1.5	0.0	0.0
Cycle Q Clear(g_c), s	0.8	13.7	9.4	9.2	7.9	7.9	24.0	0.0	19.9	21.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.56	0.05		0.02
Lane Grp Cap(c), veh/h	368	887	397	236	304	319	259	0	603	551	0	0
V/C Ratio(X)	0.07	0.85	0.63	0.97	0.72	0.72	0.61	0.00	0.89	0.62	0.00	0.00
Avail Cap(c_a), veh/h	368	944	423	236	577	605	259	0	603	551	0	0
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	0.00
Uniform Delay (d), s/veh	19.2	22.3	20.7	27.1	24.6	24.6	22.7	0.0	18.7	15.8	0.0	0.0
Incr Delay (d2), s/veh	0.1	7.2	2.7	51.3	3.2	3.1	10.3	0.0	17.4	5.1	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	0.4	7.2	4.2	7.4	3.9	4.1	3.5	0.0	11.7	5.4	0.0	0.0
LnGrp Delay(d),s/veh	19.3	29.5	23.5	78.3	27.8	27.7	33.0	0.0	36.1	20.9	0.0	0.0
LnGrp LOS	B	C	C	E	C	C	C		D	C		
Approach Vol, veh/h		1031			679			693			340	
Approach Delay, s/veh		27.8			44.9			35.4			20.9	
Approach LOS		C			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.5	14.0	21.4		28.5	19.3	16.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		24.0	9.5	18.0		24.0	5.5	22.0				
Max Q Clear Time (g_c+I1), s		26.0	11.2	15.7		23.4	2.8	9.9				
Green Ext Time (p_c), s		0.0	0.0	1.2		0.3	0.2	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			33.1									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	23.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	124	293	3	0	14	175	102	0	3	34	18
Future Vol, veh/h	0	124	293	3	0	14	175	102	0	3	34	18
Peak Hour Factor	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	141	333	3	0	16	199	116	0	3	39	20
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	30.8	17.1	11.4
HCM LOS	D	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	5%	30%	5%	58%
Vol Thru, %	62%	70%	60%	9%
Vol Right, %	33%	1%	35%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	420	291	327
LT Vol	3	124	14	191
Through Vol	34	293	175	28
RT Vol	18	3	102	108
Lane Flow Rate	62	477	331	372
Geometry Grp	1	1	1	1
Degree of Util (X)	0.127	0.814	0.568	0.663
Departure Headway (Hd)	7.29	6.143	6.184	6.425
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	489	587	582	561
Service Time	5.379	4.196	4.244	4.48
HCM Lane V/C Ratio	0.127	0.813	0.569	0.663
HCM Control Delay	11.4	30.8	17.1	21.3
HCM Lane LOS	B	D	C	C
HCM 95th-tile Q	0.4	8.2	3.5	4.9

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	191	28	108
Future Vol, veh/h	0	191	28	108
Peak Hour Factor	0.92	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	217	32	123
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	21.3
HCM LOS	C
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 19: Amethyst Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	819	65	93	441	16	79	229	173	62	250	80
Future Volume (veh/h)	73	819	65	93	441	16	79	229	173	62	250	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	80	900	71	102	485	18	87	252	190	68	275	88
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	907	406	126	949	35	107	595	506	84	414	132
Arrive On Green	0.06	0.27	0.27	0.08	0.29	0.29	0.07	0.34	0.34	0.05	0.32	0.32
Sat Flow, veh/h	1587	3353	1500	1587	3297	122	1587	1765	1500	1587	1282	410
Grp Volume(v), veh/h	80	900	71	102	246	257	87	252	190	68	0	363
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1743	1587	1765	1500	1587	0	1692
Q Serve(g_s), s	3.4	18.5	2.5	4.4	8.5	8.5	3.7	7.6	4.5	2.9	0.0	12.8
Cycle Q Clear(g_c), s	3.4	18.5	2.5	4.4	8.5	8.5	3.7	7.6	4.5	2.9	0.0	12.8
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	98	907	406	126	483	502	107	595	506	84	0	546
V/C Ratio(X)	0.82	0.99	0.17	0.81	0.51	0.51	0.81	0.42	0.38	0.81	0.00	0.66
Avail Cap(c_a), veh/h	126	907	406	126	483	502	126	595	506	172	0	546
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	0.00	1.00
Uniform Delay (d), s/veh	32.0	25.1	19.3	31.3	20.5	20.6	31.8	17.7	8.1	32.4	0.0	20.2
Incr Delay (d2), s/veh	26.2	27.9	0.2	31.5	0.9	0.9	28.1	2.2	2.1	16.8	0.0	6.3
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	2.2	12.0	1.1	3.0	4.0	4.2	2.5	4.1	2.6	1.7	0.0	6.9
LnGrp Delay(d),s/veh	58.3	53.1	19.5	62.8	21.4	21.4	59.9	19.9	10.3	49.2	0.0	26.5
LnGrp LOS	E	D	B	E	C	C	E	B	B	D		C
Approach Vol, veh/h		1051			605			529			431	
Approach Delay, s/veh		51.2			28.4			23.0			30.1	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.1	27.8	10.0	23.2	9.2	26.8	8.8	24.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	20.3	5.5	18.7	5.5	22.3	5.5	18.7				
Max Q Clear Time (g_c+I1), s	4.9	9.6	6.4	20.5	5.7	14.8	5.4	10.5				
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	1.1	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			36.7									
HCM 2010 LOS			D									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 20: Amethyst Road & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	231	166	53	89	53	122	430	84	168	388	63
Future Volume (veh/h)	110	231	166	53	89	53	122	430	84	168	388	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	112	236	169	54	91	54	124	439	86	171	396	64
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	319	271	79	130	77	181	1127	504	207	1184	530
Arrive On Green	0.11	0.18	0.18	0.05	0.13	0.13	0.11	0.34	0.34	0.13	0.35	0.35
Sat Flow, veh/h	1587	1765	1500	1587	1039	617	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	112	236	169	54	0	145	124	439	86	171	396	64
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1587	0	1656	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	4.0	7.5	4.2	2.0	0.0	5.0	4.5	5.9	2.4	6.2	5.2	1.7
Cycle Q Clear(g_c), s	4.0	7.5	4.2	2.0	0.0	5.0	4.5	5.9	2.4	6.2	5.2	1.7
Prop In Lane	1.00		1.00	1.00		0.37	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	319	271	79	0	208	181	1127	504	207	1184	530
V/C Ratio(X)	0.67	0.74	0.62	0.69	0.00	0.70	0.69	0.39	0.17	0.83	0.33	0.12
Avail Cap(c_a), veh/h	167	534	454	147	0	501	200	1127	504	227	1184	530
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	23.0	10.3	27.8	0.0	24.9	25.3	15.1	13.9	25.2	14.1	13.0
Incr Delay (d2), s/veh	10.0	3.4	2.3	10.1	0.0	4.2	8.3	1.0	0.7	20.1	0.8	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	2.2	4.0	2.4	1.1	0.0	2.5	2.4	2.9	1.1	3.9	2.5	0.8
LnGrp Delay(d),s/veh	35.6	26.4	12.6	37.9	0.0	29.1	33.7	16.1	14.6	45.3	14.9	13.5
LnGrp LOS	D	C	B	D		C	C	B	B	D	B	B
Approach Vol, veh/h		517			199			649			631	
Approach Delay, s/veh		23.9			31.5			19.3			23.0	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	24.5	7.5	15.3	11.3	25.5	10.8	12.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	20.0	5.5	18.0	7.5	21.0	5.5	18.0				
Max Q Clear Time (g_c+I1), s	8.2	7.9	4.0	9.5	6.5	7.2	6.0	7.0				
Green Ext Time (p_c), s	0.0	2.5	0.0	1.2	0.4	2.0	0.0	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			22.8									
HCM 2010 LOS			C									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 21: El Evado Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	796	59	51	400	83	75	240	127	210	299	101
Future Volume (veh/h)	128	796	59	51	400	83	75	240	127	210	299	101
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	141	875	65	56	440	91	82	264	140	231	329	111
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	889	398	71	816	365	101	768	343	388	1374	714
Arrive On Green	0.07	0.27	0.27	0.04	0.24	0.24	0.06	0.23	0.23	0.24	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	141	875	65	56	440	91	82	264	140	231	329	111
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	5.5	21.5	2.1	2.9	9.5	2.2	4.2	5.5	6.6	10.7	5.3	3.5
Cycle Q Clear(g_c), s	5.5	21.5	2.1	2.9	9.5	2.2	4.2	5.5	6.6	10.7	5.3	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	105	889	398	71	816	365	101	768	343	388	1374	714
V/C Ratio(X)	1.34	0.98	0.16	0.79	0.54	0.25	0.81	0.34	0.41	0.60	0.24	0.16
Avail Cap(c_a), veh/h	105	889	398	105	889	398	105	768	343	392	1374	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	38.7	30.3	13.7	39.3	27.3	7.2	38.4	26.8	27.2	27.7	16.0	12.3
Incr Delay (d2), s/veh	203.8	26.3	0.2	21.1	0.6	0.4	35.2	1.2	3.6	2.4	0.4	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	8.4	13.2	0.9	1.7	4.5	0.9	2.8	2.7	3.1	4.9	2.5	1.5
LnGrp Delay(d),s/veh	242.6	56.6	13.9	60.3	27.9	7.6	73.5	28.0	30.8	30.1	16.4	12.8
LnGrp LOS	F	E	B	E	C	A	E	C	C	C	B	B
Approach Vol, veh/h		1081			587			486			671	
Approach Delay, s/veh		78.3			27.8			36.5			20.5	
Approach LOS		E			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.8	23.5	8.2	26.5	9.8	38.5	10.0	24.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5	19.0	5.5	22.0	5.5	34.0	5.5	22.0				
Max Q Clear Time (g_c+I1), s	12.7	8.6	4.9	23.5	6.2	7.3	7.5	11.5				
Green Ext Time (p_c), s	1.9	1.4	0.2	0.0	0.0	3.0	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			46.9									
HCM 2010 LOS			D									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 22: Amargosa Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	171	900	105	60	561	91	103	244	58	159	241	80
Future Volume (veh/h)	171	900	105	60	561	91	103	244	58	159	241	80
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	194	1023	119	68	638	103	117	277	66	181	274	91
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	1044	467	85	775	347	171	771	181	192	743	242
Arrive On Green	0.13	0.31	0.31	0.05	0.23	0.23	0.11	0.29	0.29	0.12	0.30	0.30
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	2697	632	1587	2489	809
Grp Volume(v), veh/h	194	1023	119	68	638	103	117	170	173	181	183	182
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1653	1587	1676	1622
Q Serve(g_s), s	9.5	23.8	4.7	3.3	14.2	4.5	5.6	6.4	6.6	8.9	6.7	7.0
Cycle Q Clear(g_c), s	9.5	23.8	4.7	3.3	14.2	4.5	5.6	6.4	6.6	8.9	6.7	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.50
Lane Grp Cap(c), veh/h	212	1044	467	85	775	347	171	479	473	192	501	484
V/C Ratio(X)	0.92	0.98	0.25	0.80	0.82	0.30	0.68	0.36	0.37	0.94	0.36	0.38
Avail Cap(c_a), veh/h	212	1044	467	111	831	372	171	479	473	192	501	484
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	33.7	26.9	20.3	36.8	28.7	25.0	33.8	22.3	22.4	34.3	21.7	21.8
Incr Delay (d2), s/veh	39.4	23.0	0.3	26.4	6.4	0.5	10.5	2.1	2.2	49.2	2.0	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	6.5	14.3	2.0	2.1	7.2	1.9	2.9	3.2	3.3	6.5	3.4	3.4
LnGrp Delay(d),s/veh	73.1	49.9	20.6	63.2	35.1	25.4	44.3	24.4	24.6	83.5	23.8	24.0
LnGrp LOS	E	D	C	E	D	C	D	C	C	F	C	C
Approach Vol, veh/h		1336			809			460			546	
Approach Delay, s/veh		50.6			36.2			29.5			43.7	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	27.0	8.7	29.0	13.0	28.0	15.0	22.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	22.5	5.5	24.5	8.5	23.5	10.5	19.5				
Max Q Clear Time (g_c+I1), s	10.9	8.6	5.3	25.8	7.6	9.0	11.5	16.2				
Green Ext Time (p_c), s	0.0	1.8	0.1	0.0	0.2	1.6	0.0	1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			42.6									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project AM Peak Hour
 26: US-395 & Crossroads

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	34	56	23	30	54	60	643	54	87	510	84
Future Volume (veh/h)	74	34	56	23	30	54	60	643	54	87	510	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	80	37	61	25	33	59	65	699	59	95	554	91
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	94	154	99	64	115	108	1381	430	136	1018	456
Arrive On Green	0.07	0.16	0.16	0.03	0.11	0.11	0.06	0.29	0.29	0.08	0.30	0.30
Sat Flow, veh/h	1681	600	990	3261	569	1017	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	80	0	98	25	0	92	65	699	59	95	554	91
Grp Sat Flow(s),veh/h/ln	1681	0	1590	1630	0	1585	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	1.9	0.0	2.2	0.3	0.0	2.2	1.5	4.9	1.2	2.2	5.6	1.8
Cycle Q Clear(g_c), s	1.9	0.0	2.2	0.3	0.0	2.2	1.5	4.9	1.2	2.2	5.6	1.8
Prop In Lane	1.00		0.62	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	0	248	99	0	179	108	1381	430	136	1018	456
V/C Ratio(X)	0.65	0.00	0.40	0.25	0.00	0.51	0.60	0.51	0.14	0.70	0.54	0.20
Avail Cap(c_a), veh/h	770	0	1359	606	0	923	646	4716	1468	854	3697	1654
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	18.2	0.0	15.3	19.1	0.0	16.9	18.4	12.0	10.7	18.1	11.7	10.4
Incr Delay (d2), s/veh	5.6	0.0	1.0	1.3	0.0	2.3	5.3	0.3	0.1	6.2	0.5	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	1.1	0.0	1.1	0.2	0.0	1.1	0.9	2.2	0.5	1.3	2.6	0.8
LnGrp Delay(d),s/veh	23.8	0.0	16.3	20.5	0.0	19.1	23.7	12.3	10.8	24.3	12.2	10.6
LnGrp LOS	C		B	C		B	C	B	B	C	B	B
Approach Vol, veh/h		178			117			823			740	
Approach Delay, s/veh		19.7			19.4			13.1			13.5	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	16.1	5.7	10.8	7.1	16.8	7.5	9.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5	39.5	7.5	34.5	15.5	44.5	18.5	23.5				
Max Q Clear Time (g_c+I1), s	4.2	6.9	2.3	4.2	3.5	7.6	3.9	4.2				
Green Ext Time (p_c), s	0.2	4.7	0.0	0.5	0.1	3.7	0.1	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			14.3									
HCM 2010 LOS			B									

Intersection

Int Delay, s/veh 5.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Vol, veh/h	6	1009	861	193	104	2
Future Vol, veh/h	6	1009	861	193	104	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	200	-	-	225	150	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	1040	888	199	107	2



















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	888	0	444
Stage 1	-	-	888
Stage 2	-	-	532
Critical Hdwy	4.14	-	6.94
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	2.22	-	3.32
Pot Cap-1 Maneuver	758	-	561
Stage 1	-	-	362
Stage 2	-	-	553
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	758	-	561
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	362
Stage 2	-	-	549

Approach	EB	WB	SB
HCM Control Delay, s	0.1	0	108
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	758	-	-	-	126	561
HCM Lane V/C Ratio	0.008	-	-	-	0.851	0.004
HCM Control Delay (s)	9.8	-	-	-	109.9	11.4
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	5.3	0

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

























Project Opening Year Without Project PM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	975	0	0	821	13	0	0	0	110	0	241
Future Volume (veh/h)	126	975	0	0	821	13	0	0	0	110	0	241
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1667	1765	0	0	1765	1765				1667	0	1765
Adj Flow Rate, veh/h	129	995	0	0	838	13				112	0	246
Adj No. of Lanes	1	2	0	0	2	1				1	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	2	2	0	0	2	2				2	0	2
Cap, veh/h	163	2117	0	0	1502	672				330	0	312
Arrive On Green	0.10	0.63	0.00	0.00	0.45	0.45				0.21	0.00	0.21
Sat Flow, veh/h	1587	3441	0	0	3441	1500				1587	0	1500
Grp Volume(v), veh/h	129	995	0	0	838	13				112	0	246
Grp Sat Flow(s),veh/h/ln	1587	1676	0	0	1676	1500				1587	0	1500
Q Serve(g_s), s	4.4	8.7	0.0	0.0	10.3	0.3				3.4	0.0	8.7
Cycle Q Clear(g_c), s	4.4	8.7	0.0	0.0	10.3	0.3				3.4	0.0	8.7
Prop In Lane	1.00		0.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	163	2117	0	0	1502	672				330	0	312
V/C Ratio(X)	0.79	0.47	0.00	0.00	0.56	0.02				0.34	0.00	0.79
Avail Cap(c_a), veh/h	469	3450	0	0	2190	980				668	0	631
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	24.5	5.4	0.0	0.0	11.3	8.6				18.9	0.0	21.0
Incr Delay (d2), s/veh	8.4	0.2	0.0	0.0	0.3	0.0				0.6	0.0	4.5
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	2.3	4.1	0.0	0.0	4.7	0.3				1.5	0.0	7.2
LnGrp Delay(d),s/veh	32.8	5.6	0.0	0.0	11.7	8.6				19.5	0.0	25.5
LnGrp LOS	C	A			B	A				B		C
Approach Vol, veh/h		1124			851						358	
Approach Delay, s/veh		8.7			11.6						23.6	
Approach LOS		A			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				39.8		16.1	10.2	29.5				
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s				57.5		23.5	16.5	36.5				
Max Q Clear Time (g_c+I1), s				10.7		10.7	6.4	12.3				
Green Ext Time (p_c), s				16.8		1.0	0.2	12.8				
Intersection Summary												
HCM 2010 Ctrl Delay				12.0								
HCM 2010 LOS				B								

Intersection												
Int Delay, s/veh	11.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	5	0	252	0	0	0	321	726	0	0	783	17
Future Vol, veh/h	5	0	252	0	0	0	321	726	0	0	783	17
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	-	-	-	-	-	-	300	-	-	-	-	250
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	260	0	0	0	331	748	0	0	807	18
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2217	2217	807	2347	2217	748	807	0	-	-	-	0
Stage 1	807	807	-	1410	1410	-	-	-	-	-	-	-
Stage 2	1410	1410	-	937	807	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	-	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	-	-	-
Pot Cap-1 Maneuver	31	44	381	25	44	412	818	-	0	0	-	-
Stage 1	375	394	-	172	205	-	-	-	0	0	-	-
Stage 2	172	205	-	318	394	-	-	-	0	0	-	-
Platoon blocked, %								-				
Mov Cap-1 Maneuver	21	26	381	5	26	412	818	-	-	-	-	-
Mov Cap-2 Maneuver	21	26	-	5	26	-	-	-	-	-	-	-
Stage 1	223	394	-	102	122	-	-	-	-	-	-	-
Stage 2	102	122	-	101	394	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	75.3			0			3.8			0		
HCM LOS	F			A								
Minor Lane/Major Mvmt	NBL	NBT	EBLn1WBLn1	SBT	SBR							
Capacity (veh/h)	818	-	286	-	-							
HCM Lane V/C Ratio	0.405	-	0.926	-	-							
HCM Control Delay (s)	12.4	-	75.3	0	-							
HCM Lane LOS	B	-	F	A	-							
HCM 95th %tile Q(veh)	2	-	8.7	-	-							
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 4: US-395 & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	513	328	269	571	149	285	704	108	149	637	52
Future Volume (veh/h)	108	513	328	269	571	149	285	704	108	149	637	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	111	529	338	277	589	154	294	726	111	154	657	54
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	153	668	299	339	738	330	288	1198	536	184	980	438
Arrive On Green	0.10	0.20	0.20	0.12	0.22	0.22	0.18	0.36	0.36	0.12	0.29	0.29
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	111	529	338	277	589	154	294	726	111	154	657	54
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	5.8	12.8	11.0	8.0	14.2	5.5	15.5	15.2	4.4	8.1	14.8	2.3
Cycle Q Clear(g_c), s	5.8	12.8	11.0	8.0	14.2	5.5	15.5	15.2	4.4	8.1	14.8	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	668	299	339	738	330	288	1198	536	184	980	438
V/C Ratio(X)	0.73	0.79	1.13	0.82	0.80	0.47	1.02	0.61	0.21	0.84	0.67	0.12
Avail Cap(c_a), veh/h	153	823	368	356	980	438	288	1198	536	213	980	438
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	37.6	32.6	14.1	36.9	31.6	14.9	35.0	22.6	19.1	37.0	26.7	22.2
Incr Delay (d2), s/veh	15.7	4.3	88.9	13.3	3.5	1.0	59.0	2.3	0.9	21.9	3.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	6.4	12.9	3.8	6.9	2.9	11.4	7.3	1.9	4.7	7.3	1.0
LnGrp Delay(d),s/veh	53.2	36.9	103.0	50.1	35.1	15.9	94.1	24.8	20.0	58.9	30.3	22.8
LnGrp LOS	D	D	F	D	D	B	F	C	B	E	C	C
Approach Vol, veh/h		978			1020			1131			865	
Approach Delay, s/veh		61.6			36.3			42.4			34.9	
Approach LOS		E			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.4	35.1	14.5	21.6	20.0	29.5	12.8	23.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	29.0	10.5	21.0	15.5	25.0	6.5	25.0				
Max Q Clear Time (g_c+I1), s	10.1	17.2	10.0	14.8	17.5	16.8	7.8	16.2				
Green Ext Time (p_c), s	0.0	4.4	0.1	2.2	0.0	2.5	0.0	2.6				
Intersection Summary												
HCM 2010 Ctrl Delay			43.9									
HCM 2010 LOS			D									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 6: US-395 & Dos Palmas Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	34	46	15	33	80	36	923	28	89	976	167
Future Volume (veh/h)	130	34	46	15	33	80	36	923	28	89	976	167
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	138	36	49	16	35	85	38	982	30	95	1038	178
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	168	485	412	212	49	119	74	1563	699	118	1413	242
Arrive On Green	0.11	0.27	0.27	0.11	0.11	0.11	0.05	0.47	0.47	0.07	0.49	0.49
Sat Flow, veh/h	1587	1765	1500	1235	458	1111	1587	3353	1500	1587	2864	490
Grp Volume(v), veh/h	138	36	49	16	0	120	38	982	30	95	607	609
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1235	0	1569	1587	1676	1500	1587	1676	1678
Q Serve(g_s), s	6.2	1.1	1.8	0.9	0.0	5.4	1.7	16.1	0.8	4.3	21.0	21.1
Cycle Q Clear(g_c), s	6.2	1.1	1.8	2.0	0.0	5.4	1.7	16.1	0.8	4.3	21.0	21.1
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	168	485	412	212	0	168	74	1563	699	118	827	828
V/C Ratio(X)	0.82	0.07	0.12	0.08	0.00	0.71	0.51	0.63	0.04	0.81	0.73	0.74
Avail Cap(c_a), veh/h	185	847	720	452	0	473	120	1563	699	163	827	828
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.9	19.6	19.8	30.5	0.0	31.5	34.0	14.7	10.6	33.3	14.7	14.7
Incr Delay (d2), s/veh	22.9	0.1	0.1	0.1	0.0	5.5	5.4	1.9	0.1	18.2	5.7	5.8
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	3.8	0.5	0.7	0.3	0.0	2.6	0.9	7.8	0.3	2.5	10.9	11.0
LnGrp Delay(d),s/veh	54.9	19.7	20.0	30.6	0.0	37.0	39.3	16.6	10.7	51.5	20.4	20.5
LnGrp LOS	D	B	B	C		D	D	B	B	D	C	C
Approach Vol, veh/h		223			136			1050			1311	
Approach Delay, s/veh		41.5			36.3			17.3			22.7	
Approach LOS		D			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	38.5		24.5	7.9	40.5	12.2	12.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	34.0		35.0	5.5	36.0	8.5	22.0				
Max Q Clear Time (g_c+I1), s	6.3	18.1		3.8	3.7	23.1	8.2	7.4				
Green Ext Time (p_c), s	0.0	5.5		0.7	0.0	5.7	0.0	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			22.8									
HCM 2010 LOS			C									



















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 7: US-395 & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	79	35	47	103	173	83	767	76	228	707	84
Future Volume (veh/h)	57	79	35	47	103	173	83	767	76	228	707	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	59	82	36	49	107	180	86	799	79	238	736	88
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	496	422	411	166	280	105	1084	485	281	1456	651
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.07	0.32	0.32	0.18	0.43	0.43
Sat Flow, veh/h	1027	1765	1500	1198	592	996	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	59	82	36	49	0	287	86	799	79	238	736	88
Grp Sat Flow(s),veh/h/ln	1027	1765	1500	1198	0	1589	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	3.3	2.2	1.1	2.0	0.0	9.8	3.3	13.1	2.3	9.0	9.8	2.2
Cycle Q Clear(g_c), s	13.1	2.2	1.1	4.2	0.0	9.8	3.3	13.1	2.3	9.0	9.8	2.2
Prop In Lane	1.00		1.00	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	242	496	422	411	0	447	105	1084	485	281	1456	651
V/C Ratio(X)	0.24	0.17	0.09	0.12	0.00	0.64	0.82	0.74	0.16	0.85	0.51	0.14
Avail Cap(c_a), veh/h	435	827	703	636	0	745	167	1084	485	321	1456	651
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	16.8	16.4	18.3	0.0	19.5	28.5	18.6	14.9	24.6	12.7	10.5
Incr Delay (d2), s/veh	0.5	0.2	0.1	0.1	0.0	1.6	15.3	4.5	0.7	16.8	1.3	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	1.0	1.1	0.5	0.7	0.0	4.5	1.9	6.7	1.1	5.2	4.8	1.0
LnGrp Delay(d),s/veh	25.8	16.9	16.5	18.5	0.0	21.1	43.8	23.1	15.7	41.4	13.9	10.9
LnGrp LOS	C	B	B	B		C	D	C	B	D	B	B
Approach Vol, veh/h		177			336			964			1062	
Approach Delay, s/veh		19.8			20.7			24.3			19.9	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.5	24.5		21.9	8.6	31.4		21.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	12.5	20.0		29.0	6.5	26.0		29.0				
Max Q Clear Time (g_c+I1), s	11.0	15.1		15.1	5.3	11.8		11.8				
Green Ext Time (p_c), s	0.2	2.2		2.3	0.0	4.6		2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			21.7									
HCM 2010 LOS			C									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 8: US-395 & La Mesa Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	0	0	0	0	958	0	0	801	0
Future Volume (veh/h)	0	0	0	0	0	0	0	958	0	0	801	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1800	1765	1800	1800	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	1008	0	0	843	0
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	3	0	0	3	0	3	3091	0	3	3091	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.00	0.92	0.00
Sat Flow, veh/h	0	-79412	0	0	-79412	0	1681	3441	0	1681	3441	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	1008	0	0	843	0
Grp Sat Flow(s),veh/h/ln	0	1765	0	0	1765	0	1681	1676	0	1681	1676	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.5	0.0
Prop In Lane	0.00		0.00	0.00		0.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	0	3	0	3	3091	0	3	3091	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.27	0.00
Avail Cap(c_a), veh/h	0	552	0	0	552	0	161	3091	0	161	3091	0
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)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.7	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0
LnGrp LOS								A			A	
Approach Vol, veh/h		0			0			1008			843	
Approach Delay, s/veh		0.0			0.0			0.5			0.5	
Approach LOS								A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	57.5		0.0	0.0	57.5		0.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	5.5	53.0		18.0	5.5	53.0		18.0				
Max Q Clear Time (g_c+I1), s	0.0	3.9		0.0	0.0	3.5		0.0				
Green Ext Time (p_c), s	0.0	17.2		0.0	0.0	17.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			0.5									
HCM 2010 LOS			A									

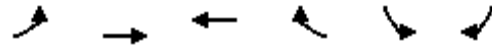
SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 9: US-395 & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	294	81	92	259	151	162	737	215	164	640	21
Future Volume (veh/h)	35	294	81	92	259	151	162	737	215	164	640	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	37	309	85	97	273	159	171	776	226	173	674	22
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	474	212	120	604	270	190	1372	614	190	1356	44
Arrive On Green	0.04	0.14	0.14	0.08	0.18	0.18	0.12	0.41	0.41	0.12	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3314	108
Grp Volume(v), veh/h	37	309	85	97	273	159	171	776	226	173	341	355
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1746
Q Serve(g_s), s	1.6	6.2	3.7	4.3	5.1	4.8	7.5	12.6	7.4	7.6	10.7	10.7
Cycle Q Clear(g_c), s	1.6	6.2	3.7	4.3	5.1	4.8	7.5	12.6	7.4	7.6	10.7	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	58	474	212	120	604	270	190	1372	614	190	686	714
V/C Ratio(X)	0.64	0.65	0.40	0.81	0.45	0.59	0.90	0.57	0.37	0.91	0.50	0.50
Avail Cap(c_a), veh/h	123	1372	614	123	1372	614	190	1372	614	190	686	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	33.7	28.8	27.7	32.3	25.9	13.0	30.8	16.1	14.6	30.8	15.5	15.5
Incr Delay (d2), s/veh	11.1	1.5	1.2	31.5	0.5	2.0	38.2	1.7	1.7	40.5	2.6	2.5
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	0.9	2.9	1.6	2.9	2.4	2.1	5.3	6.1	3.4	5.5	5.4	5.6
LnGrp Delay(d),s/veh	44.8	30.3	28.9	63.8	26.4	15.0	68.9	17.8	16.3	71.3	18.1	18.0
LnGrp LOS	D	C	C	E	C	B	E	B	B	E	B	B
Approach Vol, veh/h		431			529			1173			869	
Approach Delay, s/veh		31.3			29.9			24.9			28.6	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	33.5	9.8	14.5	13.0	33.5	7.1	17.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	29.0	5.5	29.0	8.5	29.0	5.5	29.0				
Max Q Clear Time (g_c+I1), s	9.6	14.6	6.3	8.2	9.5	12.7	3.6	7.1				
Green Ext Time (p_c), s	0.0	4.6	0.0	1.8	0.0	3.3	0.0	2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			27.8									
HCM 2010 LOS			C									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 10: Palmdale Road (SR-18) & Cantina Street



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	4	797	866	154	190	22		
Future Volume (veh/h)	4	797	866	154	190	22		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1569	1765		
Adj Flow Rate, veh/h	4	848	921	164	202	23		
Adj No. of Lanes	1	2	2	1	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	9	1533	1212	542	1051	544		
Arrive On Green	0.01	0.46	0.36	0.36	0.36	0.36		
Sat Flow, veh/h	1587	3441	3441	1500	2898	1500		
Grp Volume(v), veh/h	4	848	921	164	202	23		
Grp Sat Flow(s),veh/h/ln	1587	1676	1676	1500	1449	1500		
Q Serve(g_s), s	0.1	9.2	12.1	3.9	2.4	0.5		
Cycle Q Clear(g_c), s	0.1	9.2	12.1	3.9	2.4	0.5		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	9	1533	1212	542	1051	544		
V/C Ratio(X)	0.47	0.55	0.76	0.30	0.19	0.04		
Avail Cap(c_a), veh/h	175	2210	1538	688	1051	544		
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	24.8	9.8	14.0	11.4	10.9	10.3		
Incr Delay (d2), s/veh	34.6	0.3	1.7	0.3	0.4	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	0.1	4.2	5.8	1.6	1.0	0.5		
LnGrp Delay(d),s/veh	59.4	10.2	15.7	11.7	11.3	10.4		
LnGrp LOS	E	B	B	B	B	B		
Approach Vol, veh/h		852	1085		225			
Approach Delay, s/veh		10.4	15.1		11.2			
Approach LOS		B	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				27.3		22.6	4.8	22.5
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				32.9		18.1	5.5	22.9
Max Q Clear Time (g_c+I1), s				11.2		4.4	2.1	14.1
Green Ext Time (p_c), s				5.2		0.6	1.6	4.0
Intersection Summary								
HCM 2010 Ctrl Delay			12.9					
HCM 2010 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	13	102	37	52	76	11	30	12	28	3	11	16
Future Vol, veh/h	13	102	37	52	76	11	30	12	28	3	11	16
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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	129	47	66	96	14	38	15	35	4	14	20
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	110	0	0	176	0	0	437	427	153	446	444	103
Stage 1	-	-	-	-	-	-	185	185	-	235	235	-
Stage 2	-	-	-	-	-	-	252	242	-	211	209	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1480	-	-	1400	-	-	530	520	893	523	508	952
Stage 1	-	-	-	-	-	-	817	747	-	768	710	-
Stage 2	-	-	-	-	-	-	752	705	-	791	729	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1480	-	-	1400	-	-	483	488	893	467	477	952
Mov Cap-2 Maneuver	-	-	-	-	-	-	483	488	-	467	477	-
Stage 1	-	-	-	-	-	-	807	738	-	759	675	-
Stage 2	-	-	-	-	-	-	685	670	-	735	720	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			2.9			12.1			10.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	593	1480	-	-	1400	-	-	648				
HCM Lane V/C Ratio	0.149	0.011	-	-	0.047	-	-	0.059				
HCM Control Delay (s)	12.1	7.5	0	-	7.7	0	-	10.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.5	0	-	-	0.1	-	-	0.2				

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵	↵
Traffic Vol, veh/h	0	23	145	48	0	38	94	15	0	47	57	43
Future Vol, veh/h	0	23	145	48	0	38	94	15	0	47	57	43
Peak Hour Factor	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	23	148	49	0	39	96	15	0	48	58	44
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	10.4	9.6	9.1
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	75%	0%	86%	0%	73%
Vol Right, %	0%	0%	100%	0%	25%	0%	14%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	47	57	43	23	193	38	109	18	70
LT Vol	47	0	0	23	0	38	0	18	0
Through Vol	0	57	0	0	145	0	94	0	51
RT Vol	0	0	43	0	48	0	15	0	19
Lane Flow Rate	48	58	44	23	197	39	111	18	71
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.086	0.096	0.063	0.04	0.301	0.068	0.176	0.033	0.116
Departure Headway (Hd)	6.42	5.915	5.209	6.172	5.495	6.315	5.703	6.562	5.864
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	560	607	689	583	658	570	631	547	612
Service Time	4.142	3.638	2.931	3.873	3.196	4.025	3.425	4.289	3.591
HCM Lane V/C Ratio	0.086	0.096	0.064	0.039	0.299	0.068	0.176	0.033	0.116
HCM Control Delay	9.7	9.3	8.3	9.1	10.5	9.5	9.6	9.5	9.4
HCM Lane LOS	A	A	A	A	B	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.2	0.1	1.3	0.2	0.6	0.1	0.4

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↵	
Traffic Vol, veh/h	0	18	51	19
Future Vol, veh/h	0	18	51	19
Peak Hour Factor	0.92	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	18	52	19
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	8	107	6	0	49	141	137	0	1	29	41
Future Vol, veh/h	0	8	107	6	0	49	141	137	0	1	29	41
Peak Hour Factor	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	111	6	0	51	147	143	0	1	30	43
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	9.3	9.5	8.9
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	19%	0%	100%	86%	0%	100%	26%	0%	100%
Vol Right, %	0%	0%	81%	0%	0%	14%	0%	0%	74%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	19	51	8	71	42	49	94	184	114	23
LT Vol	1	0	0	8	0	0	49	0	0	114	0
Through Vol	0	19	10	0	71	36	0	94	47	0	23
RT Vol	0	0	41	0	0	6	0	0	137	0	0
Lane Flow Rate	1	20	53	8	74	43	51	98	192	119	24
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.002	0.035	0.082	0.015	0.123	0.071	0.085	0.15	0.265	0.213	0.039
Departure Headway (Hd)	6.684	6.184	5.618	6.465	5.965	5.864	6.002	5.502	4.981	6.469	5.969
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	538	581	640	556	604	614	591	645	713	558	603
Service Time	4.397	3.897	3.331	4.172	3.672	3.571	3.796	3.296	2.775	4.176	3.676
HCM Lane V/C Ratio	0.002	0.034	0.083	0.014	0.123	0.07	0.086	0.152	0.269	0.213	0.04
HCM Control Delay	9.4	9.1	8.8	9.3	9.5	9	9.4	9.3	9.6	10.9	8.9
HCM Lane LOS	A	A	A	A	A	A	A	A	A	B	A
HCM 95th-tile Q	0	0.1	0.3	0	0.4	0.2	0.3	0.5	1.1	0.8	0.1

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕↵	
Traffic Vol, veh/h	0	114	34	6
Future Vol, veh/h	0	114	34	6
Peak Hour Factor	0.92	0.96	0.96	0.96
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	119	35	6
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	10.3
HCM LOS	B

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵↵	
Traffic Vol, veh/h	0	18	157	27	0	43	121	10	0	16	47	34
Future Vol, veh/h	0	18	157	27	0	43	121	10	0	16	47	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	20	171	29	0	47	132	11	0	17	51	37
Number of Lanes	0	1	1	0	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	10.6	10	9
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	27%	0%
Vol Thru, %	0%	100%	32%	0%	85%	0%	92%	73%	64%
Vol Right, %	0%	0%	68%	0%	15%	0%	8%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	31	50	18	184	43	131	48	54
LT Vol	16	0	0	18	0	43	0	13	0
Through Vol	0	31	16	0	157	0	121	35	35
RT Vol	0	0	34	0	27	0	10	0	19
Lane Flow Rate	17	34	54	20	200	47	142	52	58
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.032	0.058	0.084	0.034	0.31	0.081	0.225	0.089	0.094
Departure Headway (Hd)	6.587	6.082	5.598	6.189	5.584	6.252	5.695	6.213	5.823
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	544	590	641	581	646	576	634	577	616
Service Time	4.316	3.811	3.327	3.897	3.291	3.962	3.406	3.943	3.553
HCM Lane V/C Ratio	0.031	0.058	0.084	0.034	0.31	0.082	0.224	0.09	0.094
HCM Control Delay	9.5	9.2	8.8	9.1	10.8	9.5	10.1	9.6	9.2
HCM Lane LOS	A	A	A	A	B	A	B	A	A
HCM 95th-tile Q	0.1	0.2	0.3	0.1	1.3	0.3	0.9	0.3	0.3

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			←↑→	
Traffic Vol, veh/h	0	13	69	19
Future Vol, veh/h	0	13	69	19
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	14	75	21
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	15	225	49	0	111	344	0	0	62	58	81
Future Vol, veh/h	0	15	225	49	0	111	344	0	0	62	58	81
Peak Hour Factor	0.92	0.99	0.99	0.99	0.92	0.99	0.99	0.99	0.92	0.99	0.99	0.99
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	227	49	0	112	347	0	0	63	59	82
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	11.3	10.6	10.7
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	19%	0%	100%	60%	0%	100%	100%	0%	100%
Vol Right, %	0%	0%	81%	0%	0%	40%	0%	0%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	39	100	15	150	124	111	172	172	30	53
LT Vol	62	0	0	15	0	0	111	0	0	30	0
Through Vol	0	39	19	0	150	75	0	172	172	0	53
RT Vol	0	0	81	0	0	49	0	0	0	0	0
Lane Flow Rate	63	39	101	15	152	125	112	174	174	30	53
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.129	0.075	0.178	0.03	0.277	0.219	0.213	0.306	0.222	0.064	0.104
Departure Headway (Hd)	7.402	6.902	6.336	7.076	6.576	6.299	6.837	6.337	4.603	7.562	7.062
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	483	517	563	504	544	567	524	566	775	472	505
Service Time	5.17	4.67	4.105	4.84	4.34	4.064	4.595	4.095	2.361	5.335	4.835
HCM Lane V/C Ratio	0.13	0.075	0.179	0.03	0.279	0.22	0.214	0.307	0.225	0.064	0.105
HCM Control Delay	11.3	10.2	10.5	10.1	11.9	10.8	11.5	11.9	8.7	10.9	10.7
HCM Lane LOS	B	B	B	B	B	B	B	B	A	B	B
HCM 95th-tile Q	0.4	0.2	0.6	0.1	1.1	0.8	0.8	1.3	0.8	0.2	0.3

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕	
Traffic Vol, veh/h	0	30	79	21
Future Vol, veh/h	0	30	79	21
Peak Hour Factor	0.92	0.99	0.99	0.99
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	30	80	21
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	10.6
HCM LOS	B





















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 16: Topaz Road & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	508	4	85	614	156	5	32	51	100	36	27
Future Volume (veh/h)	45	508	4	85	614	156	5	32	51	100	36	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	47	529	4	89	640	162	5	33	53	104	38	28
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	740	331	217	830	210	495	523	445	566	627	533
Arrive On Green	0.04	0.22	0.22	0.14	0.31	0.31	0.01	0.30	0.30	0.07	0.36	0.36
Sat Flow, veh/h	1587	3353	1500	1587	2652	670	1587	1765	1500	1587	1765	1500
Grp Volume(v), veh/h	47	529	4	89	404	398	5	33	53	104	38	28
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1646	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.9	9.4	0.1	3.3	14.0	14.0	0.1	0.9	1.0	2.8	0.9	0.8
Cycle Q Clear(g_c), s	1.9	9.4	0.1	3.3	14.0	14.0	0.1	0.9	1.0	2.8	0.9	0.8
Prop In Lane	1.00		1.00	1.00		0.41	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	740	331	217	524	515	495	523	445	566	627	533
V/C Ratio(X)	0.67	0.72	0.01	0.41	0.77	0.77	0.01	0.06	0.12	0.18	0.06	0.05
Avail Cap(c_a), veh/h	161	1517	679	217	811	796	621	523	445	598	627	533
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	30.2	23.1	12.9	25.3	19.9	20.0	15.6	16.2	6.1	13.1	13.6	13.6
Incr Delay (d2), s/veh	10.5	1.3	0.0	1.2	2.4	2.5	0.0	0.2	0.5	0.2	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	1.0	4.5	0.1	1.5	6.8	6.7	0.1	0.5	0.7	1.2	0.5	0.3
LnGrp Delay(d),s/veh	40.7	24.4	12.9	26.6	22.4	22.5	15.6	16.4	6.6	13.3	13.8	13.8
LnGrp LOS	D	C	B	C	C	C	B	B	A	B	B	B
Approach Vol, veh/h		580			891			91			170	
Approach Delay, s/veh		25.7			22.8			10.6			13.5	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	23.5	13.2	18.6	4.9	27.3	7.3	24.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	19.0	8.5	29.0	5.5	19.0	6.5	31.0				
Max Q Clear Time (g_c+I1), s	4.8	3.0	5.3	11.4	2.1	2.9	3.9	16.0				
Green Ext Time (p_c), s	0.0	0.4	1.5	2.8	0.0	0.4	0.0	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay				22.2								
HCM 2010 LOS				C								

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 17: Cobalt Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	879	58	145	834	14	53	47	118	22	52	29
Future Volume (veh/h)	45	879	58	145	834	14	53	47	118	22	52	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	46	906	60	149	860	14	55	48	122	23	54	30
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	996	446	159	989	16	613	174	443	162	352	174
Arrive On Green	0.10	0.30	0.30	0.10	0.29	0.29	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1587	3353	1500	1587	3377	55	1236	442	1124	240	895	442
Grp Volume(v), veh/h	46	906	60	149	427	447	55	0	170	107	0	0
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1755	1236	0	1566	1577	0	0
Q Serve(g_s), s	1.7	16.8	1.9	6.0	15.6	15.6	0.0	0.0	4.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.7	16.8	1.9	6.0	15.6	15.6	1.4	0.0	4.8	2.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.72	0.21		0.28
Lane Grp Cap(c), veh/h	166	996	446	159	491	514	613	0	617	689	0	0
V/C Ratio(X)	0.28	0.91	0.13	0.93	0.87	0.87	0.09	0.00	0.28	0.16	0.00	0.00
Avail Cap(c_a), veh/h	166	1010	452	159	531	556	613	0	617	689	0	0
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	0.00
Uniform Delay (d), s/veh	26.7	21.9	16.7	28.9	21.7	21.7	12.3	0.0	13.3	12.7	0.0	0.0
Incr Delay (d2), s/veh	0.9	11.8	0.1	52.3	13.7	13.2	0.3	0.0	1.1	0.5	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	0.8	9.3	0.8	4.9	9.1	9.5	0.7	0.0	2.2	1.3	0.0	0.0
LnGrp Delay(d),s/veh	27.6	33.7	16.8	81.2	35.4	34.9	12.6	0.0	14.4	13.2	0.0	0.0
LnGrp LOS	C	C	B	F	D	C	B		B	B		
Approach Vol, veh/h		1012			1023			225			107	
Approach Delay, s/veh		32.4			41.9			14.0			13.2	
Approach LOS		C			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.0	11.0	23.7		30.0	11.3	23.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		25.5	6.5	19.5		25.5	5.5	20.5				
Max Q Clear Time (g_c+I1), s		6.8	8.0	18.8		4.7	3.7	17.6				
Green Ext Time (p_c), s		1.6	0.0	0.4		1.7	0.1	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			33.9									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	39	155	1	0	16	207	75	0	0	8	8
Future Vol, veh/h	0	39	155	1	0	16	207	75	0	0	8	8
Peak Hour Factor	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	41	163	1	0	17	218	79	0	0	8	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.5	10.2	8.2
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	20%	5%	33%
Vol Thru, %	50%	79%	69%	15%
Vol Right, %	50%	1%	25%	52%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	195	298	130
LT Vol	0	39	16	43
Through Vol	8	155	207	19
RT Vol	8	1	75	68
Lane Flow Rate	17	205	314	137
Geometry Grp	1	1	1	1
Degree of Util (X)	0.023	0.268	0.384	0.185
Departure Headway (Hd)	4.997	4.692	4.411	4.868
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	711	764	816	733
Service Time	3.062	2.732	2.446	2.919
HCM Lane V/C Ratio	0.024	0.268	0.385	0.187
HCM Control Delay	8.2	9.5	10.2	9
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.1	1.1	1.8	0.7

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	43	19	68
Future Vol, veh/h	0	43	19	68
Peak Hour Factor	0.92	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	45	20	72
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9
HCM LOS	A
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 19: Amethyst Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	750	79	161	906	54	100	166	83	42	251	89
Future Volume (veh/h)	67	750	79	161	906	54	100	166	83	42	251	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	70	781	82	168	944	56	104	173	86	44	261	93
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	862	385	181	1019	60	117	614	522	64	391	139
Arrive On Green	0.05	0.26	0.26	0.11	0.32	0.32	0.07	0.35	0.35	0.04	0.31	0.31
Sat Flow, veh/h	1587	3353	1500	1587	3217	191	1587	1765	1500	1587	1243	443
Grp Volume(v), veh/h	70	781	82	168	492	508	104	173	86	44	0	354
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1731	1587	1765	1500	1587	0	1687
Q Serve(g_s), s	3.3	16.9	3.2	7.8	21.2	21.2	4.9	5.3	1.9	2.0	0.0	13.6
Cycle Q Clear(g_c), s	3.3	16.9	3.2	7.8	21.2	21.2	4.9	5.3	1.9	2.0	0.0	13.6
Prop In Lane	1.00		1.00	1.00		0.11	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	86	862	385	181	531	548	117	614	522	64	0	531
V/C Ratio(X)	0.82	0.91	0.21	0.93	0.93	0.93	0.89	0.28	0.16	0.69	0.00	0.67
Avail Cap(c_a), veh/h	117	875	392	181	531	548	117	614	522	138	0	531
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	0.00	1.00
Uniform Delay (d), s/veh	35.0	26.9	21.8	32.8	24.7	24.7	34.3	17.6	6.9	35.4	0.0	22.2
Incr Delay (d2), s/veh	26.4	12.9	0.3	47.2	22.5	22.0	50.8	1.1	0.7	12.6	0.0	6.5
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	2.0	9.4	1.4	5.8	13.0	13.4	3.8	2.7	1.2	1.1	0.0	7.3
LnGrp Delay(d),s/veh	61.4	39.8	22.1	80.0	47.1	46.6	85.1	18.7	7.6	48.0	0.0	28.7
LnGrp LOS	E	D	C	F	D	D	F	B	A	D		C
Approach Vol, veh/h		933			1168			363			398	
Approach Delay, s/veh		39.8			51.7			35.1			30.8	
Approach LOS		D			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.5	30.5	13.0	23.7	10.0	28.0	8.5	28.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	6.5	22.5	8.5	19.5	5.5	23.5	5.5	22.5				
Max Q Clear Time (g_c+I1), s	4.0	7.3	9.8	18.9	6.9	15.6	5.3	23.2				
Green Ext Time (p_c), s	0.0	1.2	0.0	0.3	0.0	1.1	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			42.8									
HCM 2010 LOS			D									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 20: Amethyst Road & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	101	80	24	135	38	130	361	22	45	359	59
Future Volume (veh/h)	41	101	80	24	135	38	130	361	22	45	359	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	45	111	88	26	148	42	143	397	24	49	395	65
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	304	259	48	207	59	168	1351	604	77	1160	519
Arrive On Green	0.05	0.17	0.17	0.03	0.16	0.16	0.11	0.40	0.40	0.05	0.35	0.35
Sat Flow, veh/h	1587	1765	1500	1587	1323	375	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	45	111	88	26	0	190	143	397	24	49	395	65
Grp Sat Flow(s),veh/h/ln	1587	1765	1500	1587	0	1698	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	1.4	2.9	1.8	0.8	0.0	5.5	4.6	4.2	0.5	1.6	4.5	1.5
Cycle Q Clear(g_c), s	1.4	2.9	1.8	0.8	0.0	5.5	4.6	4.2	0.5	1.6	4.5	1.5
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	73	304	259	48	0	266	168	1351	604	77	1160	519
V/C Ratio(X)	0.62	0.36	0.34	0.54	0.00	0.71	0.85	0.29	0.04	0.63	0.34	0.13
Avail Cap(c_a), veh/h	168	610	519	168	0	587	168	1351	604	168	1160	519
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	19.0	8.3	24.9	0.0	20.8	22.9	10.5	9.4	24.3	12.6	11.6
Incr Delay (d2), s/veh	8.2	0.7	0.8	9.3	0.0	3.6	32.1	0.6	0.1	8.3	0.8	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	0.8	1.4	0.8	0.5	0.0	2.8	3.5	2.0	0.2	0.9	2.2	0.7
LnGrp Delay(d),s/veh	32.6	19.7	9.1	34.2	0.0	24.4	55.0	11.1	9.6	32.6	13.4	12.1
LnGrp LOS	C	B	A	C		C	D	B	A	C	B	B
Approach Vol, veh/h		244			216			564			509	
Approach Delay, s/veh		18.3			25.6			22.1			15.1	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	25.5	6.1	13.5	10.0	22.5	6.9	12.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	5.5	18.0	5.5	18.0	5.5	18.0	5.5	18.0				
Max Q Clear Time (g_c+I1), s	3.6	6.2	2.8	4.9	6.6	6.5	3.4	7.5				
Green Ext Time (p_c), s	0.0	2.2	0.0	0.7	0.0	1.9	0.2	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			19.7									
HCM 2010 LOS			B									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 21: El Evado Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	714	82	147	978	186	104	402	70	178	309	105
Future Volume (veh/h)	136	714	82	147	978	186	104	402	70	178	309	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	139	729	84	150	998	190	106	410	71	182	315	107
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	855	383	290	1122	502	128	739	330	286	1070	634
Arrive On Green	0.10	0.26	0.26	0.18	0.33	0.33	0.08	0.22	0.22	0.18	0.32	0.32
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	139	729	84	150	998	190	106	410	71	182	315	107
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	9.6	23.0	3.8	9.5	31.4	6.5	7.3	12.1	4.3	11.8	7.8	4.9
Cycle Q Clear(g_c), s	9.6	23.0	3.8	9.5	31.4	6.5	7.3	12.1	4.3	11.8	7.8	4.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	855	383	290	1122	502	128	739	330	286	1070	634
V/C Ratio(X)	0.85	0.85	0.22	0.52	0.89	0.38	0.82	0.55	0.21	0.64	0.29	0.17
Avail Cap(c_a), veh/h	207	1070	479	290	1221	546	164	739	330	321	1070	634
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	49.0	39.4	20.0	41.0	35.1	10.4	50.3	38.5	35.5	42.2	28.4	20.0
Incr Delay (d2), s/veh	22.3	5.6	0.3	1.6	8.0	0.5	22.8	3.0	1.5	3.5	0.7	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	5.2	11.3	1.9	4.3	15.7	3.9	4.0	5.9	1.9	5.4	3.7	2.1
LnGrp Delay(d),s/veh	71.3	45.0	20.3	42.6	43.0	10.9	73.1	41.5	37.0	45.7	29.1	20.5
LnGrp LOS	E	D	C	D	D	B	E	D	D	D	C	C
Approach Vol, veh/h		952			1338			587			604	
Approach Delay, s/veh		46.7			38.4			46.7			32.6	
Approach LOS		D			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.5	29.0	24.8	32.9	13.5	40.0	16.0	41.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	22.5	24.5	19.5	35.5	11.5	35.5	14.5	40.5				
Max Q Clear Time (g_c+I1), s	13.8	14.1	11.5	25.0	9.3	9.8	11.6	33.4				
Green Ext Time (p_c), s	1.8	1.9	4.3	3.3	0.0	2.7	0.1	3.8				
Intersection Summary												
HCM 2010 Ctrl Delay			41.1									
HCM 2010 LOS			D									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Project Opening Year Without Project PM Peak Hour
 22: Amargosa Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	861	132	139	1038	98	169	339	85	174	382	197
Future Volume (veh/h)	98	861	132	139	1038	98	169	339	85	174	382	197
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1667	1765	1765	1667	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	104	916	140	148	1104	104	180	361	90	185	406	210
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	998	446	180	1136	508	203	697	172	203	561	287
Arrive On Green	0.07	0.30	0.30	0.11	0.34	0.34	0.13	0.26	0.26	0.13	0.26	0.26
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	2668	657	1587	2149	1099
Grp Volume(v), veh/h	104	916	140	148	1104	104	180	225	226	185	316	300
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1587	1676	1500	1587	1676	1649	1587	1676	1571
Q Serve(g_s), s	5.9	23.8	6.5	8.2	29.2	4.4	10.0	10.3	10.6	10.4	15.4	15.7
Cycle Q Clear(g_c), s	5.9	23.8	6.5	8.2	29.2	4.4	10.0	10.3	10.6	10.4	15.4	15.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.40	1.00		0.70
Lane Grp Cap(c), veh/h	115	998	446	180	1136	508	203	438	430	203	438	410
V/C Ratio(X)	0.91	0.92	0.31	0.82	0.97	0.20	0.89	0.51	0.52	0.91	0.72	0.73
Avail Cap(c_a), veh/h	115	1025	458	180	1136	508	203	438	430	203	438	410
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	41.5	30.5	24.5	39.0	29.3	21.1	38.6	28.4	28.5	38.8	30.3	30.4
Incr Delay (d2), s/veh	56.0	12.6	0.4	25.2	20.1	0.2	34.3	4.3	4.5	39.7	9.9	11.0
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	4.4	12.7	2.7	4.8	16.7	1.9	6.3	5.3	5.3	6.8	8.3	8.0
LnGrp Delay(d),s/veh	97.5	43.1	24.9	64.2	49.4	21.3	73.0	32.7	33.0	78.4	40.1	41.4
LnGrp LOS	F	D	C	E	D	C	E	C	C	E	D	D
Approach Vol, veh/h		1160			1356			631			801	
Approach Delay, s/veh		45.8			48.9			44.3			49.4	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	28.0	14.7	31.3	16.0	28.0	11.0	35.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	23.5	9.5	27.5	11.5	23.5	6.5	30.5				
Max Q Clear Time (g_c+I1), s	12.4	12.6	10.2	25.8	12.0	17.7	7.9	31.2				
Green Ext Time (p_c), s	0.0	2.3	0.0	1.0	0.0	1.7	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			47.3									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Opening Year Without Project PM Peak Hour
 26: US-395 & Crossroads

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	59	132	73	56	110	138	605	107	163	550	176
Future Volume (veh/h)	143	59	132	73	56	110	138	605	107	163	550	176
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	155	64	143	79	61	120	150	658	116	177	598	191
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	105	235	209	86	169	194	1216	378	228	913	409
Arrive On Green	0.12	0.22	0.22	0.06	0.16	0.16	0.12	0.25	0.25	0.14	0.27	0.27
Sat Flow, veh/h	1681	486	1087	3261	532	1047	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	155	0	207	79	0	181	150	658	116	177	598	191
Grp Sat Flow(s),veh/h/ln	1681	0	1573	1630	0	1580	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	4.9	0.0	6.4	1.3	0.0	5.9	4.7	6.4	3.4	5.5	8.6	5.8
Cycle Q Clear(g_c), s	4.9	0.0	6.4	1.3	0.0	5.9	4.7	6.4	3.4	5.5	8.6	5.8
Prop In Lane	1.00		0.69	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	0	340	209	0	254	194	1216	378	228	913	409
V/C Ratio(X)	0.77	0.00	0.61	0.38	0.00	0.71	0.77	0.54	0.31	0.78	0.65	0.47
Avail Cap(c_a), veh/h	666	0	1058	450	0	655	666	2973	926	758	2254	1009
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	23.2	0.0	19.2	24.4	0.0	21.6	23.3	17.6	16.4	22.7	17.5	16.5
Incr Delay (d2), s/veh	6.1	0.0	1.8	1.1	0.0	3.7	6.4	0.4	0.5	5.6	0.8	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	2.6	0.0	2.9	0.6	0.0	2.8	2.5	2.8	1.5	2.9	4.0	2.5
LnGrp Delay(d),s/veh	29.3	0.0	20.9	25.5	0.0	25.3	29.7	18.0	16.9	28.3	18.3	17.3
LnGrp LOS	C		C	C		C	C	B	B	C	B	B
Approach Vol, veh/h		362			260			924			966	
Approach Delay, s/veh		24.5			25.3			19.7			19.9	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.9	18.2	8.0	16.2	10.8	19.3	11.0	13.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	24.5	33.5	7.5	36.5	21.5	36.5	21.5	22.5				
Max Q Clear Time (g_c+I1), s	7.5	8.4	3.3	8.4	6.7	10.6	6.9	7.9				
Green Ext Time (p_c), s	0.4	4.4	0.1	1.3	0.3	4.2	0.3	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			21.1									
HCM 2010 LOS			C									

OPENING YEAR PLUS PROJECT CONDITIONS

Intersection

Int Delay, s/veh 17.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↗
Traffic Vol, veh/h	3	971	673	88	162	5
Future Vol, veh/h	3	971	673	88	162	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	200	-	-	225	150	0
Veh in Median Storage, #	0	0	-	0	-	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	3	1091	756	99	182	6






















Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	855	0	0
Stage 1	-	-	756
Stage 2	-	-	552
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuver	781	-	-
Stage 1	-	-	424
Stage 2	-	-	541
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	781	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	422
Stage 2	-	-	541

Approach	EB	WB	SB
HCM Control Delay, s	0	0	195.5
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	781	-	-	-	150	620
HCM Lane V/C Ratio	0.004	-	-	-	1.213	0.009
HCM Control Delay (s)	9.6	-	-	-	201.2	10.9
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	10.5	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	1014	58	69	617	7	41	2	45	49	3	98
Future Volume (veh/h)	57	1014	58	69	617	7	41	2	45	49	3	98
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1765	1765	1800	1765	1800	1700	1765	1765
Adj Flow Rate, veh/h	63	1127	64	77	686	8	46	2	50	54	3	109
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	1651	739	118	1680	751	189	20	90	0	217	184
Arrive On Green	0.06	0.49	0.49	0.07	0.50	0.50	0.12	0.12	0.12	0.00	0.12	0.12
Sat Flow, veh/h	1587	3353	1500	1681	3353	1500	538	163	730	0	1765	1500
Grp Volume(v), veh/h	63	1127	64	77	686	8	98	0	0	0	3	109
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1681	1676	1500	1430	0	0	0	1765	1500
Q Serve(g_s), s	1.7	11.0	1.0	1.9	5.5	0.1	1.8	0.0	0.0	0.0	0.1	2.9
Cycle Q Clear(g_c), s	1.7	11.0	1.0	1.9	5.5	0.1	2.7	0.0	0.0	0.0	0.1	2.9
Prop In Lane	1.00		1.00	1.00		1.00	0.47		0.51	0.00		1.00
Lane Grp Cap(c), veh/h	98	1651	739	118	1680	751	299	0	0	0	217	184
V/C Ratio(X)	0.65	0.68	0.09	0.65	0.41	0.01	0.33	0.00	0.00	0.00	0.01	0.59
Avail Cap(c_a), veh/h	351	3086	1381	255	2852	1276	760	0	0	0	1254	1066
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	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	8.3	5.8	19.4	6.7	5.4	17.6	0.0	0.0	0.0	16.5	17.8
Incr Delay (d2), s/veh	6.9	0.5	0.0	6.0	0.2	0.0	0.6	0.0	0.0	0.0	0.0	3.0
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	0.9	5.1	0.4	1.1	2.5	0.0	1.1	0.0	0.0	0.0	0.0	1.4
LnGrp Delay(d),s/veh	26.6	8.8	5.8	25.5	6.9	5.4	18.3	0.0	0.0	0.0	16.6	20.8
LnGrp LOS	C	A	A	C	A	A	B				B	C
Approach Vol, veh/h		1254			771			98			112	
Approach Delay, s/veh		9.6			8.7			18.3			20.7	
Approach LOS		A			A			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	0.0	9.8	7.5	25.6		9.8	7.1	26.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax),s	65	19.5	6.5	39.5		30.5	9.5	36.5				
Max Q Clear Time (g_c+l1),s	0.0	4.7	3.9	13.0		4.9	3.7	7.5				
Green Ext Time (p_c), s	0.0	0.4	0.0	8.1		0.3	0.0	4.3				
Intersection Summary												
HCM 2010 Ctrl Delay			10.2									
HCM 2010 LOS			B									

Intersection

























Int Delay, s/veh 12.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	22	0	230	0	0	0	126	818	0	0	598	38
Future Vol, veh/h	22	0	230	0	0	0	126	818	0	0	598	38
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	-	-	-	-	-	-	300	-	-	-	-	250
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	0	250	0	0	0	137	889	0	0	650	41

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	1813	1813	650	1959
Stage 1	650	650	-	1163
Stage 2	1163	1163	-	796
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	61	78	469	48
Stage 1	458	465	-	237
Stage 2	237	269	-	380
Platoon blocked, %				
Mov Cap-1 Maneuver	54	66	469	20
Mov Cap-2 Maneuver	54	66	-	20
Stage 1	388	465	-	201
Stage 2	201	228	-	177

Approach	EB	WB	NB	SB
HCM Control Delay	8.3	0	1.3	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn	WBLn1	SBT	SBR
Capacity (veh/h)	904	-	281	-	-	-
HCM Lane V/C Ratio	0.152	-	0.975	-	-	-
HCM Control Delay (s)	9.7	-	87.3	0	-	-
HCM Lane LOS	A	-	F	A	-	-
HCM 95th %tile Q(veh)	0.5	-	9.7	-	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	588	453	146	352	97	338	750	191	132	502	47
Future Volume (veh/h)	115	588	453	146	352	97	338	750	191	132	502	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	126	646	498	160	387	107	371	824	210	145	552	52
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	258	803	359	204	495	221	425	1384	619	172	849	380
Arrive On Green	0.16	0.24	0.24	0.07	0.15	0.15	0.27	0.41	0.41	0.11	0.25	0.25
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	126	646	498	160	387	107	371	824	210	145	552	52
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	7.7	19.3	13.7	5.8	11.9	5.4	23.8	20.4	10.2	9.6	15.7	2.9
Cycle Q Clear(g_c), s	7.7	19.3	13.7	5.8	11.9	5.4	23.8	20.4	10.2	9.6	15.7	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	258	803	359	204	495	221	425	1384	619	172	849	380
V/C Ratio(X)	0.49	0.80	1.39	0.78	0.78	0.48	0.87	0.60	0.34	0.84	0.65	0.14
Avail Cap(c_a), veh/h	258	1006	450	204	786	352	529	1384	619	275	849	380
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	40.6	38.2	11.7	48.8	43.8	25.0	37.3	24.4	21.4	46.6	35.6	30.8
Incr Delay (d2), s/veh	1.4	3.9	190.1	18.0	2.7	1.6	12.6	1.9	1.5	12.2	3.8	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	3.5	9.4	27.0	2.8	5.7	2.8	11.9	9.7	4.5	4.8	7.7	1.3
LnGrp Delay(d),s/veh	42.1	42.0	201.8	66.7	46.5	26.6	49.9	26.3	22.9	58.8	39.4	31.5
LnGrp LOS	D	D	F	E	D	C	D	C	C	E	D	C
Approach Vol, veh/h		1270			654			1405			749	
Approach Delay, s/veh		104.7			48.2			32.0			42.6	
Approach LOS		F			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.1	48.5	12.0	30.0	33.1	31.5	21.8	20.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	35	44.0	7.5	32.0	35.5	27.0	14.5	25.0				
Max Q Clear Time (g_c+l1), s	11.6	22.4	7.8	21.3	25.8	17.7	9.7	13.9				
Green Ext Time (p_c), s	0.2	5.7	0.0	4.2	0.8	2.3	0.1	1.9				
Intersection Summary												
HCM 2010 Ctrl Delay			59.2									
HCM 2010 LOS			E									



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	79	87	179	1198	1075	24		
Future Volume (veh/h)	79	87	179	1198	1075	24		
Number	7	14	5	2	6	16		
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		
Adj Sat Flow, veh/h	1765	1765	1667	1765	1765	1765		
Adj Flow Rate, veh/h	86	95	195	1302	1168	26		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	167	149	198	2442	1735	776		
Arrive On Green	0.10	0.10	0.12	0.73	0.52	0.52		
Sat Flow, veh/h	1681	1500	1587	3441	3441	1500		
Grp Volume(v), veh/h	86	95	195	1302	1168	26		
Grp Sat Flow(s), veh/h	1681	1500	1587	1676	1676	1500		
Q Serve(g_s), s	2.5	3.2	6.4	9.0	13.5	0.4		
Cycle Q Clear(g_c), s	2.5	3.2	6.4	9.0	13.5	0.4		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	167	149	198	2442	1735	776		
V/C Ratio(X)	0.52	0.64	0.99	0.53	0.67	0.03		
Avail Cap(c_a), veh/h	580	517	198	2442	1735	776		
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	22.6	22.6	22.8	3.1	9.3	6.2		
Incr Delay (d2), s/veh	2.5	4.5	59.8	0.8	2.1	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	2.8	6.0	4.3	6.7	0.2			
LnGrp Delay(d),s/veh	24.8	27.1	82.6	4.0	11.4	6.3		
LnGrp LOS	C	C	F	A	B	A		
Approach Vol, veh/h	181			1497	1194			
Approach Delay, s/veh	26.0			14.2	11.3			
Approach LOS	C			B	B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		4.5		9.7	11.0	31.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		38.0		18.0	6.5	27.0		
Max Q Clear Time (g_c+I), s		11.0		5.2	8.4	15.5		
Green Ext Time (p_c), s		9.6		0.4	0.0	5.6		
Intersection Summary								
HCM 2010 Ctrl Delay			13.8					
HCM 2010 LOS			B					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	43	41	56	37	30	250	18	949	22	158	976	96
Future Volume (veh/h)	43	41	56	37	30	250	18	949	22	158	976	96
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	191	43	58	39	31	260	19	989	23	165	1017	100
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	202	724	616	350	36	304	117	1033	462	159	1033	102
Arrive On Green	0.13	0.41	0.41	0.22	0.22	0.22	0.07	0.31	0.31	0.10	0.33	0.33
Sat Flow, veh/h	1587	1765	1500	1217	162	1362	1587	3353	1500	1587	3084	303
Grp Volume(v), veh/h	91	43	58	39	0	291	19	989	23	165	553	564
Grp Sat Flow(s), veh/h	1587	1765	1500	1217	0	1524	1587	1676	1500	1587	1676	1711
Q Serve(g_s), s	8.9	1.1	1.8	2.0	0.0	13.7	0.8	21.6	0.8	7.5	24.4	24.4
Cycle Q Clear(g_c), s	8.9	1.1	1.8	3.1	0.0	13.7	0.8	21.6	0.8	7.5	24.4	24.4
Prop In Lane	1.00	1.00	1.00	1.00	0.89	1.00	1.00	1.00	1.00	1.00	0.18	0.18
Lane Grp Cap(c), veh/h	202	724	616	350	0	340	117	1033	462	159	562	573
V/C Ratio(X)	0.95	0.06	0.09	0.11	0.00	0.86	0.16	0.96	0.05	1.03	0.98	0.98
Avail Cap(c_a), veh/h	202	851	723	437	0	449	117	1033	462	159	562	573
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	13.3	13.5	24.2	0.0	27.9	32.4	25.3	18.1	33.6	24.6	24.6
Incr Delay (d2), s/veh	17.9	0.0	0.1	0.1	0.0	11.9	0.6	19.4	0.2	80.7	34.3	34.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile BackOfQ(50%), veh	0.0	0.5	0.7	0.7	0.0	6.9	0.4	12.7	0.4	6.8	16.6	16.9
LnGrp Delay(d), s/veh	30.2	13.3	13.6	24.3	0.0	39.8	33.1	44.7	18.3	114.5	58.9	58.7
LnGrp LOS	F	B	B	C		D	C	D	B	F	E	E
Approach Vol, veh/h		292			330			1031			1282	
Approach Delay, s/veh		57.1			38.0			43.9			65.9	
Approach LOS		E			D			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+R), s	27.5			35.1	10.0	29.5	14.0	21.1				
Change Period (Y+R), s	4.5			4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	23.0			36.0	5.5	25.0	9.5	22.0				
Max Q Clear Time (g_c+1), s	12.6			3.8	2.8	26.4	10.9	15.7				
Green Ext Time (p_c), s	0.0	0.0		0.4	0.0	0.0	0.0	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			54.2									
HCM 2010 LOS			D									



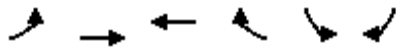
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	75	108	91	90	90	356	54	561	36	287	683	92
Future Volume (veh/h)	75	108	91	90	90	356	54	561	36	287	683	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	79	114	96	95	95	375	57	591	38	302	719	97
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	214	688	585	490	122	481	77	948	424	201	1209	541
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.05	0.28	0.28	0.13	0.36	0.36
Sat Flow, veh/h	868	1765	1500	1102	313	1234	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	79	114	96	95	0	470	57	591	38	302	719	97
Grp Sat Flow(s), veh/h	868	1765	1500	1102	0	1547	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	5.9	2.8	2.8	4.1	0.0	17.9	2.4	10.3	1.3	8.5	11.7	3.0
Cycle Q Clear(g_c), s	28.8	2.8	2.8	7.0	0.0	17.9	2.4	10.3	1.3	8.5	11.7	3.0
Prop In Lane	1.00	1.00	1.00	1.00	0.80	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	214	688	585	490	0	603	77	948	424	201	1209	541
V/C Ratio(X)	0.37	0.17	0.16	0.19	0.00	0.78	0.74	0.62	0.09	1.50	0.59	0.18
Avail Cap(c_a), veh/h	251	762	647	536	0	668	130	948	424	201	1209	541
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	13.4	13.4	15.6	0.0	18.0	31.5	21.0	17.7	29.3	17.5	14.7
Incr Delay (d2), s/veh	1.1	0.1	0.1	0.2	0.0	5.4	12.7	3.1	0.4	250.9	2.2	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	1.4	1.2	1.3	0.0	8.5	1.3	5.2	0.6	17.7	5.8	1.3	
LnGrp Delay(d), s/veh	29.5	13.5	13.5	15.8	0.0	23.3	44.2	24.1	18.1	280.2	19.6	15.4
LnGrp LOS	C	B	B	B		C	D	C	B	F	B	B
Approach Vol, veh/h		289			565			686			1118	
Approach Delay, s/veh		17.9			22.1			25.4			89.7	
Approach LOS		B			C			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	30.0	23.5		30.7	7.8	28.7		30.7				
Change Period (Y+R), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gr), s	19.0	19.0		29.0	5.5	22.0		29.0				
Max Q Clear Time (t_c), s	10.5	12.3		25.8	4.4	13.7		19.9				
Green Ext Time (p_c), s	0.0	1.9		0.4	0.0	2.9		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay			50.9									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	3	0	0	0	0	5	0	695	0	11	871	2
Future Volume (veh/h)	3	0	0	0	0	5	0	695	0	11	871	2
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1800	1765	1800	1800	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	3	0	0	0	0	6	0	772	0	12	968	2
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	0	0	0	0	17	118	2821	0	669	2888	6
Arrive On Green	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.84	0.00	0.84	0.84	0.84
Sat Flow, veh/h	923	0	0	0	0	1500	577	3441	0	695	3433	7
Grp Volume(v), veh/h	3	0	0	0	0	6	0	772	0	12	473	497
Grp Sat Flow(s), veh/h	923	0	0	0	0	1500	577	1676	0	695	1676	1763
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.2	0.0	2.9	0.0	0.2	3.8	3.8
Cycle Q Clear(g_c), s	0.4	0.0	0.0	0.0	0.0	0.2	0.0	2.9	0.0	3.1	3.8	3.8
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00	1.00		0.00
Lane Grp Cap(c), veh/h	128	0	0	0	0	17	118	2821	0	669	1411	1484
V/C Ratio(X)	0.02	0.00	0.00	0.00	0.00	0.35	0.00	0.27	0.00	0.02	0.34	0.34
Avail Cap(c_a), veh/h	559	0	0	0	0	478	118	2821	0	669	1411	1484
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	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	0.0	0.0	0.0	30.0	0.0	1.0	0.0	1.3	1.1	1.1
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	11.4	0.0	0.2	0.0	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	0.0	0.0	0.0	0.0	0.0	0.2	0.0	1.4	0.0	0.0	2.0	2.0
LnGrp Delay(d),s/veh	30.3	0.0	0.0	0.0	0.0	41.4	0.0	1.2	0.0	1.4	1.7	1.7
LnGrp LOS	C					D		A		A	A	A
Approach Vol, veh/h		3			6			772			982	
Approach Delay, s/veh		30.3			41.4			1.2			1.7	
Approach LOS		C			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.0		5.2		56.0		5.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		51.5		19.5		51.5		19.5				
Max Q Clear Time (g_c+I1), s		11.9		2.4		5.8		2.2				
Green Ext Time (p_c), s		5.2		0.0		6.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				1.7								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	42	255	134	158	172	108	69	525	69	138	691	17
Future Volume (veh/h)	42	255	134	158	172	108	69	525	69	138	691	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	45	271	143	168	183	115	73	559	73	147	735	18
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	482	216	167	696	311	123	1412	632	123	1409	34
Arrive On Green	0.04	0.14	0.14	0.11	0.21	0.21	0.08	0.42	0.42	0.08	0.42	0.42
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3345	82
Grp Volume(v), veh/h	45	271	143	168	183	115	73	559	73	147	368	385
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1750
Q Serve(g_s), s	2.0	5.4	6.4	7.5	3.3	3.5	3.2	8.3	2.1	5.5	11.6	11.6
Cycle Q Clear(g_c), s	2.0	5.4	6.4	7.5	3.3	3.5	3.2	8.3	2.1	5.5	11.6	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	66	482	216	167	696	311	123	1412	632	123	706	737
V/C Ratio(X)	0.69	0.56	0.66	1.01	0.26	0.37	0.60	0.40	0.12	1.20	0.52	0.52
Avail Cap(c_a), veh/h	45	1365	611	167	1412	632	123	1412	632	123	706	737
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	30.7	28.4	28.9	31.9	23.7	13.4	31.8	14.3	12.5	32.9	15.3	15.3
Incr Delay (d2), s/veh	1.9	1.0	3.5	71.0	0.2	0.7	7.6	0.8	0.4	144.6	2.7	2.6
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	12.6	2.9	6.5	1.5	1.8	1.6	4.0	0.9	7.3	5.9	6.1	
LnGrp Delay(d), s/veh	45.6	29.4	32.3	102.9	23.9	14.1	39.4	15.2	12.9	177.5	18.0	17.9
LnGrp LOS	D	C	C	F	C	B	D	B	B	F	B	B
Approach Vol, veh/h		459			466			705			900	
Approach Delay, s/veh		31.9			49.9			17.4			44.0	
Approach LOS		C			D			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	4.5	12.0	14.7	10.0	34.5	7.4	19.3					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	30.0	7.5	29.0	5.5	30.0	6.5	30.0					
Max Q Clear Time (g_c+I), s	9.5	9.5	8.4	5.2	13.6	4.0	5.5					
Green Ext Time (p_c), s	3.3	0.0	1.8	0.0	3.6	0.0	1.3					
Intersection Summary												
HCM 2010 Ctrl Delay		35.5										
HCM 2010 LOS		D										



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	4	870	618	65	73	6		
Future Volume (veh/h)	4	870	618	65	73	6		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h	1767	1765	1765	1765	1569	1765		
Adj Flow Rate, veh/h	4	956	679	71	80	7		
Adj No. of Lanes	1	2	2	1	2	1		
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	28	1320	950	425	1221	632		
Arrive On Green	0.02	0.39	0.28	0.28	0.42	0.42		
Sat Flow, veh/h	1587	3441	3441	1500	2898	1500		
Grp Volume(v), veh/h	4	956	679	71	80	7		
Grp Sat Flow(s), veh/h	1587	3441	3441	1500	1449	1500		
Q Serve(g_s), s	0.1	11.8	8.9	1.7	0.8	0.1		
Cycle Q Clear(g_c), s	0.1	11.8	8.9	1.7	0.8	0.1		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	28	1320	950	425	1221	632		
V/C Ratio(X)	0.14	0.72	0.71	0.17	0.07	0.01		
Avail Cap(c_a), veh/h	179	2102	1413	632	1221	632		
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	20.5	12.5	15.7	13.1	8.4	8.2		
Incr Delay (d2), s/veh	2.3	0.8	1.0	0.2	0.1	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%), veh	0.0	5.5	4.2	0.7	0.3	0.2		
LnGrp Delay(d), s/veh	25.8	13.3	16.7	13.3	8.5	8.2		
LnGrp LOS	C	B	B	B	A	A		
Approach Vol, veh/h		960	750		87			
Approach Delay, s/veh		13.3	16.4		8.5			
Approach LOS		B	B		A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				23.7		25.0	5.4	18.3
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				30.5		20.5	5.5	20.5
Max Q Clear Time (g_c+I1), s				13.8		2.8	2.1	10.9
Green Ext Time (p_c), s				5.4		0.2	0.0	2.9
Intersection Summary								
HCM 2010 Ctrl Delay			14.4					
HCM 2010 LOS			B					

Intersection

Int Delay, s/veh 13.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	170	38	98	197	7	106	14	144	18	21	15
Future Vol, veh/h	9	170	38	98	197	7	106	14	144	18	21	15
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	207	46	120	240	9	129	17	176	22	26	18

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	249	0	0	253
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1317	-	-	1312
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1317	-	-	1312
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	2.6	35	20.5
HCM LOS			E	C

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	427	1317	-	-	1312	-	-	298
HCM Lane V/C Ratio	0.754	0.008	-	-	-0.091	-	-	-0.221
HCM Control Delay (s)	35	7.8	0	-	8	0	-	20.5
HCM Lane LOS	E	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	6.2	0	-	-	0.3	-	-	0.8

Intersection

Intersection Delay, s/veh 22.3
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↶	↶	↷	
Traffic Vol, veh/h	30	145	87	85	125	14	130	139	192	97	121	33
Future Vol, veh/h	30	145	87	85	125	14	130	139	192	97	121	33
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	188	113	110	162	18	169	181	249	126	157	43
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay	32.3	19.2	19.4	20.1
HCM LOS	D	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	62%	0%	90%	0%	79%
Vol Right, %	0%	0%	100%	0%	38%	0%	10%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	130	139	192	30	232	85	139	97	154
LT Vol	130	0	0	30	0	85	0	97	0
Through Vol	0	139	0	0	145	0	125	0	121
RT Vol	0	0	192	0	87	0	14	0	33
Lane Flow Rate	169	181	249	39	301	110	181	126	200
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.435	0.439	0.557	0.106	0.753	0.307	0.472	0.347	0.514
Departure Headway (Hd)	9.278	8.761	8.037	9.78	8.994	10	9.41	9.921	9.244
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	387	410	446	366	401	359	383	362	388
Service Time	7.053	6.536	5.812	7.558	6.772	7.784	7.193	7.706	7.028
HCM Lane V/C Ratio	0.437	0.441	0.558	0.107	0.751	0.306	0.473	0.348	0.515
HCM Control Delay	19.1	18.3	20.5	13.7	34.7	17.2	20.4	17.9	21.5
HCM Lane LOS	C	C	C	B	D	C	C	C	C
HCM 95th-tile Q	2.1	2.2	3.3	0.4	6.1	1.3	2.4	1.5	2.8

Intersection

Intersection Delay, s/veh
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↕		↵	↕		↵	↕		↵	↕	
Traffic Vol, veh/h	43	142	21	21	111	179	9	113	71	215	88	46
Future Vol, veh/h	43	142	21	21	111	179	9	113	71	215	88	46
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	189	28	28	148	239	12	151	95	287	117	61
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	13.4	17.4	13.7	19.8
HCM LOS	B	C	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	35%	0%	100%	69%	0%	100%	17%	0%	100%	39%
Vol Right, %	0%	0%	65%	0%	0%	31%	0%	0%	83%	0%	0%	61%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	75	109	43	95	68	21	74	216	215	59	75
LT Vol	9	0	0	43	0	0	21	0	0	215	0	0
Through Vol	0	75	38	0	95	47	0	74	37	0	59	29
RT Vol	0	0	71	0	0	21	0	0	179	0	0	46
Lane Flow Rate	12	100	145	57	126	91	28	99	288	287	78	100
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.029	0.228	0.311	0.137	0.285	0.20	0.065	0.215	0.58	0.648	0.166	0.201
Departure Headway (Hd)	8.681	8.181	7.723	8.633	8.133	7.918	8.329	7.829	7.249	8.141	7.641	7.213
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	412	438	464	415	441	452	430	458	495	444	469	496
Service Time	6.451	5.951	5.493	6.405	5.905	5.69	6.09	5.59	5.01	5.903	5.403	4.976
HCM Lane V/C Ratio	0.029	0.228	0.313	0.137	0.286	0.201	0.065	0.216	0.582	0.646	0.166	0.202
HCM Control Delay	11.7	13.4	14	12.8	14.1	12.7	11.7	12.7	19.6	24.8	11.9	11.8
HCM Lane LOS	B	B	B	B	B	B	B	B	C	C	B	B
HCM 95th-tile Q	0.1	0.9	1.3	0.5	1.2	0.7	0.2	0.8	3.6	4.5	0.6	0.7

Intersection

Intersection Delay, s/c/h
 Intersection LOS E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↷	↶	↷
Traffic Vol, veh/h	70	286	37	107	224	79	13	231	91	75	157	33
Future Vol, veh/h	70	286	37	107	224	79	13	231	91	75	157	33
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	325	42	122	255	90	15	263	103	85	178	38
Number of Lanes	1	1	0	1	1	0	1	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	59.2	44.7	21.6	21.4
HCM LOS	F	E	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	49%	0%
Vol Thru, %	0%	100%	46%	0%	89%	0%	74%	51%	70%
Vol Right, %	0%	0%	54%	0%	11%	0%	26%	0%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	154	168	70	323	107	303	154	112
LT Vol	13	0	0	70	0	107	0	75	0
Through Vol	0	154	77	0	286	0	224	79	79
RT Vol	0	0	91	0	37	0	79	0	33
Lane Flow Rate	15	175	191	80	367	122	344	174	127
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.043	0.486	0.509	0.222	0.963	0.34	0.894	0.509	0.353
Departure Headway (Hd)	10.518	9.995	9.599	10.046	9.445	10.053	9.345	10.502	10.026
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	341	361	376	358	385	357	389	344	359
Service Time	8.275	7.752	7.356	7.798	7.197	7.806	7.099	8.261	7.785
HCM Lane V/C Ratio	0.044	0.485	0.508	0.223	0.953	0.342	0.884	0.506	0.354
HCM Control Delay	13.7	21.9	21.9	15.7	68.6	17.9	54.2	23.7	18.2
HCM Lane LOS	B	C	C	C	F	C	F	C	C
HCM 95th-tile Q	0.1	2.6	2.8	0.8	10.9	1.5	9.1	2.7	1.6

Intersection

Intersection Delay, ~~20.5h~~
 Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑		↵	↑↑		↵	↑↑		↵	↑↑	
Traffic Vol, veh/h	74	369	89	88	264	104	95	156	108	107	133	84
Future Vol, veh/h	74	369	89	88	264	104	95	156	108	107	133	84
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	456	110	109	326	128	117	193	133	132	164	104
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	38.5	27.1	22.2	20.8
HCM LOS	E	D	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	32%	0%	100%	58%	0%	100%	46%	0%	100%	35%
Vol Right, %	0%	0%	68%	0%	0%	42%	0%	0%	54%	0%	0%	65%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	104	160	74	246	212	88	176	192	107	89	128
LT Vol	95	0	0	74	0	0	88	0	0	107	0	0
Through Vol	0	104	52	0	246	123	0	176	88	0	89	44
RT Vol	0	0	108	0	0	89	0	0	104	0	0	84
Lane Flow Rate	117	128	198	91	304	262	109	217	237	132	109	158
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.363	0.379	0.558	0.268	0.848	0.709	0.326	0.621	0.652	0.413	0.327	0.453
Departure Headway (Hd)	1.14	10.64	0.167	0.546	0.046	9.752	20.787	10.287	9.908	1.259	0.759	0.301
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	324	339	356	341	361	372	334	352	365	320	335	350
Service Time	8.893	8.393	7.928	8.296	7.796	7.502	8.538	8.038	7.659	9.014	8.514	8.056
HCM Lane V/C Ratio	0.361	0.378	0.556	0.267	0.842	0.704	0.326	0.616	0.649	0.412	0.325	0.451
HCM Control Delay	20.1	19.8	25.1	17.1	49.5	33.1	18.7	28.6	29.5	21.7	18.7	21.4
HCM Lane LOS	C	C	D	C	E	D	C	D	D	C	C	C
HCM 95th-tile Q	1.6	1.7	3.2	1.1	7.8	5.2	1.4	4	4.4	1.9	1.4	2.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	33	502	9	52	307	82	9	59	118	155	47	56
Future Volume (veh/h)	33	502	9	52	307	82	9	59	118	155	47	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	36	552	10	57	337	90	10	65	130	170	52	62
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	785	351	81	650	171	524	562	477	598	707	601
Arrive On Green	0.04	0.23	0.23	0.05	0.25	0.25	0.01	0.32	0.32	0.09	0.40	0.40
Sat Flow, veh/h	1587	3353	1500	1587	2627	692	1587	1765	1500	1587	1765	1500
Grp Volume(v), veh/h	36	552	10	57	213	214	10	65	130	170	52	62
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1643	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.3	9.0	0.2	2.1	6.5	6.7	0.3	1.6	2.7	4.0	1.1	1.5
Cycle Q Clear(g_c), s	3	9.0	0.2	2.1	6.5	6.7	0.3	1.6	2.7	4.0	1.1	1.5
Prop In Lane	1.00	1.00	1.00	1.00	0.42	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	60	785	351	81	415	407	524	562	477	598	707	601
V/C Ratio(X)	0.60	0.70	0.03	0.70	0.51	0.53	0.02	0.12	0.27	0.28	0.07	0.10
Avail Cap(c_a), veh/h	146	1629	729	173	843	826	650	562	477	647	707	601
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	20.3	21.0	10.9	27.9	19.4	19.4	13.4	14.4	7.5	10.4	11.1	11.2
Incr Delay (d2), s/veh	0.4	1.2	0.0	10.4	1.0	1.1	0.0	0.4	1.4	0.3	0.2	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	4.3	0.1	1.2	3.1	3.1	0.1	0.8	1.6	1.7	0.6	0.7	0.7
LnGrp Delay(d), s/veh	17.6	22.1	10.9	38.3	20.3	20.5	13.5	14.8	8.9	10.6	11.3	11.5
LnGrp LOS	D	C	B	D	C	C	B	B	A	B	B	B
Approach Vol, veh/h	598			484			205			284		
Approach Delay, s/veh	22.9			22.5			11.0			10.9		
Approach LOS	C			C			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	23.5	7.6	18.5	5.3	28.4	6.7	19.3					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gr), s	19.0	6.5	29.0	5.5	21.0	5.5	30.0					
Max Q Clear Time (g_c), s	11.7	4.1	11.0	2.3	3.5	3.3	8.7					
Green Ext Time (p_c), s	0.5	0.0	3.0	0.0	0.3	0.0	2.1					
Intersection Summary												
HCM 2010 Ctrl Delay			19.1									
HCM 2010 LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↕	↘
Traffic Volume (veh/h)	24	682	215	193	427	4	138	197	252	14	265	10
Future Volume (veh/h)	24	682	215	193	427	4	138	197	252	14	265	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	29	812	256	230	508	5	164	235	300	17	315	12
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	347	914	409	233	683	7	248	262	335	63	454	17
Arrive On Green	0.22	0.27	0.27	0.15	0.20	0.20	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1587	3353	1500	1587	3402	33	990	705	900	13	1221	45
Grp Volume(v), veh/h	29	812	256	230	250	263	164	0	535	344	0	0
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1759	990	0	1606	1279	0	0
Q Serve(g_s), s	0.9	15.0	9.7	9.3	9.1	9.1	2.1	0.0	20.3	1.6	0.0	0.0
Cycle Q Clear(g_c), s	0.9	15.0	9.7	9.3	9.1	9.1	24.0	0.0	20.3	21.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.56	0.05		0.03
Lane Grp Cap(c), veh/h	347	914	409	233	337	353	248	0	597	534	0	0
V/C Ratio(X)	0.08	0.89	0.63	0.99	0.74	0.74	0.66	0.00	0.90	0.64	0.00	0.00
Avail Cap(c_a), veh/h	347	934	418	233	571	599	248	0	597	534	0	0
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	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	20.1	22.6	20.6	27.5	24.2	24.3	23.7	0.0	19.1	16.3	0.0	0.0
Incr Delay (d2), s/veh	0.1	10.4	2.8	54.6	3.3	3.1	13.0	0.0	18.7	5.9	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	8.2	4.3	7.6	4.5	4.7	3.8	0.0	12.0	5.7	0.0	0.0	0.0
LnGrp Delay(d),s/veh	20.2	32.9	23.5	82.1	27.5	27.4	36.7	0.0	37.8	22.2	0.0	0.0
LnGrp LOS	C	C	C	F	C	C	D		D	C		
Approach Vol, veh/h	1097				743			699			344	
Approach Delay, s/veh	30.4				44.4			37.6			22.2	
Approach LOS	C				D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	28.5	14.0	22.1			28.5	18.6	17.5				
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5	4.5	4.5				
Max Green Setting (Gmax), s	24.0	9.5	18.0			24.0	5.5	22.0				
Max Q Clear Time (g_c+I), s	25.0	11.3	17.0			23.9	2.9	11.1				
Green Ext Time (p_c), s	0.0	0.0	0.6			0.0	0.0	1.9				
Intersection Summary												
HCM 2010 Ctrl Delay			34.7									
HCM 2010 LOS			C									

Intersection

Intersection Delay, ~~20.2~~
 Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	126	316	5	14	201	102	6	34	18	191	28	111
Future Vol, veh/h	126	316	5	14	201	102	6	34	18	191	28	111
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	143	359	6	16	228	116	7	39	20	217	32	126
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	40.9	20.2	12.1	23.7
HCM LOS	E	C	B	C

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	10%	28%	4%	58%
Vol Thru, %	59%	71%	63%	8%
Vol Right, %	31%	1%	32%	34%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	58	447	317	330
LT Vol	6	126	14	191
Through Vol	34	316	201	28
RT Vol	18	5	102	111
Lane Flow Rate	66	508	360	375
Geometry Grp	1	1	1	1
Degree of Util (X)	0.143	0.890	0.639	0.695
Departure Headway (Hd)	7.789	6.311	6.387	6.668
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	463	569	562	540
Service Time	5.789	4.386	4.471	4.743
HCM Lane V/C Ratio	0.143	0.893	0.641	0.694
HCM Control Delay	12.1	40.9	20.2	23.7
HCM Lane LOS	B	E	C	C
HCM 95th-tile Q	0.5	10.4	4.5	5.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	80	858	67	93	485	16	82	229	173	62	250	88
Future Volume (veh/h)	80	858	67	93	485	16	82	229	173	62	250	88
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	88	943	74	102	533	18	90	252	190	68	275	97
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	904	405	126	929	31	111	598	508	84	401	142
Arrive On Green	0.07	0.27	0.27	0.08	0.28	0.28	0.07	0.34	0.34	0.05	0.32	0.32
Sat Flow, veh/h	1587	3353	1500	1587	3310	112	1587	1765	1500	1587	1247	440
Grp Volume(v), veh/h	88	943	74	102	270	281	90	252	190	68	0	372
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1745	1587	1765	1500	1587	0	1687
Q Serve(g_s), s	3.8	18.7	2.6	4.4	9.6	9.6	3.9	7.6	4.5	2.9	0.0	13.3
Cycle Q Clear(g_c), s	3.8	18.7	2.6	4.4	9.6	9.6	3.9	7.6	4.5	2.9	0.0	13.3
Prop In Lane	1.00	1.00	1.00	1.00	0.06	1.00	1.00	1.00	1.00	1.00	0.26	0.26
Lane Grp Cap(c), veh/h	108	904	405	126	471	490	111	598	508	84	0	543
V/C Ratio(X)	0.81	1.04	0.18	0.81	0.57	0.57	0.81	0.42	0.37	0.81	0.00	0.69
Avail Cap(c_a), veh/h	126	904	405	126	471	490	126	598	508	172	0	543
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	0.00	1.00
Uniform Delay (d), s/veh	25.3	19.4	31.4	21.4	21.4	31.8	17.7	8.1	32.5	0.0	20.5	20.5
Incr Delay (d2), s/veh	28.5	41.6	0.2	31.6	1.7	1.6	29.0	2.2	2.1	16.9	0.0	6.9
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	13.8	1.1	3.0	4.6	4.8	2.6	4.1	2.6	1.7	0.0	7.2	7.2
LnGrp Delay(d), s/veh	60.4	66.9	19.7	63.0	23.1	23.0	60.8	19.9	10.2	49.4	0.0	27.4
LnGrp LOS	E	F	B	E	C	C	E	B	B	D		C
Approach Vol, veh/h	1105			653			532			440		
Approach Delay, s/veh	63.3			29.3			23.3			30.8		
Approach LOS	E			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	28.0	10.0	23.2	9.3	26.8	9.2	24.0					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	5.5	18.7	5.5	22.3	5.5	18.7						
Max Q Clear Time (g_c+1), s	6.4	20.7	5.9	15.3	5.8	11.6						
Green Ext Time (p_c), s	1.4	0.0	0.0	0.0	1.1	0.0	1.6					
Intersection Summary												
HCM 2010 Ctrl Delay	42.1											
HCM 2010 LOS	D											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	2	245	173	53	105	53	130	430	84	168	388	66
Future Volume (veh/h)	2	245	173	53	105	53	130	430	84	168	388	66
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	114	250	177	54	107	54	133	439	86	171	396	67
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	163	331	281	78	149	75	181	1116	499	207	1172	524
Arrive On Green	0.10	0.19	0.19	0.05	0.13	0.13	0.11	0.33	0.33	0.13	0.35	0.35
Sat Flow, veh/h	1587	1765	1500	1587	1107	559	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	14	250	177	54	0	161	133	439	86	171	396	67
Grp Sat Flow(s), veh/h	1587	1765	1500	1587	0	1666	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	4.2	8.1	4.4	2.0	0.0	5.6	4.9	6.0	2.4	6.3	5.2	1.8
Cycle Q Clear(g_c), s	4.2	8.1	4.4	2.0	0.0	5.6	4.9	6.0	2.4	6.3	5.2	1.8
Prop In Lane	1.00	1.00	1.00	1.00	0.34	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	163	331	281	78	0	224	181	1116	499	207	1172	524
V/C Ratio(X)	0.70	0.76	0.63	0.69	0.00	0.72	0.74	0.39	0.17	0.83	0.34	0.13
Avail Cap(c_a), veh/h	163	529	449	145	0	499	198	1116	499	225	1172	524
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.1	23.1	10.3	28.1	0.0	24.9	25.7	15.4	14.2	25.5	14.4	13.3
Incr Delay (d2), s/veh	2.6	3.5	2.3	10.2	0.0	4.3	12.2	1.0	0.7	20.5	0.8	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	4.2	2.5	1.1	0.0	2.8	2.8	2.9	1.1	3.9	2.5	0.8	0.8
LnGrp Delay(d), s/veh	28.7	26.6	12.6	38.3	0.0	29.2	38.0	16.4	14.9	45.9	15.2	13.8
LnGrp LOS	D	C	B	D		C	D	B	B	D	B	B
Approach Vol, veh/h		541			215			658			634	
Approach Delay, s/veh		24.6			31.5			20.6			23.3	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	12.0	24.5	7.5	15.8	11.3	25.5	10.7	12.6				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	20.0	5.5	18.0	7.5	21.0	5.5	18.0					
Max Q Clear Time (g_c+1), s	11.0	4.0	10.1	6.9	7.2	6.2	7.6					
Green Ext Time (p_c), s	0.0	2.2	0.0	1.2	0.0	2.1	0.0	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			23.6									
HCM 2010 LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	817	817	68	51	423	83	85	240	127	210	299	111
Future Volume (veh/h)	817	817	68	51	423	83	85	240	127	210	299	111
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	151	898	75	56	465	91	93	264	140	231	329	122
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	887	397	69	812	363	105	766	343	391	1371	713
Arrive On Green	0.07	0.26	0.26	0.04	0.24	0.24	0.07	0.23	0.23	0.25	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	817	817	167	167	1667	1667	1667	1667	1667	1667	1667	1667
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	5.5	22.0	2.5	2.9	10.1	2.2	4.8	5.5	6.6	10.7	5.3	3.9
Cycle Q Clear(g_c), s	5.5	22.0	2.5	2.9	10.1	2.2	4.8	5.5	6.6	10.7	5.3	3.9
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	105	887	397	69	812	363	105	766	343	391	1371	713
V/C Ratio(X)	1.44	1.01	0.19	0.81	0.57	0.25	0.89	0.34	0.41	0.59	0.24	0.17
Avail Cap(c_a), veh/h	105	887	397	105	887	397	105	766	343	391	1371	713
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	30.6	30.6	13.8	39.4	27.7	7.2	38.5	26.8	27.3	27.6	16.1	12.5
Incr Delay (d2), s	12.7	33.2	0.2	23.2	0.8	0.4	53.4	1.2	3.6	2.3	0.4	0.5
Initial Q Delay(d3), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh	14.2	14.2	1.3	1.7	4.7	1.6	3.7	2.7	3.1	4.9	2.5	1.7
LnGrp Delay(d), s	1.5	63.8	14.0	62.6	28.5	7.5	91.9	28.1	30.9	29.9	16.5	13.0
LnGrp LOS	F	F	B	E	C	A	F	C	C	C	B	B
Approach Vol, veh/h	1124			612			497			682		
Approach Delay, s/veh	89.7			28.5			40.8			20.4		
Approach LOS	F			C			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	23.5	23.5	8.1	26.5	10.0	38.5	10.0	24.6				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	19.0	19.0	5.5	22.0	5.5	34.0	5.5	22.0				
Max Q Clear Time (G+Y+R), s	13.6	13.6	4.9	24.0	6.8	7.3	7.5	12.1				
Green Ext Time (p_c), s	1.4	1.4	0.0	0.0	0.0	2.3	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			52.3									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	73	916	107	60	579	91	106	244	58	159	241	83
Future Volume (veh/h)	73	916	107	60	579	91	106	244	58	159	241	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	197	1041	122	68	658	103	120	277	66	181	274	94
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	212	1045	467	83	773	346	172	772	181	192	737	247
Arrive On Green	0.13	0.31	0.31	0.05	0.23	0.23	0.11	0.29	0.29	0.12	0.30	0.30
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	2697	632	1587	2467	828
Grp Volume(v), veh/h	197	1041	122	68	658	103	120	170	173	181	184	184
Grp Sat Flow(s), veh/h	1587	1676	1500	1587	1676	1500	1587	1676	1653	1587	1676	1619
Q Serve(g_s), s	9.7	24.4	4.8	3.3	14.8	4.5	5.7	6.4	6.5	8.9	6.8	7.1
Cycle Q Clear(g_c), s	9.7	24.4	4.8	3.3	14.8	4.5	5.7	6.4	6.5	8.9	6.8	7.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.38	1.00	0.51	0.51	0.51
Lane Grp Cap(c), veh/h	212	1045	467	83	773	346	172	480	473	192	501	484
V/C Ratio(X)	0.93	1.00	0.26	0.82	0.85	0.30	0.70	0.36	0.36	0.94	0.37	0.38
Avail Cap(c_a), veh/h	212	1045	467	111	832	372	172	480	473	192	501	484
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	27.0	27.0	20.3	36.9	29.0	25.0	33.8	22.3	22.4	34.3	21.7	21.8
Incr Delay (d2), s/veh	2.5	26.9	0.3	28.1	8.0	0.5	11.9	2.1	2.2	49.0	2.1	2.3
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	15.0	2.0	2.1	7.7	1.9	3.1	3.2	3.3	6.5	3.4	3.5	3.5
LnGrp Delay(d), s/veh	16.2	53.9	20.6	64.9	37.0	25.5	45.7	24.4	24.5	83.3	23.8	24.1
LnGrp LOS	E	D	C	E	D	C	D	C	C	F	C	C
Approach Vol, veh/h	1360			829			463			549		
Approach Delay, s/veh	54.2			37.8			30.0			43.5		
Approach LOS	D			D			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	27.0	8.6	29.0	13.0	28.0	15.0	22.6					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G), s	22.5	5.5	24.5	8.5	23.5	10.5	19.5					
Max Q Clear Time (G+Y), s	18.5	5.3	26.4	7.7	9.1	11.7	16.8					
Green Ext Time (p_c), s	1.5	0.0	0.0	0.0	1.6	0.0	1.2					
Intersection Summary												
HCM 2010 Ctrl Delay			44.6									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1134	6	0	737	0	46
Future Vol, veh/h	1134	6	0	737	0	46
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	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1233	7	0	801	0	50

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 620
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 431
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 431
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.4
HCM LOS			B

Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	431	-	-	-
HCM Lane V/C Ratio	0.116	-	-	-
HCM Control Delay (s)	14.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection























Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↕↕	↕↕	↗
Traffic Vol, veh/h	0	52	0	1266	1052	49
Future Vol, veh/h	0	52	0	1266	1052	49
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	-	-	-	0
Veh in Median Storage#	-		-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	57	0	1376	1143	53

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 572	-	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	- 6.94	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	- 3.32	-	-
Pot Cap-1 Maneuver	0 463	0	-
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	- 463	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR
Capacity (veh/h)	-	463	-	-
HCM Lane V/C Ratio	-	0.122	-	-
HCM Control Delay (s)	-	13.9	-	-
HCM Lane LOS	-	B	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	34	56	23	30	54	60	664	54	87	533	84
Future Volume (veh/h)	74	34	56	23	30	54	60	664	54	87	533	84
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	80	37	61	25	33	59	65	722	59	95	579	91
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	93	153	99	64	114	107	1410	439	136	1038	465
Arrive On Green	0.07	0.15	0.15	0.03	0.11	0.11	0.06	0.29	0.29	0.08	0.31	0.31
Sat Flow, veh/h	1681	600	990	3261	569	1017	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	80	0	98	25	0	92	65	722	59	95	579	91
Grp Sat Flow(s),veh/h/ln	1681	0	1590	1630	0	1585	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	1.9	0.0	2.3	0.3	0.0	2.2	1.5	5.1	1.2	2.2	5.9	1.8
Cycle Q Clear(g_c), s	1.9	0.0	2.3	0.3	0.0	2.2	1.5	5.1	1.2	2.2	5.9	1.8
Prop In Lane	1.00		0.62	1.00		0.64	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	0	246	99	0	177	107	1410	439	136	1038	465
V/C Ratio(X)	0.65	0.00	0.40	0.25	0.00	0.52	0.61	0.51	0.13	0.70	0.56	0.20
Avail Cap(c_a), veh/h	763	0	1345	600	0	914	639	4667	1453	845	3659	1637
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	18.4	0.0	15.5	19.3	0.0	17.1	18.6	12.0	10.6	18.3	11.7	10.3
Incr Delay (d2), s/veh	5.7	0.0	1.0	1.3	0.0	2.3	5.4	0.3	0.1	6.4	0.5	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	1.1	0.0	1.1	0.2	0.0	1.1	0.9	2.2	0.5	1.3	2.7	0.8
LnGrp Delay(d),s/veh	24.1	0.0	16.6	20.7	0.0	19.4	24.0	12.3	10.8	24.6	12.2	10.5
LnGrp LOS	C		B	C		B	C	B	B	C	B	B
Approach Vol, veh/h		178			117			846			765	
Approach Delay, s/veh		20.0			19.7			13.1			13.6	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	16.4	5.7	10.8	7.1	17.1	7.5	9.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	20.5	39.5	7.5	34.5	15.5	44.5	18.5	23.5				
Max Q Clear Time (g_c+I1),s	4.2	7.1	2.3	4.3	3.5	7.9	3.9	4.2				
Green Ext Time (p_c), s	0.2	4.9	0.0	0.5	0.1	3.9	0.1	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			14.3									
HCM 2010 LOS			B									

Intersection

Int Delay, s/veh 7.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↘	↑↑	↑↑	↗	↘	↗
Traffic Vol, veh/h	6	1032	884	203	114	2
Future Vol, veh/h	6	1032	884	203	114	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	200	-	-	225	150	0
Veh in Median Storage, #	0	0	-	0	-	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	6	1064	911	209	118	2

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	1120	0	0
Stage 1	-	-	911
Stage 2	-	-	544
Critical Hdwy	4.14	-	-
Critical Hdwy Stg 1	-	-	5.84
Critical Hdwy Stg 2	-	-	5.84
Follow-up Hdwy	2.22	-	-
Pot Cap-1 Maneuve	619	-	-
Stage 1	-	-	352
Stage 2	-	-	546
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuve	619	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	348
Stage 2	-	-	546























Approach

	EB	WB	SB
HCM Control Delay, s	0.1	0	143.1
HCM LOS			F

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn	SBLn2
Capacity (veh/h)	619	-	-	-	120	551
HCM Lane V/C Ratio	0.01	-	-	-	-0.979	0.004
HCM Control Delay (s)	10.9	-	-	-	-145.4	11.6
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q(veh)	0	-	-	-	6.5	0

SWC US395/SR18 TIA Project Opening Year Plus Project Phase 1 & 2 PM Peak Hour
 HCM 2010 Signalized Intersection Summary 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	942	66	103	780	13	72	3	61	110	3	241
Future Volume (veh/h)	126	942	66	103	780	13	72	3	61	110	3	241
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1765	1765	1800	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	129	961	67	105	796	13	73	3	62	112	3	246
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	1	1	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	1272	569	132	1196	535	178	22	85	140	6	458
Arrive On Green	0.10	0.38	0.38	0.08	0.36	0.36	0.14	0.14	0.14	0.09	0.31	0.31
Sat Flow, veh/h	1587	3353	1500	1681	3353	1500	579	154	598	1587	18	1485
Grp Volume(v), veh/h	129	961	67	105	796	13	138	0	0	112	0	249
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1681	1676	1500	1331	0	0	1587	0	1503
Q Serve(g_s), s	4.6	14.4	1.7	3.6	11.6	0.3	4.4	0.0	0.0	4.0	0.0	7.9
Cycle Q Clear(g_c), s	4.6	14.4	1.7	3.6	11.6	0.3	5.6	0.0	0.0	4.0	0.0	7.9
Prop In Lane	1.00		1.00	1.00		1.00	0.53		0.45	1.00		0.99
Lane Grp Cap(c), veh/h	161	1272	569	132	1196	535	285	0	0	140	0	464
V/C Ratio(X)	0.80	0.76	0.12	0.79	0.67	0.02	0.48	0.00	0.00	0.80	0.00	0.54
Avail Cap(c_a), veh/h	316	1884	843	218	1652	739	578	0	0	288	0	948
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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.4	15.6	11.7	26.2	15.7	12.1	23.6	0.0	0.0	25.9	0.0	16.6
Incr Delay (d2), s/veh	8.9	1.0	0.1	10.2	0.6	0.0	1.3	0.0	0.0	10.1	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	2.4	6.7	0.7	2.0	5.4	0.1	2.2	0.0	0.0	2.1	0.0	3.4
LnGrp Delay(d),s/veh	34.3	16.6	11.8	36.4	16.3	12.1	24.8	0.0	0.0	36.0	0.0	17.5
LnGrp LOS	C	B	B	D	B	B	C			D		B
Approach Vol, veh/h		1157			914			138				361
Approach Delay, s/veh		18.3			18.6			24.8				23.3
Approach LOS		B			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	9.6	12.8	9.1	26.4		22.3	10.4	25.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax),s	10.5	21.5	7.5	32.5		36.5	11.5	28.5				
Max Q Clear Time (g_c+l1),s	6.9	7.6	5.6	16.4		9.9	6.6	13.6				
Green Ext Time (p_c), s	0.1	0.6	0.0	5.5		1.7	0.1	4.2				
Intersection Summary												
HCM 2010 Ctrl Delay				19.5								
HCM 2010 LOS				B								

Intersection

























Int Delay, s/veh 13.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	5	0	259	0	0	0	327	749	0	0	806	17
Future Vol, veh/h	5	0	259	0	0	0	327	749	0	0	806	17
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	-	-	-	-	-	-	300	-	-	-	-	250
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	267	0	0	0	337	772	0	0	831	18

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	2277	831 2420	2295 772 849	0 - - - 0
Stage 1	831 831	- 1446 1446	- - - - - -	- - - - - -
Stage 2	1446 1446	- 974 849	- - - - - -	- - - - - -
Critical Hdwy	7.12 6.52	6.22 7.12 6.52	6.22 4.12	- - - - - -
Critical Hdwy Stg 1	6.12 5.52	- 6.12 5.52	- - - - - -	- - - - - -
Critical Hdwy Stg 2	6.12 5.52	- 6.12 5.52	- - - - - -	- - - - - -
Follow-up Hdwy	3.518 4.018	3.318 3.518 4.018	3.318 2.218	- - - - - -
Pot Cap-1 Maneuver	28 40	370 22 39	400 789	- 0 0 - -
Stage 1	364 384	- 164 197	- - - - - -	0 0 - -
Stage 2	164 197	- 303 377	- - - - - -	0 0 - -
Platoon blocked, %				- - - - - -
Mov Cap-1 Maneuver	19 23	370 4 22	400 789	- - - - - -
Mov Cap-2 Maneuver	19 23	- 4 22	- - - - - -	- - - - - -
Stage 1	209 384	- 94 113	- - - - - -	- - - - - -
Stage 2	94 113	- 84 377	- - - - - -	- - - - - -

Approach	EB	WB	NB	SB
HCM Control Delay (s)	9.3	0	3.9	0
HCM LOS	F	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn	WBLn	SBT	SBR
Capacity (veh/h)	789	-	274	-	-	-
HCM Lane V/C Ratio	0.427	-	0.993	-	-	-
HCM Control Delay (s)	12.9	-	93.3	0	-	-
HCM Lane LOS	B	-	F	A	-	-
HCM 95th %tile Q(veh)	2.2	-	10	-	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	560	344	313	610	149	301	728	142	149	660	59
Future Volume (veh/h)	113	560	344	313	610	149	301	728	142	149	660	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	116	577	355	323	629	154	310	751	146	154	680	61
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	703	315	349	769	344	282	1168	522	183	960	429
Arrive On Green	0.10	0.21	0.21	0.12	0.23	0.23	0.18	0.35	0.35	0.12	0.29	0.29
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	116	577	355	323	629	154	310	751	146	154	680	61
Grp Sat Flow(s),veh/h/ln	1587	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	6.2	14.3	11.8	9.6	15.5	5.5	15.5	16.4	6.1	8.3	15.9	2.6
Cycle Q Clear(g_c), s	6.2	14.3	11.8	9.6	15.5	5.5	15.5	16.4	6.1	8.3	15.9	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	160	703	315	349	769	344	282	1168	522	183	960	429
V/C Ratio(X)	0.73	0.82	1.13	0.93	0.82	0.45	1.10	0.64	0.28	0.84	0.71	0.14
Avail Cap(c_a), veh/h	160	806	361	349	960	429	282	1168	522	209	960	429
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	38.1	32.9	14.3	38.0	31.9	14.8	35.9	23.9	20.5	37.8	27.9	23.2
Incr Delay (d2), s/veh	15.2	6.0	89.3	30.2	4.6	0.9	83.1	2.7	1.3	22.9	4.4	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	3.4	7.2	13.7	5.3	7.7	2.9	13.2	8.1	2.7	4.8	8.0	1.2
LnGrp Delay(d),s/veh	53.3	39.0	103.7	68.2	36.5	15.7	119.0	26.6	21.9	60.7	32.3	23.9
LnGrp LOS	D	D	F	E	D	B	F	C	C	E	C	C
Approach Vol, veh/h		1048			1106			1207			895	
Approach Delay, s/veh		62.5			42.9			49.8			36.6	
Approach LOS		E			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	34.9	15.0	22.8	20.0	29.5	13.3	24.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	15	29.0	10.5	21.0	15.5	25.0	6.5	25.0				
Max Q Clear Time (g_c+I1),s	10.5	18.4	11.6	16.3	17.5	17.9	8.2	17.5				
Green Ext Time (p_c), s	0.0	3.6	0.0	2.0	0.0	2.4	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			48.3									
HCM 2010 LOS			D									



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	103	144	213	1068	1267	33		
Future Volume (veh/h)	103	144	213	1068	1267	33		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00				1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h	1765	1765	1667	1765	1765	1765		
Adj Flow Rate, veh/h	112	157	232	1161	1377	36		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	250	223	177	2242	1563	699		
Arrive On Green	0.15	0.15	0.11	0.67	0.47	0.47		
Sat Flow, veh/h	1681	1500	1587	3441	3441	1500		
Grp Volume(v), veh/h	112	157	232	1161	1377	36		
Grp Sat Flow(s), veh/h	1681	1500	1587	1676	1676	1500		
Q Serve(g_s), s	3.0	4.9	5.5	8.7	18.4	0.6		
Cycle Q Clear(g_c), s	3.0	4.9	5.5	8.7	18.4	0.6		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	250	223	177	2242	1563	699		
V/C Ratio(X)	0.45	0.70	1.31	0.52	0.88	0.05		
Avail Cap(c_a), veh/h	613	547	177	2242	1563	699		
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	20.0	20.0	21.9	4.1	11.9	7.2		
Incr Delay (d2), s/veh	1.3	4.0	174.5	0.9	7.5	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	4.2	10.9	4.1	10.0	0.3			
LnGrp Delay(d),s/veh	20.4	24.0	196.4	5.0	19.4	7.3		
LnGrp LOS	C	C	F	A	B	A		
Approach Vol, veh/h	269		1393		1413			
Approach Delay, s/veh	27.5		36.9		19.1			
Approach LOS	C		D		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	2		4		5		6	
Phs Duration (G+Y+Rc), s	7.5		11.8		10.0		27.5	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	33.0		18.0		5.5		23.0	
Max Q Clear Time (g_c+I), s	11.7		6.9		7.5		20.4	
Green Ext Time (p_c), s	7.7		0.6		0.0		1.9	
Intersection Summary								
HCM 2010 Ctrl Delay			27.5					
HCM 2010 LOS			C					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	137	34	46	15	33	113	36	1066	28	121	1115	173
Future Volume (veh/h)	137	34	46	15	33	113	36	1066	28	121	1115	173
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	146	36	49	16	35	120	38	1134	30	129	1186	184
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	173	523	444	234	45	156	112	1459	653	152	1342	207
Arrive On Green	0.11	0.30	0.30	0.13	0.13	0.13	0.07	0.44	0.44	0.10	0.46	0.46
Sat Flow, veh/h	1587	1765	1500	1235	351	1202	1587	3353	1500	1587	2912	450
Grp Volume(v), veh/h	146	36	49	16	0	155	38	1134	30	129	681	689
Grp Sat Flow(s), veh/h	1667	1765	1500	1235	0	1553	1587	1676	1500	1587	1676	1685
Q Serve(g_s), s	7.1	1.1	1.9	0.9	0.0	7.5	1.8	22.6	0.9	6.2	28.8	29.2
Cycle Q Clear(g_c), s	7.1	1.1	1.9	2.1	0.0	7.5	1.8	22.6	0.9	6.2	28.8	29.2
Prop In Lane	1.00	1.00	1.00	1.00	0.77	1.00	1.00	1.00	1.00	1.00	0.27	0.27
Lane Grp Cap(c), veh/h	173	523	444	234	0	201	112	1459	653	152	772	776
V/C Ratio(X)	0.85	0.07	0.11	0.07	0.00	0.77	0.34	0.78	0.05	0.85	0.88	0.89
Avail Cap(c_a), veh/h	173	790	672	422	0	437	112	1459	653	152	772	776
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.2	19.8	20.0	31.0	0.0	32.9	34.6	18.8	12.7	34.8	19.1	19.2
Incr Delay (d2), s/veh	0.2	0.1	0.1	0.1	0.0	6.1	1.8	4.1	0.1	33.4	13.8	14.3
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	0.6	0.8	0.3	0.0	3.6	0.8	11.2	0.4	4.1	16.2	16.5	16.5
LnGrp Delay(d), s/veh	64.3	19.8	20.1	31.1	0.0	39.0	36.4	23.0	12.9	68.2	32.9	33.5
LnGrp LOS	E	B	C	C		D	D	C	B	E	C	C
Approach Vol, veh/h		231			171			1202			1499	
Approach Delay, s/veh		48.0			38.2			23.1			36.2	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+R), s	12.0	8.5		27.6	10.0	40.5	13.0	14.6				
Change Period (Y+R), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	34.0	34.0		35.0	5.5	36.0	8.5	22.0				
Max Q Clear Time (g_c+I), s	12.6	12.6		3.9	3.8	31.2	9.1	9.5				
Green Ext Time (p_c), s	0.0	4.7		0.3	0.0	3.1	0.0	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			32.1									
HCM 2010 LOS			C									



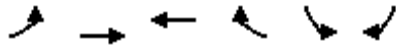
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	64	79	35	47	103	261	83	815	76	296	772	90
Future Volume (veh/h)	64	79	35	47	103	261	83	815	76	296	772	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	67	82	36	49	107	272	86	849	79	308	804	94
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	567	482	451	142	361	106	990	443	293	1385	619
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.07	0.30	0.30	0.18	0.41	0.41
Sat Flow, veh/h	944	1765	1500	1198	442	1124	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	67	82	36	49	0	379	86	849	79	308	804	94
Grp Sat Flow(s), veh/h	944	1765	1500	1198	0	1566	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	4.6	2.2	1.1	2.1	0.0	14.7	3.6	16.2	2.7	12.5	12.5	2.7
Cycle Q Clear(g_c), s	19.3	2.2	1.1	4.3	0.0	14.7	3.6	16.2	2.7	12.5	12.5	2.7
Prop In Lane	1.00	1.00	1.00	1.00	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	205	567	482	451	0	503	106	990	443	293	1385	619
V/C Ratio(X)	0.33	0.14	0.07	0.11	0.00	0.75	0.81	0.86	0.18	1.05	0.58	0.15
Avail Cap(c_a), veh/h	306	755	642	579	0	670	152	990	443	293	1385	619
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	16.4	16.0	17.9	0.0	20.6	31.2	22.5	17.8	27.6	15.4	12.5
Incr Delay (d2), s/veh	0.9	0.1	0.1	0.1	0.0	3.4	19.1	9.5	0.9	66.8	1.8	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	1.1	0.5	0.7	0.0	6.8	2.1	8.7	1.2	10.8	6.1	1.2	1.2
LnGrp Delay(d), s/veh	30.2	16.5	16.1	18.0	0.0	24.0	50.3	32.1	18.6	94.5	17.1	13.0
LnGrp LOS	C	B	B	B		C	D	C	B	F	B	B
Approach Vol, veh/h		185			428			1014			1206	
Approach Delay, s/veh		21.4			23.3			32.6			36.6	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	17.0	24.5		26.3	9.0	32.5		26.3				
Change Period (Y+R), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (G_max), s	20.0	20.0		29.0	6.5	26.0		29.0				
Max Q Clear Time (G+Y+R), s	13.2	13.2		21.3	5.6	14.5		16.7				
Green Ext Time (p_c), s	0.0	1.0		0.4	0.0	3.9		2.0				
Intersection Summary												
HCM 2010 Ctrl Delay											32.1	
HCM 2010 LOS											C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	3	0	0	0	0	7	0	996	0	14	849	3
Future Volume (veh/h)	3	0	0	0	0	7	0	996	0	14	849	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1800	1765	1800	1800	1765	1800	1765	1765	1800	1765	1765	1800
Adj Flow Rate, veh/h	3	0	0	0	0	7	0	1048	0	15	894	3
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	0	0	0	0	19	2	2590	0	30	2935	10
Arrive On Green	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.77	0.00	0.02	0.86	0.86
Sat Flow, veh/h	889	0	0	0	0	1500	1681	3441	0	1681	3428	12
Grp Volume(v), veh/h	3	0	0	0	0	7	0	1048	0	15	437	460
Grp Sat Flow(s), veh/h	889	0	0	0	0	1500	1681	1676	0	1681	1676	1763
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.3	0.0	7.1	0.0	0.6	3.5	3.5
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.0	0.0	0.3	0.0	7.1	0.0	0.6	3.5	3.5
Prop In Lane	1.00		0.00	0.00		1.00	1.00		0.00	1.00		0.01
Lane Grp Cap(c), veh/h	116	0	0	0	0	19	2	2590	0	30	1435	1509
V/C Ratio(X)	0.03	0.00	0.00	0.00	0.00	0.37	0.00	0.40	0.00	0.49	0.30	0.30
Avail Cap(c_a), veh/h	116	0	0	0	0	394	135	2590	0	135	1435	1509
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	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	0.0	0.0	0.0	0.0	33.6	0.0	2.6	0.0	33.4	1.0	1.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	11.5	0.0	0.5	0.0	11.8	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	0.0	0.0	0.0	0.0	0.0	0.2	0.0	3.4	0.0	0.4	1.8	1.9
LnGrp Delay(d),s/veh	33.9	0.0	0.0	0.0	0.0	45.1	0.0	3.1	0.0	45.2	1.5	1.5
LnGrp LOS	C					D		A		D	A	A
Approach Vol, veh/h		3			7		1048			912		
Approach Delay, s/veh		33.9			45.1		3.1			2.2		
Approach LOS		C			D		A			A		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	57.5			5.4	0.0	63.2		5.4				
Change Period (Y+R), s	4.5			4.5	4.5	4.5		4.5				
Max Green Setting (G_max), s	53.0			18.0	5.5	53.0		18.0				
Max Q Clear Time (g_c+1), s	19.4			2.5	0.0	5.5		2.3				
Green Ext Time (p_c), s	0.0	7.8		0.0	0.0	5.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				2.9								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	35	294	81	92	259	165	162	760	215	189	663	21
Future Volume (veh/h)	35	294	81	92	259	165	162	760	215	189	663	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	37	309	85	97	273	174	171	800	226	199	698	22
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	474	212	120	604	270	190	1372	614	190	1358	43
Arrive On Green	0.04	0.14	0.14	0.08	0.18	0.18	0.12	0.41	0.41	0.12	0.41	0.41
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3318	105
Grp Volume(v), veh/h	37	309	85	97	273	174	171	800	226	199	353	367
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1746
Q Serve(g_s), s	1.6	6.2	3.7	4.3	5.1	5.3	7.5	13.1	7.4	8.5	11.1	11.2
Cycle Q Clear(g_c), s	6.6	6.2	3.7	4.3	5.1	5.3	7.5	13.1	7.4	8.5	11.1	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	58	474	212	120	604	270	190	1372	614	190	686	715
V/C Ratio(X)	0.64	0.65	0.40	0.81	0.45	0.64	0.90	0.58	0.37	1.05	0.51	0.51
Avail Cap(c_a), veh/h	123	1372	614	123	1372	614	190	1372	614	190	686	715
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	30.7	28.8	27.7	32.3	25.9	13.1	30.8	16.2	14.6	31.2	15.7	15.7
Incr Delay (d2), s/veh	1.1	1.5	1.2	31.5	0.5	2.6	38.2	1.8	1.7	77.6	2.7	2.6
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	1.2	2.9	1.6	2.9	2.4	2.4	5.3	6.3	3.4	7.8	5.6	5.8
LnGrp Delay(d), s/veh	4.8	30.3	28.9	63.8	26.4	15.7	68.9	18.1	16.3	108.8	18.4	18.3
LnGrp LOS	D	C	C	E	C	B	E	B	B	F	B	B
Approach Vol, veh/h		431			544			1197			919	
Approach Delay, s/veh		31.3			29.7			25.0			37.9	
Approach LOS		C			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	13.0	33.5	9.8	14.5	13.0	33.5	7.1	17.3				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gr), s	29.0	29.0	5.5	29.0	8.5	29.0	5.5	29.0				
Max Q Clear Time (t0+1), s	15.4	6.3	8.2	9.5	13.2	3.6	7.3					
Green Ext Time (p_c), s	0.0	4.7	0.0	1.8	0.0	3.4	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			30.5									
HCM 2010 LOS			C									



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	7	875	946	154	190	25		
Future Volume (veh/h)	7	875	946	154	190	25		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h	1767	1765	1765	1765	1569	1765		
Adj Flow Rate, veh/h	7	931	1006	164	202	27		
Adj No. of Lanes	1	2	2	1	2	1		
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	15	1590	1266	566	1018	527		
Arrive On Green	0.01	0.47	0.38	0.38	0.35	0.35		
Sat Flow, veh/h	1587	3441	3441	1500	2898	1500		
Grp Volume(v), veh/h	7	931	1006	164	202	27		
Grp Sat Flow(s), veh/h	1587	3441	3441	1500	2898	1500		
Q Serve(g_s), s	0.2	10.4	13.7	3.9	2.5	0.6		
Cycle Q Clear(g_c), s	0.2	10.4	13.7	3.9	2.5	0.6		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	15	1590	1266	566	1018	527		
V/C Ratio(X)	0.48	0.59	0.79	0.29	0.20	0.05		
Avail Cap(c_a), veh/h	1587	3441	3441	1500	2898	1500		
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	25.4	9.9	14.3	11.2	11.7	11.0		
Incr Delay (d2), s/veh	2.1	0.3	2.6	0.3	0.4	0.2		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	4.9	6.7	1.6	1.0	0.7		
LnGrp Delay(d),s/veh	17.5	10.2	16.9	11.5	12.1	11.2		
LnGrp LOS	D	B	B	B	B	B		
Approach Vol, veh/h		938	1170		229			
Approach Delay, s/veh		10.5	16.1		12.0			
Approach LOS		B	B		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				28.9		22.6	5.0	24.0
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				32.9		18.1	5.5	22.9
Max Q Clear Time (g_c+I1), s				12.4		4.5	2.2	15.7
Green Ext Time (p_c), s				5.7		0.6	0.0	3.7
Intersection Summary								
HCM 2010 Ctrl Delay			13.5					
HCM 2010 LOS			B					

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	16	128	40	52	103	11	33	12	28	3	11	19
Future Vol, veh/h	16	128	40	52	103	11	33	12	28	3	11	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	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	-	-	0	-	-	0	-	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	79	79	79	79	79	79	79	79	79	79	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	162	51	66	130	14	42	15	35	4	14	24

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	144	0	0	213
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	438	-	-	1357
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	438	-	-	1357
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	6.7	2.4	13.3	11.3
HCM LOS			B	B

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)		528	1438	-	-	1357	-	613
HCM Lane V/C Ratio		0.175	0.014	-	-	0.049	-	0.068
HCM Control Delay (s)		13.3	7.5	0	-	7.8	0	11.3
HCM Lane LOS		B	A	A	-	A	A	B
HCM 95th %tile Q(veh)		0.6	0	-	-	0.2	-	0.2

Intersection

Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↶	↷	↶	↷
Traffic Vol, veh/h	23	184	77	38	134	15	95	57	43	18	51	19
Future Vol, veh/h	23	184	77	38	134	15	95	57	43	18	51	19
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	188	79	39	137	15	97	58	44	18	52	19
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay	12.5	10.8	10.2	10.1
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	70%	0%	90%	0%	73%
Vol Right, %	0%	0%	100%	0%	30%	0%	10%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	57	43	23	261	38	149	18	70
LT Vol	95	0	0	23	0	38	0	18	0
Through Vol	0	57	0	0	184	0	134	0	51
RT Vol	0	0	43	0	77	0	15	0	19
Lane Flow Rate	97	58	44	23	266	39	152	18	71
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.184	0.102	0.068	0.042	0.428	0.072	0.259	0.036	0.127
Departure Headway (Hd)	6.832	6.326	5.617	6.49	5.779	6.705	6.13	7.116	6.415
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	524	566	636	552	623	534	585	502	558
Service Time	4.579	4.073	3.364	4.229	3.518	4.449	3.873	4.869	4.168
HCM Lane V/C Ratio	0.185	0.102	0.069	0.042	0.427	0.073	0.26	0.036	0.127
HCM Control Delay	11.1	9.8	8.8	9.5	12.8	10	11	10.1	10.1
HCM Lane LOS	B	A	A	A	B	A	B	B	B
HCM 95th-tile Q	0.7	0.3	0.2	0.1	2.1	0.2	1	0.1	0.4

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵ ↑↑			↵ ↑↑			↵ ↑↑			↵ ↑↑		
Traffic Vol, veh/h	8	111	16	49	146	178	4	36	41	143	34	6
Future Vol, veh/h	8	111	16	49	146	178	4	36	41	143	34	6
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	116	17	51	152	185	4	38	43	149	35	6
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	9.7	10.3	9.3	11.3
HCM LOS	A	B	A	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	23%	0%	100%	70%	0%	100%	21%	0%	100%	65%
Vol Right, %	0%	0%	77%	0%	0%	30%	0%	0%	79%	0%	0%	35%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	4	24	53	8	74	53	49	97	227	143	23	17
LT Vol	4	0	0	8	0	0	49	0	0	143	0	0
Through Vol	0	24	12	0	74	37	0	97	49	0	23	11
RT Vol	0	0	41	0	0	16	0	0	178	0	0	6
Lane Flow Rate	4	25	55	8	77	55	51	101	236	149	24	18
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.008	0.045	0.091	0.016	0.133	0.092	0.089	0.163	0.343	0.276	0.041	0.03
Departure Headway (Hd)	6.951	6.451	5.909	6.72	6.22	6.008	6.276	5.776	5.226	6.677	6.177	5.935
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	515	555	606	533	577	597	572	622	689	539	580	603
Service Time	4.688	4.188	3.646	4.453	3.953	3.742	4.003	3.503	2.953	4.41	3.91	3.668
HCM Lane V/C Ratio	0.008	0.045	0.091	0.015	0.133	0.092	0.089	0.162	0.343	0.276	0.041	0.03
HCM Control Delay	9.7	9.5	9.2	9.6	9.9	9.4	9.6	9.6	10.7	11.9	9.2	8.9
HCM Lane LOS	A	A	A	A	A	A	A	A	B	B	A	A
HCM 95th-tile Q	0	0.1	0.3	0	0.5	0.3	0.3	0.6	1.5	1.1	0.1	0.1

Intersection

Intersection Delay, s/veh
Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	↖
Traffic Vol, veh/h	18	196	27	43	161	10	16	47	34	13	69	19
Future Vol, veh/h	18	196	27	43	161	10	16	47	34	13	69	19
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	213	29	47	175	11	17	51	37	14	75	21
Number of Lanes	1	1	0	1	1	0	1	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.8	10.8	9.4	9.7
HCM LOS	B	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	27%	0%
Vol Thru, %	0%	100%	32%	0%	88%	0%	94%	73%	64%
Vol Right, %	0%	0%	68%	0%	12%	0%	6%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	31	50	18	223	43	171	48	54
LT Vol	16	0	0	18	0	43	0	13	0
Through Vol	0	31	16	0	196	0	161	35	35
RT Vol	0	0	34	0	27	0	10	0	19
Lane Flow Rate	17	34	54	20	242	47	186	52	58
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.033	0.060	0.088	0.034	0.386	0.083	0.301	0.093	0.099
Departure Headway (Hd)	6.887	6.385	5.895	6.316	5.728	6.381	5.837	6.514	6.123
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	561	608	568	630	562	617	550	586
Service Time	4.624	4.118	3.632	4.043	3.455	4.109	3.565	4.248	3.857
HCM Lane V/C Ratio	0.033	0.061	0.089	0.035	0.384	0.084	0.301	0.095	0.099
HCM Control Delay	9.9	9.5	9.2	9.3	12	9.7	11.1	9.9	9.5
HCM Lane LOS	A	A	A	A	B	A	B	A	A
HCM 95th-tile Q	0.1	0.2	0.3	0.1	1.8	0.3	1.3	0.3	0.3

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↶↷		↶	↶↷	
Traffic Vol, veh/h	15	251	56	111	371	0	81	58	81	30	79	21
Future Vol, veh/h	15	251	56	111	371	0	81	58	81	30	79	21
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	254	57	112	375	0	82	59	82	30	80	21
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	12	11	11.2	10.8
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	19%	0%	100%	60%	0%	100%	100%	0%	100%	56%
Vol Right, %	0%	0%	81%	0%	0%	40%	0%	0%	0%	0%	0%	44%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	81	39	100	15	167	140	111	186	186	30	53	47
LT Vol	81	0	0	15	0	0	111	0	0	30	0	0
Through Vol	0	39	19	0	167	84	0	186	186	0	53	26
RT Vol	0	0	81	0	0	56	0	0	0	0	0	21
Lane Flow Rate	82	39	101	15	169	141	112	187	187	30	53	48
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.172	0.077	0.183	0.03	0.316	0.253	0.218	0.339	0.248	0.066	0.108	0.093
Departure Headway (Hd)	7.581	7.081	6.516	7.229	6.729	6.448	7.006	6.506	4.772	7.795	7.295	6.985
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	470	503	547	493	531	554	510	551	746	457	488	510
Service Time	5.366	4.866	4.301	5.006	4.506	4.225	4.778	4.278	2.544	5.585	5.085	4.774
HCM Lane V/C Ratio	0.174	0.078	0.185	0.03	0.318	0.255	0.22	0.339	0.251	0.066	0.109	0.094
HCM Control Delay	12	10.5	10.8	10.2	12.6	11.4	11.7	12.6	9.1	11.1	11	10.5
HCM Lane LOS	B	B	B	B	B	B	B	B	A	B	B	B
HCM 95th-tile Q	0.6	0.2	0.7	0.1	1.3	1	0.8	1.5	1	0.2	0.4	0.3



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑↑	↗	↖	↑↑		↖	↑	↗	↖	↑	↗
Traffic Volume (veh/h)	45	531	7	85	626	167	8	39	51	100	43	27
Future Volume (veh/h)	45	531	7	85	626	167	8	39	51	100	43	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	47	553	7	89	652	174	8	41	53	104	45	28
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	70	766	343	212	832	222	495	519	441	555	616	524
Arrive On Green	0.04	0.23	0.23	0.13	0.32	0.32	0.01	0.29	0.29	0.07	0.35	0.35
Sat Flow, veh/h	1587	3353	1500	1587	2620	698	1587	1765	1500	1587	1765	1500
Grp Volume(v), veh/h	47	553	7	89	417	409	8	41	53	104	45	28
Grp Sat Flow(s), veh/h	1587	1676	1500	1587	1676	1641	1587	1765	1500	1587	1765	1500
Q Serve(g_s), s	1.9	9.8	0.2	3.3	14.6	14.6	0.2	1.1	1.0	2.8	1.1	0.8
Cycle Q Clear(g_c), s	9.9	9.8	0.2	3.3	14.6	14.6	0.2	1.1	1.0	2.8	1.1	0.8
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	766	343	212	532	521	495	519	441	555	616	524
V/C Ratio(X)	0.67	0.72	0.02	0.42	0.78	0.78	0.02	0.08	0.12	0.19	0.07	0.05
Avail Cap(c_a), veh/h	160	1506	674	212	805	788	614	519	441	586	616	524
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	30.4	23.0	12.5	25.7	20.0	20.0	15.7	16.5	6.3	13.5	14.0	13.9
Incr Delay (d2), s/veh	10.6	1.3	0.0	1.3	2.9	3.0	0.0	0.3	0.6	0.2	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	4.7	0.1	1.5	7.1	7.0	0.1	0.6	0.7	1.2	0.6	0.4	
LnGrp Delay(d), s/veh	1.0	24.3	12.6	27.0	22.9	23.0	15.7	16.8	6.8	13.7	14.3	14.1
LnGrp LOS	D	C	B	C	C	C	B	B	A	B	B	B
Approach Vol, veh/h		607			915			102			177	
Approach Delay, s/veh		25.5			23.4			11.5			13.9	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	23.5	13.1	19.2	5.2	27.1	7.3	25.0					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	19.0	8.5	29.0	5.5	19.0	6.5	31.0					
Max Q Clear Time (g+1), s	13.4	5.3	11.8	2.2	3.1	3.9	16.6					
Green Ext Time (p_c), s	0.0	0.2	0.0	2.9	0.0	0.2	3.9					
Intersection Summary												
HCM 2010 Ctrl Delay		22.5										
HCM 2010 LOS		C										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↕	↘
Traffic Volume (veh/h)	48	947	64	145	904	14	60	47	118	22	52	32
Future Volume (veh/h)	48	947	64	145	904	14	60	47	118	22	52	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1800	1800	1765	1800
Adj Flow Rate, veh/h	49	976	66	149	932	14	62	48	122	23	54	33
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	149	1006	450	159	1034	16	609	174	441	157	342	185
Arrive On Green	0.09	0.30	0.30	0.10	0.31	0.31	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1587	3353	1500	1587	3381	51	1232	442	1124	231	872	473
Grp Volume(v), veh/h	49	976	66	149	462	484	62	0	170	110	0	0
Grp Sat Flow(s), veh/h	1587	1676	1500	1587	1676	1756	1232	0	1566	1576	0	0
Q Serve(g_s), s	1.9	18.7	2.1	6.1	17.2	17.2	0.0	0.0	4.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9	18.7	2.1	6.1	17.2	17.2	1.6	0.0	4.8	2.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.72	0.21		0.30
Lane Grp Cap(c), veh/h	149	1006	450	159	513	537	609	0	614	685	0	0
V/C Ratio(X)	0.33	0.97	0.15	0.94	0.90	0.90	0.10	0.00	0.28	0.16	0.00	0.00
Avail Cap(c_a), veh/h	149	1006	450	159	529	554	609	0	614	685	0	0
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	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	27.5	22.5	16.7	29.1	21.6	21.6	12.5	0.0	13.5	12.8	0.0	0.0
Incr Delay (d2), s/veh	1.3	21.4	0.1	53.4	18.2	17.6	0.3	0.0	1.1	0.5	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	11.5	0.9	5.0	10.6	11.0	0.8	0.0	2.3	1.4	0.0	0.0	0.0
LnGrp Delay(d), s/veh	28.8	43.9	16.8	82.5	39.8	39.2	12.8	0.0	14.6	13.3	0.0	0.0
LnGrp LOS	C	D	B	F	D	D	B		B	B		
Approach Vol, veh/h	1091			1095			232			110		
Approach Delay, s/veh	41.6			45.3			14.1			13.3		
Approach LOS	D			D			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	30.0	11.0	24.0			30.0	10.6	24.4				
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5	6.5	19.5			25.5	5.5	20.5				
Max Q Clear Time (g_c+I1), s	11.8	8.1	20.7			4.8	3.9	19.2				
Green Ext Time (p_c), s	1.0	0.0	0.0			0.5	0.0	0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			39.5									
HCM 2010 LOS			D									

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	187	4	16	240	75	3	8	8	43	19	71
Future Vol, veh/h	42	187	4	16	240	75	3	8	8	43	19	71
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	197	4	17	253	79	3	8	8	45	20	75
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	11	8.5	9.3
HCM LOS	B	B	A	A

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	16%	18%	5%	32%
Vol Thru, %	42%	80%	73%	14%
Vol Right, %	42%	2%	23%	53%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	19	233	331	133
LT Vol	3	42	16	43
Through Vol	8	187	240	19
RT Vol	8	4	75	71
Lane Flow Rate	20	245	348	140
Geometry Grp	1	1	1	1
Degree of Util (X)	0.029	0.324	0.435	0.196
Departure Headway (Hd)	5.268	4.751	4.499	5.037
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	673	753	798	707
Service Time	3.355	2.805	2.547	3.103
HCM Lane V/C Ratio	0.030	0.325	0.436	0.198
HCM Control Delay	8.5	10.1	11	9.3
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.1	1.4	2.2	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	77	805	82	161	963	54	103	166	83	42	251	99
Future Volume (veh/h)	77	805	82	161	963	54	103	166	83	42	251	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1800
Adj Flow Rate, veh/h	80	839	85	168	1003	56	107	173	86	44	261	103
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	98	872	390	180	1005	56	116	612	520	64	378	149
Arrive On Green	0.06	0.26	0.26	0.11	0.31	0.31	0.07	0.35	0.35	0.04	0.31	0.31
Sat Flow, veh/h	1587	3353	1500	1587	3229	180	1587	1765	1500	1587	1205	476
Grp Volume(v), veh/h	80	839	85	168	521	538	107	173	86	44	0	364
Grp Sat Flow(s), veh/h	1667	1676	1500	1587	1676	1733	1587	1765	1500	1587	0	1681
Q Serve(g_s), s	3.7	18.5	3.3	7.9	23.3	23.3	5.0	5.3	1.9	2.1	0.0	14.2
Cycle Q Clear(g_c), s	3.7	18.5	3.3	7.9	23.3	23.3	5.0	5.3	1.9	2.1	0.0	14.2
Prop In Lane	1.00	1.00	1.00	1.00	0.10	1.00	1.00	1.00	1.00	1.00	0.28	0.28
Lane Grp Cap(c), veh/h	98	872	390	180	522	539	116	612	520	64	0	527
V/C Ratio(X)	0.81	0.96	0.22	0.93	1.00	1.00	0.92	0.28	0.17	0.69	0.00	0.69
Avail Cap(c_a), veh/h	116	872	390	180	522	539	116	612	520	138	0	527
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	0.00	1.00
Uniform Delay (d), s/veh	34.7	27.4	21.8	33.0	25.8	25.8	34.5	17.7	7.0	35.5	0.0	22.6
Incr Delay (d2), s/veh	19.9	21.8	0.3	48.3	38.8	38.1	58.7	1.2	0.7	12.7	0.0	7.3
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	11.1	11.1	1.4	5.9	16.3	16.8	4.1	2.8	0.9	1.1	0.0	7.6
LnGrp Delay(d), s/veh	64.6	49.1	22.0	81.3	64.6	63.9	93.3	18.9	7.7	48.2	0.0	29.8
LnGrp LOS	E	D	C	F	E	E	F	B	A	D		C
Approach Vol, veh/h	1004			1227			366			408		
Approach Delay, s/veh	48.1			66.6			38.0			31.8		
Approach LOS	D			E			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	30.5	13.0	24.0	10.0	28.0	9.2	27.8					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G), s	22.5	8.5	19.5	5.5	23.5	5.5	22.5					
Max Q Clear Time (g+1), s	9.9	9.9	20.5	7.0	16.2	5.7	25.3					
Green Ext Time (p_c), s	0.0	0.9	0.0	0.0	0.0	1.1	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			52.2									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	120	120	90	24	155	38	140	361	22	45	359	62
Future Volume (veh/h)	120	120	90	24	155	38	140	361	22	45	359	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1800	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	48	132	99	26	170	42	154	397	24	49	395	68
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	330	280	48	231	57	165	1325	593	77	1139	510
Arrive On Green	0.05	0.19	0.19	0.03	0.17	0.17	0.10	0.40	0.40	0.05	0.34	0.34
Sat Flow, veh/h	1587	1765	1500	1587	1367	338	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	132	99	26	0	212	154	397	24	49	395	68	
Grp Sat Flow(s), veh/h	1587	1765	1500	1587	0	1705	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	1.6	3.5	2.0	0.9	0.0	6.3	5.1	4.3	0.5	1.6	4.7	1.7
Cycle Q Clear(g_c), s	1.6	3.5	2.0	0.9	0.0	6.3	5.1	4.3	0.5	1.6	4.7	1.7
Prop In Lane	1.00	1.00	1.00	1.00	0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	76	330	280	48	0	288	165	1325	593	77	1139	510
V/C Ratio(X)	0.63	0.40	0.35	0.55	0.00	0.74	0.93	0.30	0.04	0.64	0.35	0.13
Avail Cap(c_a), veh/h	165	600	510	165	0	579	165	1325	593	165	1139	510
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.9	8.3	25.3	0.0	20.9	23.6	11.0	9.9	24.7	13.1	12.1	
Incr Delay (d2), s/veh	0.8	0.8	9.4	0.0	3.6	51.2	0.6	0.1	8.4	0.8	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	
%ile BackOfQ(50%), veh/ln	1.8	0.9	0.5	0.0	3.2	4.6	2.1	0.2	0.9	2.3	0.8	
LnGrp Delay(d), s/veh	19.7	9.0	34.7	0.0	24.5	74.7	11.6	10.0	33.2	13.9	12.6	
LnGrp LOS	C	B	A	C		C	E	B	A	C	B	B
Approach Vol, veh/h	279			238			575		512			
Approach Delay, s/veh	18.2			25.7			28.4		15.6			
Approach LOS	B			C			C		B			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.4	6.1	14.4	10.0	22.5	7.0	13.5					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	18.0	5.5	18.0	5.5	18.0	5.5	18.0					
Max Q Clear Time (g3+1), s	2.9	5.5	7.1	6.7	3.6	8.3						
Green Ext Time (p_c), s	1.8	0.0	0.7	0.0	1.9	0.0	0.7					
Intersection Summary												
HCM 2010 Ctrl Delay			22.1									
HCM 2010 LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	749	743	95	147	1008	186	117	402	70	178	309	118
Future Volume (veh/h)	749	743	95	147	1008	186	117	402	70	178	309	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	152	758	97	150	1029	190	119	410	71	182	315	120
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	873	391	295	1124	503	142	713	319	293	1033	629
Arrive On Green	0.11	0.26	0.26	0.19	0.34	0.34	0.09	0.21	0.21	0.18	0.31	0.31
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	52	758	97	150	1029	190	119	410	71	182	315	120
Grp Sat Flow(s), veh/h	1587	1676	1500	1587	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	10.8	24.9	4.6	9.8	33.9	6.7	8.5	12.6	4.5	12.2	8.3	5.8
Cycle Q Clear(g_c), s	10.8	24.9	4.6	9.8	33.9	6.7	8.5	12.6	4.5	12.2	8.3	5.8
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	176	873	391	295	1124	503	142	713	319	293	1033	629
V/C Ratio(X)	0.86	0.87	0.25	0.51	0.92	0.38	0.84	0.57	0.22	0.62	0.30	0.19
Avail Cap(c_a), veh/h	200	1033	462	295	1179	527	158	713	319	310	1033	629
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	50.3	40.7	20.2	42.2	36.7	10.7	51.6	40.7	37.5	43.2	30.4	21.1
Incr Delay (d2), s/veh	7.6	7.1	0.3	1.4	10.8	0.5	28.9	3.4	1.6	3.5	0.8	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/h	12.3	2.3	4.4	17.4	4.0	4.9	6.2	2.0	5.6	3.9	2.5	
LnGrp Delay(d), s/veh	7.9	47.8	20.5	43.6	47.6	11.1	80.5	44.0	39.1	46.7	31.2	21.8
LnGrp LOS	E	D	C	D	D	B	F	D	D	D	C	C
Approach Vol, veh/h	1007			1369			600			617		
Approach Delay, s/veh	49.7			42.1			50.7			33.9		
Approach LOS	D			D			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	29.0	29.0	25.9	34.5	14.8	40.0	17.3	43.1				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	24.5	24.5	19.5	35.5	11.5	35.5	14.5	40.5				
Max Q Clear Time (G+Y+R), s	14.6	14.6	11.8	26.9	10.5	10.3	12.8	35.9				
Green Ext Time (p_c), s	1.9	1.9	0.2	3.1	0.0	2.2	0.1	2.7				
Intersection Summary												
HCM 2010 Ctrl Delay			44.2									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	884	884	135	139	1061	98	172	339	85	174	382	200
Future Volume (veh/h)	884	884	135	139	1061	98	172	339	85	174	382	200
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1667	1765	1765	1667	1765	1800	1667	1765	1800
Adj Flow Rate, veh/h	107	940	144	148	1129	104	183	361	90	185	406	213
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	1010	452	174	1136	508	203	697	172	203	558	289
Arrive On Green	0.07	0.30	0.30	0.11	0.34	0.34	0.13	0.26	0.26	0.13	0.26	0.26
Sat Flow, veh/h	1587	3353	1500	1587	3353	1500	1587	2668	657	1587	2137	1108
Grp Volume(v), veh/h	940	144	148	1129	104	183	225	226	185	317	302	
Grp Sat Flow(s), veh/h	1676	1500	1587	1676	1500	1587	1676	1649	1587	1676	1569	
Q Serve(g_s), s	6.0	24.5	6.7	8.2	30.2	4.4	10.2	10.3	10.6	10.4	15.5	15.8
Cycle Q Clear(g_c), s	6.0	24.5	6.7	8.2	30.2	4.4	10.2	10.3	10.6	10.4	15.5	15.8
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	0.40	1.00	0.71			
Lane Grp Cap(c), veh/h	1010	452	174	1136	508	203	438	430	203	438	410	
V/C Ratio(X)	0.93	0.93	0.32	0.85	0.99	0.20	0.90	0.51	0.52	0.91	0.73	0.74
Avail Cap(c_a), veh/h	1025	458	174	1136	508	203	438	430	203	438	410	
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	30.5	24.3	39.3	29.7	21.1	38.7	28.4	28.5	38.8	30.3	30.4	
Incr Delay (d2), s/veh	14.2	0.4	30.6	25.1	0.2	37.5	4.3	4.5	39.7	10.0	11.2	
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	
%ile BackOfQ(50%), veh	13.4	2.8	5.1	17.9	1.9	6.6	5.3	5.3	6.8	8.4	8.1	
LnGrp Delay(d), s/veh	44.8	24.7	70.0	54.7	21.3	76.2	32.7	33.0	78.4	40.3	41.6	
LnGrp LOS	F	D	C	E	D	C	E	C	C	E	D	D
Approach Vol, veh/h	1191			1381			634			804		
Approach Delay, s/veh	47.7			53.8			45.3			49.6		
Approach LOS	D			D			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	28.0	14.4	31.6	16.0	28.0	11.0	35.0					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gr), s	23.5	9.5	27.5	11.5	23.5	6.5	30.5					
Max Q Clear Time (t2+I), s	12.6	10.2	26.5	12.2	17.8	8.0	32.2					
Green Ext Time (p_c), s	1.8	0.0	0.6	0.0	1.7	0.0	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay			49.8									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑		↑
Traffic Vol, veh/h	1134	6	0	737	0	46
Future Vol, veh/h	1134	6	0	737	0	46
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	-	-	-	0
Veh in Median Storage#	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1233	7	0	801	0	50

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 617
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 433
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 433
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.4
HCM LOS			B

Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	433	-	-	-
HCM Lane V/C Ratio	0.115	-	-	-
HCM Control Delay (s)	14.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection























Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↗↗	↗↗	↗
Traffic Vol, veh/h	0	60	0	1171	1249	68
Future Vol, veh/h	0	60	0	1171	1249	68
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	-	-	-	0
Veh in Median Storage#	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	65	0	1273	1358	74

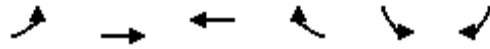
Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 679	-	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	- 6.94	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	- 3.32	-	-
Pot Cap-1 Maneuver	0 394	0	-
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	- 394	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR
Capacity (veh/h)	-	394	-	-
HCM Lane V/C Ratio	-	0.166	-	-
HCM Control Delay (s)	-	15.9	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.6	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	59	132	73	56	110	138	634	107	163	580	176
Future Volume (veh/h)	143	59	132	73	56	110	138	634	107	163	580	176
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	155	64	143	79	61	120	150	689	116	177	630	191
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	201	105	234	207	85	167	194	1261	393	227	945	423
Arrive On Green	0.12	0.22	0.22	0.06	0.16	0.16	0.12	0.26	0.26	0.14	0.28	0.28
Sat Flow, veh/h	1681	486	1087	3261	532	1047	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	155	0	207	79	0	181	150	689	116	177	630	191
Grp Sat Flow(s),veh/h/ln	1681	0	1573	1630	0	1580	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	5.0	0.0	6.6	1.3	0.0	6.0	4.8	6.8	3.4	5.7	9.2	5.8
Cycle Q Clear(g_c), s	5.0	0.0	6.6	1.3	0.0	6.0	4.8	6.8	3.4	5.7	9.2	5.8
Prop In Lane	1.00		0.69	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	201	0	339	207	0	252	194	1261	393	227	945	423
V/C Ratio(X)	0.77	0.00	0.61	0.38	0.00	0.72	0.77	0.55	0.30	0.78	0.67	0.45
Avail Cap(c_a), veh/h	650	0	1033	440	0	639	650	2903	904	741	2201	985
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	23.7	0.0	19.7	25.0	0.0	22.2	23.9	17.7	16.4	23.2	17.7	16.4
Incr Delay (d2), s/veh	6.2	0.0	1.8	1.2	0.0	3.8	6.5	0.4	0.4	5.7	0.8	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	2.6	0.0	3.0	0.6	0.0	2.9	2.6	3.0	1.5	3.0	4.4	2.5
LnGrp Delay(d),s/veh	29.9	0.0	21.5	26.1	0.0	26.0	30.3	18.0	16.8	28.9	18.5	17.2
LnGrp LOS	C		C	C		C	C	B	B	C	B	B
Approach Vol, veh/h		362			260			955			998	
Approach Delay, s/veh		25.1			26.0			19.8			20.1	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	19.1	8.0	16.5	10.9	20.2	11.1	13.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	24.5	33.5	7.5	36.5	21.5	36.5	21.5	22.5				
Max Q Clear Time (g_c+l1), s	7.7	8.8	3.3	8.6	6.8	11.2	7.0	8.0				
Green Ext Time (p_c), s	0.4	4.6	0.1	1.3	0.3	4.4	0.3	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			21.3									
HCM 2010 LOS			C									

Opening Year With Project Phase 1 & 2
With Recommended Improvements



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↶	↷	↷	↷	↶	↷		
Traffic Volume (veh/h)	3	971	673	88	162	5		
Future Volume (veh/h)	3	971	673	88	162	5		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1667	1765		
Adj Flow Rate, veh/h	3	1091	756	99	182	6		
Adj No. of Lanes	1	2	2	1	1	1		
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	7	1819	1345	602	291	275		
Arrive On Green	0.00	0.54	0.40	0.40	0.18	0.18		
Sat Flow, veh/h	1587	3441	3441	1500	1587	1500		
Grp Volume(v), veh/h	3	1091	756	99	182	6		
Grp Sat Flow(s),veh/h/ln	1587	1676	1676	1500	1587	1500		
Q Serve(g_s), s	0.1	7.2	5.7	1.4	3.5	0.1		
Cycle Q Clear(g_c), s	0.1	7.2	5.7	1.4	3.5	0.1		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	7	1819	1345	602	291	275		
V/C Ratio(X)	0.46	0.60	0.56	0.16	0.63	0.02		
Avail Cap(c_a), veh/h	363	7613	6386	2857	1766	1669		
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	16.3	5.1	7.6	6.3	12.4	11.0		
Incr Delay (d2), s/veh	43.1	0.3	0.4	0.1	2.2	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	0.1	3.3	2.7	0.6	1.7	0.1		
LnGrp Delay(d),s/veh	59.4	5.4	8.0	6.4	14.6	11.0		
LnGrp LOS	E	A	A	A	B	B		
Approach Vol, veh/h		1094	855		188			
Approach Delay, s/veh		5.6	7.8		14.5			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				22.3		10.5	4.6	17.7
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				74.5		36.5	7.5	62.5
Max Q Clear Time (g_c+l1), s				9.2		5.5	2.1	7.7
Green Ext Time (p_c), s				8.5		0.5	0.0	5.4
Intersection Summary								
HCM 2010 Ctrl Delay			7.2					
HCM 2010 LOS			A					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Volume (veh/h)	22	0	230	0	0	0	126	818	0	0	598	38
Future Volume (veh/h)	22	0	230	0	0	0	126	818	0	0	598	38
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/s	1800	1765	1800	1800	1765	1800	1667	1765	0	0	1765	1765
Adj Flow Rate, veh/h	24	0	250	0	0	0	137	889	0	0	650	41
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	0	1	1
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, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	83	14	306	0	394	0	173	1099	0	0	770	654
Arrive On Green	0.22	0.00	0.22	0.00	0.00	0.00	0.11	0.62	0.00	0.00	0.44	0.44
Sat Flow, veh/h	69	62	1373	0	1765	0	1587	1765	0	0	1765	1500
Grp Volume(v), veh/h	274	0	0	0	0	0	137	889	0	0	650	41
Grp Sat Flow(s), veh/h/s	1800	0	0	0	1765	0	1587	1765	0	0	1765	1500
Q Serve(g_s), s	4.0	0.0	0.0	0.0	0.0	0.0	4.9	22.3	0.0	0.0	19.2	0.9
Cycle Q Clear(g_c), s	10.1	0.0	0.0	0.0	0.0	0.0	4.9	22.3	0.0	0.0	19.2	0.9
Prop In Lane	0.09		0.91	0.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	83	0	0	0	394	0	173	1099	0	0	770	654
V/C Ratio(X)	0.68	0.00	0.00	0.00	0.00	0.00	0.79	0.81	0.00	0.00	0.84	0.06
Avail Cap(c_a), veh/h	625	0	0	0	657	0	531	2703	0	0	1976	1680
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	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	0.0	0.0	0.0	0.0	0.0	25.3	8.4	0.0	0.0	14.7	9.5
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	0.0	0.0	7.8	1.5	0.0	0.0	2.6	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	1.0	0.0	0.0	0.0	0.0	0.0	2.5	11.1	0.0	0.0	9.8	0.4
LnGrp Delay(d), s/veh	28.5	0.0	0.0	0.0	0.0	0.0	33.1	9.8	0.0	0.0	17.3	9.6
LnGrp LOS	C						C	A			B	A
Approach Vol, veh/h		274			0			1026			691	
Approach Delay, s/veh		23.5			0.0			13.0			16.9	
Approach LOS		C						B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		40.8		17.5	10.9	29.9		17.5				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		89.5		21.7	19.5	65.3		21.7				
Max Q Clear Time (g_c+I), s		24.5		12.1	6.9	21.2		0.0				
Green Ext Time (p_c), s		7.0		1.1	0.2	4.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.8									
HCM 2010 LOS			B									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	588	588	453	146	352	97	338	750	191	132	502	47
Future Volume (veh/h)	588	588	453	146	352	97	338	750	191	132	502	47
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	126	646	498	160	387	107	371	824	210	145	552	52
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	791	742	211	495	221	411	1387	620	173	883	395
Arrive On Green	0.16	0.24	0.24	0.07	0.15	0.15	0.26	0.41	0.41	0.11	0.26	0.26
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	26	646	498	160	387	107	371	824	210	145	552	52
Grp Sat Flow(s), veh/h	1667	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	7.7	19.4	6.1	5.8	11.8	5.4	24.0	20.3	10.2	9.5	15.4	2.8
Cycle Q Clear(g_c), s	7.7	19.4	6.1	5.8	11.8	5.4	24.0	20.3	10.2	9.5	15.4	2.8
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	255	791	742	211	495	221	411	1387	620	173	883	395
V/C Ratio(X)	0.49	0.82	0.67	0.76	0.78	0.48	0.90	0.59	0.34	0.84	0.63	0.13
Avail Cap(c_a), veh/h	255	946	812	232	788	353	530	1387	620	291	883	395
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	38.5	8.5	48.4	43.7	24.9	38.1	24.2	21.3	46.5	34.6	29.9	29.9
Incr Delay (d2), s/veh	4.8	1.9	12.5	2.7	1.6	15.7	1.9	1.5	10.4	3.3	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	9.5	6.9	2.7	5.7	2.8	12.3	9.7	4.4	4.7	7.5	1.2	1.2
LnGrp Delay(d), s/veh	42.2	43.3	10.4	60.9	46.4	26.5	53.8	26.1	22.7	56.9	37.9	30.6
LnGrp LOS	D	D	B	E	D	C	D	C	C	E	D	C
Approach Vol, veh/h	1270			654			1405			749		
Approach Delay, s/veh	30.3			46.7			32.9			41.1		
Approach LOS	C			D			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	48.5	12.2	29.6	32.1	32.5	21.6	20.2					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	44.0	8.5	30.0	35.5	28.0	13.5	25.0					
Max Q Clear Time (G1+2), s	12.3	7.8	21.4	26.0	17.4	9.7	13.8					
Green Ext Time (p_c), s	5.7	0.0	3.7	0.8	2.4	0.1	1.9					
Intersection Summary												
HCM 2010 Ctrl Delay			35.8									
HCM 2010 LOS			D									

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	170	38	98	197	7	106	14	144	18	21	15
Future Vol, veh/h	9	170	38	98	197	7	106	14	144	18	21	15
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	207	46	120	240	9	129	17	176	22	26	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.5	15.7	14	10.1
HCM LOS	B	C	B	B

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	40%	4%	32%	33%
Vol Thru, %	5%	78%	65%	39%
Vol Right, %	55%	18%	2%	28%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	264	217	302	54
LT Vol	106	9	98	18
Through Vol	14	170	197	21
RT Vol	144	38	7	15
Lane Flow Rate	322	265	368	66
Geometry Grp	1	1	1	1
Degree of Util (X)	0.496	0.410	0.568	0.114
Departure Headway (Hd)	5.546	5.582	5.556	6.234
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	647	640	648	570
Service Time	3.608	3.648	3.616	4.324
HCM Lane V/C Ratio	0.498	0.414	0.568	0.116
HCM Control Delay	14	12.5	15.7	10.1
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	2.8	2	3.6	0.4

Intersection

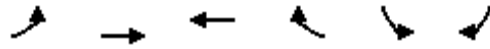
Intersection Delay, s/veh
Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑		↵	↑		↵	↑↑			↑↑	
Traffic Vol, veh/h	70	286	37	107	224	79	13	231	91	75	157	33
Future Vol, veh/h	70	286	37	107	224	79	13	231	91	75	157	33
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	80	325	42	122	255	90	15	263	103	85	178	38
Number of Lanes	1	2	0	1	1	0	1	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	19.7	37.6	19.9	19.5
HCM LOS	C	E	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	49%	0%
Vol Thru, %	0%	100%	46%	0%	100%	72%	0%	74%	51%	70%
Vol Right, %	0%	0%	54%	0%	0%	28%	0%	26%	0%	30%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	154	168	70	191	132	107	303	154	112
LT Vol	13	0	0	70	0	0	107	0	75	0
Through Vol	0	154	77	0	191	95	0	224	79	79
RT Vol	0	0	91	0	0	37	0	79	0	33
Lane Flow Rate	15	175	191	80	217	150	122	344	174	127
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.041	0.461	0.482	0.216	0.557	0.378	0.323	0.847	0.478	0.331
Departure Headway (Hd)	10.003	9.486	9.094	9.766	9.259	9.048	9.555	8.854	9.872	9.406
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	357	378	395	367	390	397	376	410	365	381
Service Time	7.786	7.269	6.876	7.547	7.036	6.828	7.331	6.637	6.659	7.193
HCM Lane V/C Ratio	0.042	0.463	0.484	0.218	0.556	0.378	0.324	0.839	0.477	0.333
HCM Control Delay	13.2	20.2	20.1	15.2	23.1	17.3	16.9	44.9	21.4	16.8
HCM Lane LOS	B	C	C	C	C	C	C	E	C	C
HCM 95th-tile Q	0.1	2.3	2.5	0.8	3.3	1.7	1.4	8.1	2.5	1.4

SWC US395/SR18 TIA Improved Project Opening Year Plus Project Phase 1 & 2 PM Peak Hour
 HCM 2010 Signalized Intersection Summary 1: Palmdale Road (SR-18) & Pearmain St



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↙	↑↑	↑↑	↘	↙	↘		
Traffic Volume (veh/h)	6	1032	884	203	114	2		
Future Volume (veh/h)	6	1032	884	203	114	2		
Number	7	4	8	18	1	16		
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		
Adj Sat Flow, veh/h/ln	1667	1765	1765	1765	1667	1765		
Adj Flow Rate, veh/h	6	1064	911	209	118	2		
Adj No. of Lanes	1	2	2	1	1	1		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	13	2012	1554	695	227	214		
Arrive On Green	0.01	0.60	0.46	0.46	0.14	0.14		
Sat Flow, veh/h	1587	3441	3441	1500	1587	1500		
Grp Volume(v), veh/h	6	1064	911	209	118	2		
Grp Sat Flow(s),veh/h/ln	1587	1676	1676	1500	1587	1500		
Q Serve(g_s), s	0.1	6.5	7.0	3.0	2.4	0.0		
Cycle Q Clear(g_c), s	0.1	6.5	7.0	3.0	2.4	0.0		
Prop In Lane	1.00			1.00	1.00	1.00		
Lane Grp Cap(c), veh/h	13	2012	1554	695	227	214		
V/C Ratio(X)	0.47	0.53	0.59	0.30	0.52	0.01		
Avail Cap(c_a), veh/h	340	5508	4358	1950	1066	1007		
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	17.3	4.1	6.9	5.9	13.9	12.9		
Incr Delay (d2), s/veh	24.1	0.2	0.4	0.2	1.8	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	0.1	3.0	3.2	1.3	1.2	0.0		
LnGrp Delay(d),s/veh	41.4	4.3	7.3	6.1	15.7	12.9		
LnGrp LOS	D	A	A	A	B	B		
Approach Vol, veh/h		1070	1120		120			
Approach Delay, s/veh		4.5	7.1		15.7			
Approach LOS		A	A		B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6	7	8
Phs Duration (G+Y+Rc), s				25.5		9.5	4.8	20.7
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s				57.5		23.5	7.5	45.5
Max Q Clear Time (g_c+l1), s				8.5		4.4	2.1	9.0
Green Ext Time (p_c), s				8.1		0.3	0.0	7.2
Intersection Summary								
HCM 2010 Ctrl Delay			6.3					
HCM 2010 LOS			A					

SWC US395/SR18 Improved Project Opening Year Plus Project Phase 1 & 2 PM Peak Hour
 HCM 2010 Signalized Intersection Summary 3: US-395 & Seneca Road



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑			↑	↗
Traffic Volume (veh/h)	5	0	259	0	0	0	327	749	0	0	806	17
Future Volume (veh/h)	5	0	259	0	0	0	327	749	0	0	806	17
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1800	1765	1800	1800	1765	1800	1667	1765	0	0	1765	1765
Adj Flow Rate, veh/h	5	0	267	0	0	0	337	772	0	0	831	18
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	0	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	0	0	2	2
Cap, veh/h	43	4	294	0	351	0	309	1237	0	0	805	684
Arrive On Green	0.20	0.00	0.20	0.00	0.00	0.00	0.19	0.70	0.00	0.00	0.46	0.46
Sat Flow, veh/h	9	19	1475	0	1765	0	1587	1765	0	0	1765	1500
Grp Volume(v), veh/h	272	0	0	0	0	0	337	772	0	0	831	18
Grp Sat Flow(s), veh/h	1800	0	0	0	1765	0	1587	1765	0	0	1765	1500
Q Serve(g_s), s	3.7	0.0	0.0	0.0	0.0	0.0	17.5	20.9	0.0	0.0	41.0	0.6
Cycle Q Clear(g_c), s	15.9	0.0	0.0	0.0	0.0	0.0	17.5	20.9	0.0	0.0	41.0	0.6
Prop In Lane	0.02		0.98	0.00		0.00	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h	43	0	0	0	351	0	309	1237	0	0	805	684
V/C Ratio(X)	0.80	0.00	0.00	0.00	0.00	0.00	1.09	0.62	0.00	0.00	1.03	0.03
Avail Cap(c_a), veh/h	42	0	0	0	353	0	309	1237	0	0	805	684
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	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	55.2	0.0	0.0	0.0	0.0	0.0	36.2	7.2	0.0	0.0	24.5	13.5
Incr Delay (d2), s/veh	12.6	0.0	0.0	0.0	0.0	0.0	77.7	1.0	0.0	0.0	40.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh	1.0	0.0	0.0	0.0	0.0	0.0	14.3	10.4	0.0	0.0	28.9	0.2
LnGrp Delay(d), s/veh	47.8	0.0	0.0	0.0	0.0	0.0	113.9	8.1	0.0	0.0	64.9	13.5
LnGrp LOS	D						F	A			F	B
Approach Vol, veh/h		272			0			1109			849	
Approach Delay, s/veh		47.8			0.0			40.3			63.8	
Approach LOS		D						D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		67.5		22.4	22.0	45.5		22.4				
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s		63.0		18.0	17.5	41.0		18.0				
Max Q Clear Time (g_c+I), s		22.9		17.9	19.5	43.0		0.0				
Green Ext Time (p_c), s		5.3		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			50.1									
HCM 2010 LOS			D									

SWC US395/SR18 Improved Project Opening Year Plus Project Phase 1 & 2 PM Peak Hour
 HCM 2010 Signalized Intersection Summary 4: US-395 & Palmdale Road (SR-18)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	353	560	344	313	610	149	301	728	142	149	660	59
Future Volume (veh/h)	353	560	344	313	610	149	301	728	142	149	660	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1765	1765	1569	1765	1765	1667	1765	1765	1667	1765	1765
Adj Flow Rate, veh/h	116	577	355	323	629	154	310	751	146	154	680	61
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	689	572	345	767	343	279	1191	533	184	989	443
Arrive On Green	0.10	0.21	0.21	0.12	0.23	0.23	0.18	0.36	0.36	0.12	0.30	0.30
Sat Flow, veh/h	1587	3353	1500	2898	3353	1500	1587	3353	1500	1587	3353	1500
Grp Volume(v), veh/h	16	577	355	323	629	154	310	751	146	154	680	61
Grp Sat Flow(s), veh/h/ln	1667	1676	1500	1449	1676	1500	1587	1676	1500	1587	1676	1500
Q Serve(g_s), s	6.3	14.6	4.7	9.7	15.7	5.6	15.5	16.4	6.1	8.4	15.8	2.6
Cycle Q Clear(g_c), s	6.3	14.6	4.7	9.7	15.7	5.6	15.5	16.4	6.1	8.4	15.8	2.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	152	689	572	345	767	343	279	1191	533	184	989	443
V/C Ratio(X)	0.76	0.84	0.62	0.94	0.82	0.45	1.11	0.63	0.27	0.84	0.69	0.14
Avail Cap(c_a), veh/h	152	761	604	345	951	426	279	1191	533	225	989	443
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	30.8	33.6	8.6	38.5	32.3	15.0	36.3	23.6	20.3	38.1	27.5	22.8
Incr Delay (d2), s/veh	20.0	7.6	1.8	32.1	4.7	0.9	86.7	2.5	1.3	20.0	3.9	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	7.5	4.0	5.4	7.8	2.9	13.5	8.0	2.7	4.7	7.8	1.2	
LnGrp Delay(d),s/veh	58.8	41.2	10.4	70.6	37.0	16.0	123.0	26.1	21.6	58.2	31.3	23.5
LnGrp LOS	E	D	B	E	D	B	F	C	C	E	C	C
Approach Vol, veh/h	1048			1106			1207			895		
Approach Delay, s/veh	32.7			43.9			50.5			35.4		
Approach LOS	C			D			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	35.8	15.0	22.6	20.0	30.5	13.0	24.7					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	10.5	20.0	15.5	26.0	5.5	25.0						
Max Q Clear Time (G+Y+R), s	11.7	16.6	17.5	17.8	8.3	17.7						
Green Ext Time (p_c), s	3.6	0.0	1.6	0.0	2.6	0.0	2.5					
Intersection Summary												
HCM 2010 Ctrl Delay	41.2											
HCM 2010 LOS	D											

Intersection

Intersection Delay, s/veh
 Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	128	40	52	103	11	33	12	28	3	11	19
Future Vol, veh/h	16	128	40	52	103	11	33	12	28	3	11	19
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	162	51	66	130	14	42	15	35	4	14	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	9.2	8.6	8
HCM LOS	A	A	A	A

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	45%	9%	31%	9%
Vol Thru, %	16%	70%	62%	33%
Vol Right, %	38%	22%	7%	58%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	184	166	33
LT Vol	33	16	52	3
Through Vol	12	128	103	11
RT Vol	28	40	11	19
Lane Flow Rate	92	233	210	42
Geometry Grp	1	1	1	1
Degree of Util (X)	0.124	0.283	0.265	0.055
Departure Headway (Hd)	4.838	4.384	5.334	4.724
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	739	820	792	756
Service Time	2.878	2.412	2.563	2.768
HCM Lane V/C Ratio	0.124	0.284	0.265	0.056
HCM Control Delay	8.6	9.1	9.2	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.4	1.2	1.1	0.2

Intersection

Intersection Delay, s/veh
 Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕		↖	↕		↖	↕			↕	
Traffic Vol, veh/h	18	196	27	43	161	10	16	47	34	13	69	19
Future Vol, veh/h	18	196	27	43	161	10	16	47	34	13	69	19
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	213	29	47	175	11	17	51	37	14	75	21
Number of Lanes	1	2	0	1	1	0	1	2	0	0	2	0























Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	9.9	10.7	9.3	9.6
HCM LOS	A	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	27%	0%
Vol Thru, %	0%	100%	32%	0%	100%	71%	0%	94%	73%	64%
Vol Right, %	0%	0%	68%	0%	0%	29%	0%	6%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	16	31	50	18	131	92	43	171	48	54
LT Vol	16	0	0	18	0	0	43	0	13	0
Through Vol	0	31	16	0	131	65	0	161	35	35
RT Vol	0	0	34	0	0	27	0	10	0	19
Lane Flow Rate	17	34	54	20	142	100	47	186	52	58
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.033	0.060	0.087	0.034	0.229	0.156	0.082	0.299	0.092	0.097
Departure Headway (Hd)	6.794	6.291	5.808	6.304	5.801	5.595	6.329	5.786	6.406	6.018
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	528	570	617	569	619	641	567	623	560	596
Service Time	4.527	4.023	3.544	4.031	3.529	3.323	4.057	3.514	4.139	3.751
HCM Lane V/C Ratio	0.032	0.060	0.088	0.035	0.229	0.156	0.083	0.299	0.093	0.097
HCM Control Delay	9.8	9.4	9.1	9.3	10.3	9.4	9.6	11	9.8	9.4
HCM Lane LOS	A	A	A	A	B	A	A	B	A	A
HCM 95th-tile Q	0.1	0.2	0.3	0.1	0.9	0.6	0.3	1.3	0.3	0.3

Interim Year Without Project Conditions



















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 1: Palmdale Road (SR-18) & Pearmain St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	986	62	103	739	84	5	62	5	145	176	13
Future Volume (veh/h)	7	986	62	103	739	84	5	62	5	145	176	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	7	1038	65	108	778	88	5	65	5	153	185	14
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	1189	532	160	1476	661	11	152	12	613	1348	101
Arrive On Green	0.01	0.34	0.34	0.18	0.83	0.83	0.01	0.05	0.05	0.36	0.40	0.40
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	3334	254	1681	3338	251
Grp Volume(v), veh/h	7	1038	65	108	778	88	5	34	36	153	97	102
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	1770	1818	1681	1770	1819
Q Serve(g_s), s	0.5	30.3	2.7	6.3	7.1	0.3	0.3	2.1	2.1	7.0	3.8	3.9
Cycle Q Clear(g_c), s	0.5	30.3	2.7	6.3	7.1	0.3	0.3	2.1	2.1	7.0	3.8	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.14
Lane Grp Cap(c), veh/h	15	1189	532	160	1476	661	11	80	83	613	715	735
V/C Ratio(X)	0.48	0.87	0.12	0.68	0.53	0.13	0.46	0.42	0.43	0.25	0.14	0.14
Avail Cap(c_a), veh/h	84	1367	612	202	1593	712	84	290	297	613	715	735
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	34.3	19.0	43.6	5.9	0.3	54.5	51.1	51.1	24.4	20.7	20.7
Incr Delay (d2), s/veh	22.0	5.9	0.1	4.8	0.2	0.1	27.7	15.6	15.7	0.2	0.1	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	0.3	15.8	1.2	3.3	3.3	0.1	0.2	1.4	1.4	3.3	1.9	2.0
LnGrp Delay(d),s/veh	76.2	40.2	19.1	48.4	6.1	0.4	82.1	66.7	66.8	24.6	20.8	20.8
LnGrp LOS	E	D	B	D	A	A	F	E	E	C	C	C
Approach Vol, veh/h		1110			974			75			352	
Approach Delay, s/veh		39.2			10.3			67.8			22.4	
Approach LOS		D			B			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.6	9.5	14.4	41.5	5.2	48.9	5.5	50.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.0	18.0	12.5	42.5	5.5	31.5	5.5	49.5				
Max Q Clear Time (g_c+I1), s	9.0	4.1	8.3	32.3	2.3	5.9	2.5	9.1				
Green Ext Time (p_c), s	1.1	0.2	2.0	4.6	0.0	1.6	0.0	5.9				
Intersection Summary												
HCM 2010 Ctrl Delay			26.5									
HCM 2010 LOS			C									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	1048	0	0	681	9	0	0	0	49	0	118
Future Volume (veh/h)	63	1048	0	0	681	9	0	0	0	49	0	118
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1765	1863	0	0	1863	1863				1900	1863	1863
Adj Flow Rate, veh/h	66	1103	0	0	717	9				52	0	124
Adj No. of Lanes	1	2	0	0	2	1				0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	2	2				2	2	2
Cap, veh/h	84	1505	0	0	1183	529				875	0	781
Arrive On Green	0.05	0.43	0.00	0.00	0.33	0.33				0.49	0.00	0.49
Sat Flow, veh/h	1681	3632	0	0	3632	1583				1774	0	1583
Grp Volume(v), veh/h	66	1103	0	0	717	9				52	0	124
Grp Sat Flow(s),veh/h/ln	1681	1770	0	0	1770	1583				1774	0	1583
Q Serve(g_s), s	4.3	28.6	0.0	0.0	18.6	0.4				1.7	0.0	4.7
Cycle Q Clear(g_c), s	4.3	28.6	0.0	0.0	18.6	0.4				1.7	0.0	4.7
Prop In Lane	1.00		0.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	84	1505	0	0	1183	529				875	0	781
V/C Ratio(X)	0.78	0.73	0.00	0.00	0.61	0.02				0.06	0.00	0.16
Avail Cap(c_a), veh/h	267	2333	0	0	1625	727				875	0	781
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.00	0.00	0.86	0.86				1.00	0.00	1.00
Uniform Delay (d), s/veh	51.7	26.4	0.0	0.0	30.6	24.5				14.6	0.0	15.3
Incr Delay (d2), s/veh	7.7	0.4	0.0	0.0	0.4	0.0				0.0	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
%ile BackOfQ(50%),veh/ln	2.2	14.0	0.0	0.0	9.1	0.5				0.8	0.0	5.7
LnGrp Delay(d),s/veh	59.4	26.8	0.0	0.0	31.0	24.5				14.6	0.0	15.4
LnGrp LOS	E	C			C	C				B		B
Approach Vol, veh/h		1169			726						176	
Approach Delay, s/veh		28.6			30.9						15.2	
Approach LOS		C			C						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				51.3		58.7	10.0	41.3				
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s				72.5		28.5	17.5	50.5				
Max Q Clear Time (g_c+I1), s				30.6		6.7	6.3	20.6				
Green Ext Time (p_c), s				16.1		0.6	0.1	14.1				
Intersection Summary												
HCM 2010 Ctrl Delay			28.3									
HCM 2010 LOS			C									

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↑			↑	↕
Traffic Vol, veh/h	31	27	287	22	16	22	155	1289	33	33	993	54
Future Vol, veh/h	31	27	287	22	16	22	155	1289	33	33	993	54
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	-	-	-	-	-	-	300	-	-	-	-	250
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	28	302	23	17	23	163	1357	35	35	1045	57

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2836	2833	1045	2981	2816	1374	1045	0	0	1392	0	0
Stage 1	1115	1115	-	1701	1701	-	-	-	-	-	-	-
Stage 2	1721	1718	-	1280	1115	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 11	~ 17	~ 278	~ 9	18	178	666	-	-	491	-	-
Stage 1	252	283	-	116	147	-	-	-	-	-	-	-
Stage 2	113	145	-	204	283	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	-	~ 10	~ 278	-	~ 11	178	666	-	-	491	-	-
Mov Cap-2 Maneuver	-	~ 10	-	-	~ 11	-	-	-	-	-	-	-
Stage 1	190	230	-	88	111	-	-	-	-	-	-	-
Stage 2	63	110	-	-	230	-	-	-	-	-	-	-

























Approach	EB	WB	NB	SB
HCM Control Delay, s			1.3	0.4
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	666	-	-	-	491	-	-
HCM Lane V/C Ratio	0.245	-	-	-	0.071	-	-
HCM Control Delay (s)	12.2	-	-	-	12.9	-	-
HCM Lane LOS	B	-	-	-	B	-	-
HCM 95th %tile Q(veh)	1	-	-	-	0.2	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 4: US-395 & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	569	525	152	377	134	384	1037	198	181	751	56
Future Volume (veh/h)	140	569	525	152	377	134	384	1037	198	181	751	56
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	147	599	553	160	397	141	404	1092	208	191	791	59
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	901	403	210	512	229	420	1384	619	206	933	417
Arrive On Green	0.06	0.08	0.08	0.07	0.14	0.14	0.08	0.13	0.13	0.12	0.26	0.26
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	147	599	553	160	397	141	404	1092	208	191	791	59
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	9.3	18.1	28.0	5.6	11.9	7.0	26.4	32.9	9.9	12.4	23.3	3.1
Cycle Q Clear(g_c), s	9.3	18.1	28.0	5.6	11.9	7.0	26.4	32.9	9.9	12.4	23.3	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	299	901	403	210	512	229	420	1384	619	206	933	417
V/C Ratio(X)	0.49	0.66	1.37	0.76	0.78	0.62	0.96	0.79	0.34	0.93	0.85	0.14
Avail Cap(c_a), veh/h	299	901	403	210	804	360	420	1384	619	206	933	417
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.67	0.82	0.82	0.82	0.83	0.83	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	45.8	50.4	50.4	45.3	25.6	49.9	43.5	19.8	47.8	38.4	31.0
Incr Delay (d2), s/veh	0.8	1.3	177.9	12.6	2.1	2.2	30.2	3.9	1.2	42.4	9.4	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	4.4	9.0	32.2	2.8	5.9	3.2	15.8	16.9	4.6	8.2	12.6	1.5
LnGrp Delay(d),s/veh	47.8	47.1	228.3	62.9	47.4	27.8	80.2	47.4	21.0	90.2	47.8	31.7
LnGrp LOS	D	D	F	E	D	C	F	D	C	F	D	C
Approach Vol, veh/h		1299			698			1704			1041	
Approach Delay, s/veh		124.3			47.0			51.9			54.7	
Approach LOS		F			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	47.5	12.0	32.5	32.0	33.5	24.1	20.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	43.0	7.5	28.0	27.5	29.0	10.5	25.0				
Max Q Clear Time (g_c+I1), s	14.4	34.9	7.6	30.0	28.4	25.3	11.3	13.9				
Green Ext Time (p_c), s	0.0	5.1	0.0	0.0	0.0	1.7	0.0	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				71.6								
HCM 2010 LOS				E								
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 6: US-395 & Dos Palmas Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	50	78	49	45	270	29	1169	26	161	1257	148
Future Volume (veh/h)	234	50	78	49	45	270	29	1169	26	161	1257	148
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	246	53	82	52	47	284	31	1231	27	169	1323	156
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	728	619	302	46	278	84	1351	605	176	1393	163
Arrive On Green	0.15	0.39	0.39	0.20	0.20	0.20	0.02	0.13	0.13	0.10	0.44	0.44
Sat Flow, veh/h	1681	1863	1583	1184	230	1388	1681	3539	1583	1681	3192	374
Grp Volume(v), veh/h	246	53	82	52	0	331	31	1231	27	169	730	749
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1184	0	1618	1681	1770	1583	1681	1770	1797
Q Serve(g_s), s	16.0	2.0	3.7	4.0	0.0	22.0	2.0	37.8	1.6	11.0	43.6	44.3
Cycle Q Clear(g_c), s	16.0	2.0	3.7	4.0	0.0	22.0	2.0	37.8	1.6	11.0	43.6	44.3
Prop In Lane	1.00		1.00	1.00		0.86	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	252	728	619	302	0	324	84	1351	605	176	772	784
V/C Ratio(X)	0.98	0.07	0.13	0.17	0.00	1.02	0.37	0.91	0.04	0.96	0.95	0.95
Avail Cap(c_a), veh/h	252	728	619	302	0	324	84	1351	605	176	772	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.68	0.68	0.68	0.91	0.91	0.91
Uniform Delay (d), s/veh	46.6	21.0	21.5	36.8	0.0	44.0	52.4	46.2	30.4	49.0	29.8	30.0
Incr Delay (d2), s/veh	49.7	0.0	0.1	0.3	0.0	56.0	1.8	7.8	0.1	53.5	20.2	21.5
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	10.9	1.0	1.6	1.3	0.0	14.8	1.0	20.0	0.7	7.7	25.4	26.5
LnGrp Delay(d),s/veh	96.3	21.0	21.6	37.1	0.0	100.1	54.2	54.0	30.5	102.6	49.9	51.4
LnGrp LOS	F	C	C	D		F	D	D	C	F	D	D
Approach Vol, veh/h		381			383			1289			1648	
Approach Delay, s/veh		69.8			91.5			53.5			56.0	
Approach LOS		E			F			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	46.5		47.5	10.0	52.5	21.0	26.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	42.0		43.0	5.5	48.0	16.5	22.0				
Max Q Clear Time (g_c+I1), s	13.0	39.8		5.7	4.0	46.3	18.0	24.0				
Green Ext Time (p_c), s	0.0	1.5		3.0	1.1	1.3	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			60.2									
HCM 2010 LOS			E									





















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 7: US-395 & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	106	121	115	88	351	72	828	48	288	962	108
Future Volume (veh/h)	84	106	121	115	88	351	72	828	48	288	962	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	88	112	127	121	93	369	76	872	51	303	1013	114
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	635	540	387	112	445	145	1213	543	325	1593	712
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.11	0.46	0.46	0.39	0.90	0.90
Sat Flow, veh/h	878	1863	1583	1077	329	1304	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	88	112	127	121	0	462	76	872	51	303	1013	114
Grp Sat Flow(s),veh/h/ln	878	1863	1583	1077	0	1633	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	8.9	4.6	6.3	9.8	0.0	28.6	4.7	21.9	2.0	19.0	7.4	0.9
Cycle Q Clear(g_c), s	37.5	4.6	6.3	14.4	0.0	28.6	4.7	21.9	2.0	19.0	7.4	0.9
Prop In Lane	1.00		1.00	1.00		0.80	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	136	635	540	387	0	557	145	1213	543	325	1593	712
V/C Ratio(X)	0.65	0.18	0.24	0.31	0.00	0.83	0.52	0.72	0.09	0.93	0.64	0.16
Avail Cap(c_a), veh/h	136	635	540	387	0	557	145	1213	543	374	1593	712
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94	0.62	0.62	0.62
Uniform Delay (d), s/veh	51.4	25.4	26.0	30.5	0.0	33.3	46.6	25.6	20.2	33.0	3.4	3.1
Incr Delay (d2), s/veh	10.0	0.1	0.2	0.5	0.0	10.2	3.2	3.5	0.3	19.8	1.2	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	3.0	2.4	2.8	2.9	0.0	14.4	2.3	11.2	0.9	10.5	3.4	0.4
LnGrp Delay(d),s/veh	61.5	25.6	26.2	30.9	0.0	43.5	49.8	29.1	20.5	52.8	4.6	3.4
LnGrp LOS	E	C	C	C		D	D	C	C	D	A	A
Approach Vol, veh/h		327			583			999			1430	
Approach Delay, s/veh		35.5			40.9			30.3			14.7	
Approach LOS		D			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.8	42.2		42.0	14.0	54.0		42.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	24.5	34.5		37.5	9.5	49.5		37.5				
Max Q Clear Time (g_c+I1), s	21.0	23.9		39.5	6.7	9.4		30.6				
Green Ext Time (p_c), s	0.3	4.1		0.0	0.5	7.9		2.8				
Intersection Summary												
HCM 2010 Ctrl Delay			26.0									
HCM 2010 LOS			C									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 8: US-395 & La Mesa Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	33	5	11	49	11	5	1025	5	5	1369	5
Future Volume (veh/h)	5	33	5	11	49	11	5	1025	5	5	1369	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1900	1765	1863	1900	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	5	35	5	12	52	12	5	1079	5	5	1441	5
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	94	13	114	86	20	364	3105	14	458	3109	11
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.86	0.86	0.86	1.00	1.00	1.00
Sat Flow, veh/h	1262	1595	228	1290	1465	338	348	3613	17	491	3618	13
Grp Volume(v), veh/h	5	0	40	12	0	64	5	529	555	5	705	741
Grp Sat Flow(s),veh/h/ln	1262	0	1823	1290	0	1803	348	1770	1860	491	1770	1861
Q Serve(g_s), s	0.4	0.0	2.3	1.0	0.0	3.8	0.2	6.6	6.6	0.1	0.0	0.0
Cycle Q Clear(g_c), s	4.2	0.0	2.3	3.3	0.0	3.8	0.2	6.6	6.6	6.7	0.0	0.0
Prop In Lane	1.00		0.13	1.00		0.19	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	96	0	107	114	0	106	364	1521	1598	458	1521	1599
V/C Ratio(X)	0.05	0.00	0.37	0.11	0.00	0.60	0.01	0.35	0.35	0.01	0.46	0.46
Avail Cap(c_a), veh/h	268	0	356	290	0	352	364	1521	1598	458	1521	1599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.78	0.78	0.78	0.87	0.87	0.87
Uniform Delay (d), s/veh	52.6	0.0	49.8	51.4	0.0	50.5	1.1	1.5	1.5	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	2.1	0.4	0.0	5.4	0.1	0.5	0.5	0.0	0.9	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	0.2	0.0	1.2	0.4	0.0	2.1	0.0	3.3	3.4	0.0	0.4	0.4
LnGrp Delay(d),s/veh	52.8	0.0	52.0	51.8	0.0	56.0	1.2	2.0	2.0	0.3	0.9	0.8
LnGrp LOS	D		D	D		E	A	A	A	A	A	A
Approach Vol, veh/h		45			76			1089			1451	
Approach Delay, s/veh		52.1			55.3			2.0			0.9	
Approach LOS		D			E			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		99.0		11.0		99.0		11.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		79.5		21.5		79.5		21.5				
Max Q Clear Time (g_c+I1), s		8.6		6.2		8.7		5.8				
Green Ext Time (p_c), s		30.3		0.4		30.3		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			3.8									
HCM 2010 LOS			A									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 9: US-395 & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	370	220	258	334	156	133	782	95	165	1077	34
Future Volume (veh/h)	67	370	220	258	334	156	133	782	95	165	1077	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	71	389	232	272	352	164	140	823	100	174	1134	36
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	589	263	267	963	431	309	1385	620	201	1146	36
Arrive On Green	0.05	0.17	0.17	0.16	0.27	0.27	0.18	0.39	0.39	0.12	0.33	0.33
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3502	111
Grp Volume(v), veh/h	71	389	232	272	352	164	140	823	100	174	573	597
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1843
Q Serve(g_s), s	4.6	11.3	10.7	17.5	8.8	9.3	8.2	20.3	4.5	11.2	35.4	35.5
Cycle Q Clear(g_c), s	4.6	11.3	10.7	17.5	8.8	9.3	8.2	20.3	4.5	11.2	35.4	35.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	90	589	263	267	963	431	309	1385	620	201	579	603
V/C Ratio(X)	0.79	0.66	0.88	1.02	0.37	0.38	0.45	0.59	0.16	0.87	0.99	0.99
Avail Cap(c_a), veh/h	160	933	417	267	1158	518	309	1385	620	206	579	603
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	0.82	0.82	0.82	1.00	1.00	1.00	0.88	0.88	0.88
Uniform Delay (d), s/veh	51.5	42.9	20.8	46.3	32.4	32.5	40.0	26.5	21.7	47.6	36.8	36.8
Incr Delay (d2), s/veh	14.3	1.3	12.4	54.4	0.2	0.5	1.0	1.9	0.6	26.8	32.6	32.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	5.6	5.6	12.1	4.3	4.1	3.9	10.2	2.1	6.7	22.4	23.3
LnGrp Delay(d),s/veh	65.7	44.2	33.2	100.8	32.5	33.0	41.0	28.4	22.3	74.4	69.4	68.8
LnGrp LOS	E	D	C	F	C	C	D	C	C	E	E	E
Approach Vol, veh/h		692			788			1063			1344	
Approach Delay, s/veh		42.7			56.2			29.5			69.8	
Approach LOS		D			E			C			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	47.6	22.0	22.8	24.7	40.5	10.4	34.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	32.0	17.5	29.0	9.5	36.0	10.5	36.0				
Max Q Clear Time (g_c+I1), s	13.2	22.3	19.5	13.3	10.2	37.5	6.6	11.3				
Green Ext Time (p_c), s	0.0	3.9	0.0	5.0	0.0	0.0	0.0	5.8				
Intersection Summary												
HCM 2010 Ctrl Delay			51.2									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 10: Palmdale Road (SR-18) & Cantina Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	1002	16	16	701	71	22	5	22	86	5	7
Future Volume (veh/h)	6	1002	16	16	701	71	22	5	22	86	5	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1667	1863	1900
Adj Flow Rate, veh/h	6	1055	17	17	738	75	23	5	23	91	5	7
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	151	1162	520	33	909	407	39	11	52	889	214	300
Arrive On Green	0.18	0.66	0.66	0.02	0.26	0.26	0.02	0.04	0.04	0.29	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	291	1336	3079	704	985
Grp Volume(v), veh/h	6	1055	17	17	738	75	23	0	28	91	0	12
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	0	1627	1540	0	1689
Q Serve(g_s), s	0.3	27.9	0.2	1.0	21.5	4.1	1.5	0.0	1.9	2.4	0.0	0.5
Cycle Q Clear(g_c), s	0.3	27.9	0.2	1.0	21.5	4.1	1.5	0.0	1.9	2.4	0.0	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.82	1.00		0.58
Lane Grp Cap(c), veh/h	151	1162	520	33	909	407	39	0	63	889	0	514
V/C Ratio(X)	0.04	0.91	0.03	0.52	0.81	0.18	0.60	0.00	0.44	0.10	0.00	0.02
Avail Cap(c_a), veh/h	151	1528	684	89	1528	684	84	0	303	889	0	514
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.68	0.94	0.94	0.94	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.2	17.5	4.6	53.5	38.4	31.9	53.2	0.0	51.7	28.7	0.0	26.8
Incr Delay (d2), s/veh	0.1	4.8	0.0	11.5	1.7	0.2	13.8	0.0	4.8	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	14.0	0.1	0.6	10.8	1.8	0.8	0.0	0.9	1.0	0.0	0.3
LnGrp Delay(d),s/veh	41.3	22.2	4.6	65.0	40.1	32.1	67.1	0.0	56.5	28.9	0.0	26.9
LnGrp LOS	D	C	A	E	D	C	E		E	C		C
Approach Vol, veh/h		1078			830			51			103	
Approach Delay, s/veh		22.1			39.9			61.3			28.7	
Approach LOS		C			D			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.3	8.8	6.5	40.6	7.0	38.0	14.4	32.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	20.5	5.5	47.5	5.5	33.5	5.5	47.5				
Max Q Clear Time (g_c+I1), s	4.4	3.9	3.0	29.9	3.5	2.5	2.3	23.5				
Green Ext Time (p_c), s	0.2	0.1	0.0	6.2	0.0	0.3	0.0	4.7				
Intersection Summary												
HCM 2010 Ctrl Delay			30.5									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 12.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	152	43	123	190	14	115	28	160	24	31	16
Future Vol, veh/h	14	152	43	123	190	14	115	28	160	24	31	16
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	160	45	129	200	15	121	29	168	25	33	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	215	0	0	205	0	0	703	686	183	777	701	207
Stage 1	-	-	-	-	-	-	212	212	-	466	466	-
Stage 2	-	-	-	-	-	-	491	474	-	311	235	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1355	-	-	1366	-	-	352	370	859	314	363	833
Stage 1	-	-	-	-	-	-	790	727	-	577	562	-
Stage 2	-	-	-	-	-	-	559	558	-	699	710	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1355	-	-	1366	-	-	290	326	859	214	320	833
Mov Cap-2 Maneuver	-	-	-	-	-	-	290	326	-	214	320	-
Stage 1	-	-	-	-	-	-	780	718	-	569	502	-
Stage 2	-	-	-	-	-	-	457	498	-	532	701	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	3	29.7	20.2
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	453	1355	-	-	1366	-	-	311
HCM Lane V/C Ratio	0.704	0.011	-	-	0.095	-	-	0.24
HCM Control Delay (s)	29.7	7.7	0	-	7.9	0	-	20.2
HCM Lane LOS	D	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	5.4	0	-	-	0.3	-	-	0.9

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵	↵
Traffic Vol, veh/h	0	35	115	73	0	91	100	17	0	99	174	197
Future Vol, veh/h	0	35	115	73	0	91	100	17	0	99	174	197
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	37	121	77	0	96	105	18	0	104	183	207
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	15.4	13.7	13.7
HCM LOS	C	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	61%	0%	85%	0%	79%
Vol Right, %	0%	0%	100%	0%	39%	0%	15%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	174	197	35	188	91	117	107	175
LT Vol	99	0	0	35	0	91	0	107	0
Through Vol	0	174	0	0	115	0	100	0	139
RT Vol	0	0	197	0	73	0	17	0	36
Lane Flow Rate	104	183	207	37	198	96	123	113	184
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.228	0.374	0.382	0.087	0.422	0.227	0.27	0.258	0.388
Departure Headway (Hd)	7.865	7.355	6.64	8.469	7.682	8.514	7.9	8.252	7.592
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	456	489	541	422	467	421	453	435	473
Service Time	5.623	5.112	4.397	6.235	5.448	6.282	5.668	6.019	5.358
HCM Lane V/C Ratio	0.228	0.374	0.383	0.088	0.424	0.228	0.272	0.26	0.389
HCM Control Delay	12.9	14.5	13.5	12	16	13.8	13.6	13.9	15.1
HCM Lane LOS	B	B	B	B	C	B	B	B	C
HCM 95th-tile Q	0.9	1.7	1.8	0.3	2.1	0.9	1.1	1	1.8

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↶	↷	
Traffic Vol, veh/h	0	107	139	36
Future Vol, veh/h	0	107	139	36
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	113	146	38
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	14.6
HCM LOS	B

Intersection	
Intersection Delay, s/veh	13.3
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕↕			↵	↕↕			↵	↕↕	
Traffic Vol, veh/h	0	46	141	17	0	31	149	194	0	9	122	79
Future Vol, veh/h	0	46	141	17	0	31	149	194	0	9	122	79
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	148	18	0	33	157	204	0	9	128	83
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	11.8	13.9	12
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	34%	0%	100%	73%	0%	100%	20%	0%	100%
Vol Right, %	0%	0%	66%	0%	0%	27%	0%	0%	80%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	81	120	46	94	64	31	99	244	209	72
LT Vol	9	0	0	46	0	0	31	0	0	209	0
Through Vol	0	81	41	0	94	47	0	99	50	0	72
RT Vol	0	0	79	0	0	17	0	0	194	0	0
Lane Flow Rate	9	86	126	48	99	67	33	105	256	220	76
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.021	0.179	0.247	0.108	0.207	0.138	0.069	0.208	0.471	0.465	0.15
Departure Headway (Hd)	8.029	7.529	7.067	8.034	7.534	7.348	7.662	7.162	6.605	7.616	7.116
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	446	477	509	447	477	488	468	502	546	473	505
Service Time	5.769	5.269	4.807	5.772	5.272	5.086	5.396	4.896	4.339	5.352	4.852
HCM Lane V/C Ratio	0.02	0.18	0.248	0.107	0.208	0.137	0.071	0.209	0.469	0.465	0.15
HCM Control Delay	10.9	11.9	12.1	11.7	12.2	11.3	11	11.8	15.1	16.8	11.1
HCM Lane LOS	B	B	B	B	B	B	B	B	C	C	B
HCM 95th-tile Q	0.1	0.6	1	0.4	0.8	0.5	0.2	0.8	2.5	2.4	0.5

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕↵	
Traffic Vol, veh/h	0	209	108	52
Future Vol, veh/h	0	209	108	52
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	220	114	55
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	14.3
HCM LOS	B

Intersection	
Intersection Delay, s/veh	21.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵	
Traffic Vol, veh/h	0	68	258	38	0	106	192	77	0	11	230	88
Future Vol, veh/h	0	68	258	38	0	106	192	77	0	11	230	88
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	72	272	40	0	112	202	81	0	12	242	93
Number of Lanes	0	1	1	0	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	27.8	22.8	16.9
HCM LOS	D	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	50%	0%
Vol Thru, %	0%	100%	47%	0%	87%	0%	71%	50%	72%
Vol Right, %	0%	0%	53%	0%	13%	0%	29%	0%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	153	165	68	296	106	269	154	108
LT Vol	11	0	0	68	0	106	0	76	0
Through Vol	0	153	77	0	258	0	192	78	78
RT Vol	0	0	88	0	38	0	77	0	30
Lane Flow Rate	12	161	173	72	312	112	283	162	113
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.03	0.396	0.407	0.18	0.73	0.281	0.656	0.417	0.277
Departure Headway (Hd)	9.352	8.835	8.448	9.046	8.44	9.054	8.335	9.285	8.824
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	407	426	397	427	397	433	388	406
Service Time	7.112	6.594	6.207	6.803	6.197	6.81	6.09	7.049	6.588
HCM Lane V/C Ratio	0.031	0.396	0.406	0.181	0.731	0.282	0.654	0.418	0.278
HCM Control Delay	12.4	17.3	16.9	13.8	31	15.3	25.7	18.6	15
HCM Lane LOS	B	C	C	B	D	C	D	C	B
HCM 95th-tile Q	0.1	1.9	1.9	0.6	5.8	1.1	4.6	2	1.1

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			←T	
Traffic Vol, veh/h	0	76	155	30
Future Vol, veh/h	0	76	155	30
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	80	163	32
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	17.1
HCM LOS	C

Intersection	
Intersection Delay, s/veh	21.2
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	75	374	85	0	98	295	110	0	99	176	128
Future Vol, veh/h	0	75	374	85	0	98	295	110	0	99	176	128
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	79	394	89	0	103	311	116	0	104	185	135
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	24.9	21.4	19
HCM LOS	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	31%	0%	100%	59%	0%	100%	47%	0%	100%
Vol Right, %	0%	0%	69%	0%	0%	41%	0%	0%	53%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	117	187	75	249	210	98	197	208	111	89
LT Vol	99	0	0	75	0	0	98	0	0	111	0
Through Vol	0	117	59	0	249	125	0	197	98	0	89
RT Vol	0	0	128	0	0	85	0	0	110	0	0
Lane Flow Rate	104	124	196	79	262	221	103	207	219	117	93
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.295	0.333	0.503	0.215	0.679	0.554	0.284	0.541	0.55	0.337	0.256
Departure Headway (Hd)	10.204	9.704	9.224	9.815	9.315	9.031	9.901	9.401	9.031	10.386	9.886
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	352	371	389	366	388	399	362	383	399	346	363
Service Time	7.981	7.481	7.001	7.589	7.089	6.805	7.674	7.174	6.804	8.166	7.666
HCM Lane V/C Ratio	0.295	0.334	0.504	0.216	0.675	0.554	0.285	0.54	0.549	0.338	0.256
HCM Control Delay	17.2	17.3	21	15.3	29.8	22.5	16.6	22.8	22.4	18.4	16.1
HCM Lane LOS	C	C	C	C	D	C	C	C	C	C	C
HCM 95th-tile Q	1.2	1.4	2.7	0.8	4.8	3.2	1.1	3.1	3.2	1.5	1

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕↵	
Traffic Vol, veh/h	0	111	133	96
Future Vol, veh/h	0	111	133	96
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	117	140	101
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	17.6
HCM LOS	C






















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 16: Topaz Road & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	481	9	60	406	80	9	56	121	164	46	73
Future Volume (veh/h)	30	481	9	60	406	80	9	56	121	164	46	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	32	506	9	63	427	84	9	59	127	173	48	77
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	637	285	101	625	122	803	466	396	882	601	511
Arrive On Green	0.03	0.18	0.18	0.06	0.21	0.21	0.27	0.25	0.25	0.35	0.32	0.32
Sat Flow, veh/h	1681	3539	1583	1681	2954	577	1681	1863	1583	1681	1863	1583
Grp Volume(v), veh/h	32	506	9	63	255	256	9	59	127	173	48	77
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1761	1681	1863	1583	1681	1863	1583
Q Serve(g_s), s	2.1	15.0	0.5	4.0	14.6	14.8	0.0	2.7	7.2	0.0	2.0	3.2
Cycle Q Clear(g_c), s	2.1	15.0	0.5	4.0	14.6	14.8	0.0	2.7	7.2	0.0	2.0	3.2
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	637	285	101	374	372	803	466	396	882	601	511
V/C Ratio(X)	0.67	0.79	0.03	0.63	0.68	0.69	0.01	0.13	0.32	0.20	0.08	0.15
Avail Cap(c_a), veh/h	130	1174	525	206	668	664	803	466	396	882	601	511
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)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	43.2	37.2	50.5	39.9	40.0	13.5	31.9	33.6	12.9	25.9	18.6
Incr Delay (d2), s/veh	12.0	1.8	0.0	6.2	2.2	2.3	0.0	0.6	2.1	0.1	0.3	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	1.1	7.5	0.2	2.0	7.4	7.4	0.1	1.5	3.4	2.8	1.1	1.5
LnGrp Delay(d),s/veh	64.9	45.0	37.2	56.8	42.1	42.3	13.5	32.5	35.8	13.0	26.2	19.2
LnGrp LOS	E	D	D	E	D	D	B	C	D	B	C	B
Approach Vol, veh/h		547			574			195			298	
Approach Delay, s/veh		46.0			43.8			33.8			16.7	
Approach LOS		D			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	42.6	32.0	11.1	24.3	34.6	40.0	7.6	27.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	14.5	27.5	13.5	36.5	6.5	35.5	8.5	41.5				
Max Q Clear Time (g_c+I1), s	2.0	9.2	6.0	17.0	2.0	5.2	4.1	16.8				
Green Ext Time (p_c), s	0.4	0.6	1.7	2.7	0.2	0.4	0.0	2.8				
Intersection Summary												
HCM 2010 Ctrl Delay			38.3									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 17: Cobalt Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	653	221	219	492	7	160	199	261	11	266	9
Future Volume (veh/h)	20	653	221	219	492	7	160	199	261	11	266	9
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	687	233	231	518	7	168	209	275	12	280	9
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	812	363	283	1345	18	515	351	461	48	834	26
Arrive On Green	0.02	0.23	0.23	0.17	0.38	0.38	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1681	3539	1583	1681	3576	48	1029	731	962	29	1740	55
Grp Volume(v), veh/h	21	687	233	231	256	269	168	0	484	301	0	0
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1854	1029	0	1693	1823	0	0
Q Serve(g_s), s	1.4	20.4	14.6	14.6	11.6	11.6	5.6	0.0	22.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.4	20.4	14.6	14.6	11.6	11.6	16.8	0.0	22.9	11.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.57	0.04		0.03
Lane Grp Cap(c), veh/h	36	812	363	283	666	698	515	0	812	908	0	0
V/C Ratio(X)	0.58	0.85	0.64	0.82	0.38	0.39	0.33	0.00	0.60	0.33	0.00	0.00
Avail Cap(c_a), veh/h	84	956	428	359	767	804	515	0	812	908	0	0
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)	0.58	0.58	0.58	0.72	0.72	0.72	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	53.3	40.5	38.3	44.1	25.0	25.0	20.0	0.0	20.9	17.8	0.0	0.0
Incr Delay (d2), s/veh	8.3	3.8	1.5	8.2	0.3	0.3	1.7	0.0	3.2	1.0	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	0.7	10.3	6.6	7.4	5.7	6.0	3.6	0.0	11.3	5.9	0.0	0.0
LnGrp Delay(d),s/veh	61.6	44.3	39.8	52.3	25.3	25.3	21.7	0.0	24.1	18.8	0.0	0.0
LnGrp LOS	E	D	D	D	C	C	C		C	B		
Approach Vol, veh/h		941			756			652			301	
Approach Delay, s/veh		43.6			33.5			23.5			18.8	
Approach LOS		D			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		57.2	23.0	29.7		57.2	6.9	45.9				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		43.3	23.5	29.7		43.3	5.5	47.7				
Max Q Clear Time (g_c+I1), s		24.9	16.6	22.4		13.1	3.4	13.6				
Green Ext Time (p_c), s		5.5	2.0	2.8		6.3	0.0	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay			32.9									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	18.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	124	289	7	0	11	173	104	0	7	36	19
Future Vol, veh/h	0	124	289	7	0	11	173	104	0	7	36	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	131	304	7	0	12	182	109	0	7	38	20
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	23	14.7	10.9
HCM LOS	C	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	30%	4%	59%
Vol Thru, %	58%	69%	60%	9%
Vol Right, %	31%	2%	36%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	420	288	325
LT Vol	7	124	11	191
Through Vol	36	289	173	28
RT Vol	19	7	104	106
Lane Flow Rate	65	442	303	342
Geometry Grp	1	1	1	1
Degree of Util (X)	0.124	0.726	0.497	0.588
Departure Headway (Hd)	6.856	5.909	5.901	6.191
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	521	615	609	585
Service Time	4.924	3.933	3.947	4.215
HCM Lane V/C Ratio	0.125	0.719	0.498	0.585
HCM Control Delay	10.9	23	14.7	17.7
HCM Lane LOS	B	C	B	C
HCM 95th-tile Q	0.4	6.1	2.8	3.8

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	191	28	106
Future Vol, veh/h	0	191	28	106
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	201	29	112
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	17.7
HCM LOS	C
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 19: Amethyst Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	831	66	100	521	18	94	251	194	65	249	89
Future Volume (veh/h)	75	831	66	100	521	18	94	251	194	65	249	89
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	79	875	69	105	548	19	99	264	204	68	262	94
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	999	447	129	673	23	275	601	511	260	411	147
Arrive On Green	0.17	0.28	0.28	0.08	0.19	0.19	0.16	0.32	0.32	0.15	0.31	0.31
Sat Flow, veh/h	1681	3539	1583	1681	3490	121	1681	1863	1583	1681	1310	470
Grp Volume(v), veh/h	79	875	69	105	278	289	99	264	204	68	0	356
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1841	1681	1863	1583	1681	0	1780
Q Serve(g_s), s	4.5	25.9	2.4	6.8	16.5	16.6	5.8	12.3	8.4	3.9	0.0	18.9
Cycle Q Clear(g_c), s	4.5	25.9	2.4	6.8	16.5	16.6	5.8	12.3	8.4	3.9	0.0	18.9
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	280	999	447	129	341	355	275	601	511	260	0	558
V/C Ratio(X)	0.28	0.88	0.15	0.81	0.81	0.82	0.36	0.44	0.40	0.26	0.00	0.64
Avail Cap(c_a), veh/h	280	1142	511	176	587	611	275	601	511	260	0	558
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)	0.50	0.50	0.50	0.87	0.87	0.87	0.92	0.92	0.92	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.1	37.6	12.8	50.0	42.5	42.5	40.9	29.4	17.0	41.0	0.0	32.4
Incr Delay (d2), s/veh	0.3	3.8	0.1	16.3	4.1	4.0	0.7	2.1	2.1	0.5	0.0	5.5
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	2.1	13.2	1.0	3.7	8.5	8.8	2.7	6.7	4.0	1.9	0.0	10.1
LnGrp Delay(d),s/veh	40.4	41.4	12.9	66.3	46.7	46.6	41.6	31.5	19.1	41.5	0.0	37.9
LnGrp LOS	D	D	B	E	D	D	D	C	B	D		D
Approach Vol, veh/h		1023			672			567			424	
Approach Delay, s/veh		39.4			49.7			28.8			38.5	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.5	40.0	13.0	35.5	22.5	39.0	22.8	25.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	35.5	11.5	35.5	10.5	34.5	10.5	36.5				
Max Q Clear Time (g_c+I1), s	5.9	14.3	8.8	27.9	7.8	20.9	6.5	18.6				
Green Ext Time (p_c), s	0.1	1.9	0.0	3.1	0.1	1.6	2.1	2.6				
Intersection Summary												
HCM 2010 Ctrl Delay			39.6									
HCM 2010 LOS			D									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 20: Amethyst Road & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	230	164	55	98	55	123	440	85	165	384	60
Future Volume (veh/h)	113	230	164	55	98	55	123	440	85	165	384	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	119	242	173	58	103	58	129	463	89	174	404	63
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	310	264	74	126	71	154	917	410	617	1891	846
Arrive On Green	0.10	0.17	0.17	0.04	0.11	0.11	0.18	0.52	0.52	0.37	0.53	0.53
Sat Flow, veh/h	1681	1863	1583	1681	1120	631	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	119	242	173	58	0	161	129	463	89	174	404	63
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1681	0	1751	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	7.6	13.7	11.2	3.8	0.0	9.9	8.1	9.4	2.8	8.0	6.6	1.3
Cycle Q Clear(g_c), s	7.6	13.7	11.2	3.8	0.0	9.9	8.1	9.4	2.8	8.0	6.6	1.3
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	310	264	74	0	198	154	917	410	617	1891	846
V/C Ratio(X)	0.73	0.78	0.66	0.79	0.00	0.81	0.83	0.50	0.22	0.28	0.21	0.07
Avail Cap(c_a), veh/h	267	483	410	176	0	358	283	917	410	617	1891	846
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	48.2	43.9	42.9	52.1	0.0	47.7	44.1	21.9	14.1	24.6	13.5	4.7
Incr Delay (d2), s/veh	6.0	4.3	2.8	16.8	0.0	7.9	11.1	2.0	1.2	0.2	0.2	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	3.8	7.4	5.1	2.1	0.0	5.2	4.2	4.8	1.3	3.8	3.3	0.6
LnGrp Delay(d),s/veh	54.3	48.2	45.7	68.9	0.0	55.6	55.2	23.9	15.3	24.8	13.7	4.8
LnGrp LOS	D	D	D	E		E	E	C	B	C	B	A
Approach Vol, veh/h		534			219			681			641	
Approach Delay, s/veh		48.8			59.1			28.7			15.8	
Approach LOS		D			E			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.9	33.0	9.3	22.8	14.6	63.3	15.2	16.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	23.5	28.5	11.5	28.5	18.5	33.5	17.5	22.5				
Max Q Clear Time (g_c+I1), s	10.0	11.4	5.8	15.7	10.1	8.6	9.6	11.9				
Green Ext Time (p_c), s	2.5	2.7	0.0	1.8	0.2	3.0	1.4	0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			33.1									
HCM 2010 LOS			C									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 21: El Evado Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	148	869	64	55	411	90	87	288	147	226	330	109
Future Volume (veh/h)	148	869	64	55	411	90	87	288	147	226	330	109
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	156	915	67	58	433	95	92	303	155	238	347	115
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1050	470	80	829	371	115	692	309	499	1501	846
Arrive On Green	0.11	0.30	0.30	0.05	0.23	0.23	0.07	0.20	0.20	0.30	0.42	0.42
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	156	915	67	58	433	95	92	303	155	238	347	115
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	10.0	27.0	2.7	3.7	11.7	2.7	5.9	8.3	9.6	12.8	6.9	4.0
Cycle Q Clear(g_c), s	10.0	27.0	2.7	3.7	11.7	2.7	5.9	8.3	9.6	12.8	6.9	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	1050	470	80	829	371	115	692	309	499	1501	846
V/C Ratio(X)	0.84	0.87	0.14	0.73	0.52	0.26	0.80	0.44	0.50	0.48	0.23	0.14
Avail Cap(c_a), veh/h	283	1207	540	115	853	381	160	692	309	499	1501	846
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)	0.63	0.63	0.63	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	36.7	17.6	51.7	36.8	8.8	50.5	38.9	39.5	31.7	20.2	12.9
Incr Delay (d2), s/veh	8.7	4.2	0.1	7.9	0.3	0.2	17.7	2.0	5.7	0.7	0.4	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	5.1	13.8	1.2	1.9	5.8	1.2	3.3	4.2	4.7	6.0	3.4	1.8
LnGrp Delay(d),s/veh	56.7	40.9	17.7	59.6	37.1	9.0	68.2	40.9	45.2	32.4	20.6	13.2
LnGrp LOS	E	D	B	E	D	A	E	D	D	C	C	B
Approach Vol, veh/h		1138			586			550			700	
Approach Delay, s/veh		41.7			34.8			46.7			23.4	
Approach LOS		D			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.1	26.0	9.7	37.1	12.0	51.1	16.6	30.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5	21.5	7.5	37.5	10.5	36.5	18.5	26.5				
Max Q Clear Time (g_c+I1), s	14.8	11.6	5.7	29.0	7.9	8.9	12.0	13.7				
Green Ext Time (p_c), s	2.4	1.6	0.6	3.7	0.0	3.2	0.2	2.3				
Intersection Summary												
HCM 2010 Ctrl Delay			37.0									
HCM 2010 LOS			D									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 22: Amargosa Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	1017	116	64	557	99	115	290	69	177	261	83
Future Volume (veh/h)	198	1017	116	64	557	99	115	290	69	177	261	83
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	208	1071	122	67	586	104	121	305	73	186	275	87
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	323	1210	541	86	709	317	325	897	211	215	665	206
Arrive On Green	0.19	0.34	0.34	0.05	0.20	0.20	0.19	0.32	0.32	0.13	0.25	0.25
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	2844	671	1681	2662	825
Grp Volume(v), veh/h	208	1071	122	67	586	104	121	188	190	186	181	181
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1744	1681	1770	1717
Q Serve(g_s), s	12.5	31.4	6.0	4.3	17.5	4.6	6.9	9.0	9.2	11.9	9.4	9.7
Cycle Q Clear(g_c), s	12.5	31.4	6.0	4.3	17.5	4.6	6.9	9.0	9.2	11.9	9.4	9.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.48
Lane Grp Cap(c), veh/h	323	1210	541	86	709	317	325	558	550	215	442	429
V/C Ratio(X)	0.64	0.89	0.23	0.78	0.83	0.33	0.37	0.34	0.35	0.86	0.41	0.42
Avail Cap(c_a), veh/h	328	1335	597	115	885	396	325	558	550	298	442	429
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)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.9	34.2	25.8	51.6	42.1	20.5	38.5	28.8	28.9	47.0	34.5	34.6
Incr Delay (d2), s/veh	2.5	4.4	0.1	21.6	5.3	0.6	0.7	1.6	1.7	17.0	2.8	3.0
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	6.1	16.1	2.6	2.5	9.1	2.0	3.3	4.6	4.7	6.5	4.9	5.0
LnGrp Delay(d),s/veh	43.5	38.6	25.9	73.2	47.4	21.1	39.3	30.5	30.6	64.0	37.2	37.6
LnGrp LOS	D	D	C	E	D	C	D	C	C	E	D	D
Approach Vol, veh/h		1401			757			499			548	
Approach Delay, s/veh		38.2			46.1			32.7			46.4	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.6	39.2	10.1	42.1	25.8	32.0	25.7	26.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	23.5	7.5	41.5	15.5	27.5	21.5	27.5				
Max Q Clear Time (g_c+I1), s	13.9	11.2	6.3	33.4	8.9	11.7	14.5	19.5				
Green Ext Time (p_c), s	0.2	1.9	0.1	4.2	1.3	1.7	0.4	2.6				
Intersection Summary												
HCM 2010 Ctrl Delay			40.6									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project AM Peak Hour
 26: US-395 & Crossroads

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	42	62	32	35	56	64	1258	61	86	1076	85
Future Volume (veh/h)	81	42	62	32	35	56	64	1258	61	86	1076	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	88	46	67	35	38	61	70	1367	66	93	1170	92
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	83	121	120	60	96	97	2231	695	118	1596	714
Arrive On Green	0.07	0.13	0.13	0.04	0.10	0.10	0.06	0.46	0.46	0.07	0.48	0.48
Sat Flow, veh/h	1681	650	947	3261	611	981	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	88	0	113	35	0	99	70	1367	66	93	1170	92
Grp Sat Flow(s),veh/h/ln	1681	0	1598	1630	0	1592	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	3.1	0.0	4.0	0.6	0.0	3.6	2.4	12.7	1.5	3.2	16.7	2.0
Cycle Q Clear(g_c), s	3.1	0.0	4.0	0.6	0.0	3.6	2.4	12.7	1.5	3.2	16.7	2.0
Prop In Lane	1.00		0.59	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	0	203	120	0	155	97	2231	695	118	1596	714
V/C Ratio(X)	0.79	0.00	0.56	0.29	0.00	0.64	0.72	0.61	0.09	0.78	0.73	0.13
Avail Cap(c_a), veh/h	353	0	684	301	0	494	296	4651	1448	381	3405	1524
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	27.4	0.0	24.4	27.9	0.0	25.9	27.6	12.0	9.0	27.2	12.6	8.7
Incr Delay (d2), s/veh	11.5	0.0	2.4	1.3	0.0	4.3	9.7	0.3	0.1	10.8	0.7	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	1.8	0.0	1.9	0.3	0.0	1.8	1.4	5.6	0.6	1.9	7.8	0.8
LnGrp Delay(d),s/veh	38.9	0.0	26.8	29.2	0.0	30.1	37.3	12.3	9.0	38.0	13.2	8.8
LnGrp LOS	D		C	C		C	D	B	A	D	B	A
Approach Vol, veh/h		201			134			1503			1355	
Approach Delay, s/veh		32.1			29.9			13.3			14.6	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	32.1	6.7	12.1	7.9	32.9	8.5	10.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	57.5	5.5	25.5	10.5	60.5	12.5	18.5				
Max Q Clear Time (g_c+I1), s	5.2	14.7	2.6	6.0	4.4	18.7	5.1	5.6				
Green Ext Time (p_c), s	0.1	11.6	0.0	0.5	0.1	9.6	0.1	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			15.7									
HCM 2010 LOS			B									






















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 1: Palmdale Road (SR-18) & Pearmain St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1070	38	65	925	316	27	114	27	99	103	12
Future Volume (veh/h)	14	1070	38	65	925	316	27	114	27	99	103	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	15	1126	40	68	974	333	28	120	28	104	108	13
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	1283	574	116	1456	651	44	187	42	577	1218	144
Arrive On Green	0.02	0.36	0.36	0.13	0.82	0.82	0.03	0.07	0.07	0.34	0.38	0.38
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	2867	651	1681	3188	378
Grp Volume(v), veh/h	15	1126	40	68	974	333	28	73	75	104	59	62
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	1770	1748	1681	1770	1796
Q Serve(g_s), s	1.0	32.7	1.5	4.0	11.9	2.0	1.8	4.4	4.6	4.8	2.4	2.4
Cycle Q Clear(g_c), s	1.0	32.7	1.5	4.0	11.9	2.0	1.8	4.4	4.6	4.8	2.4	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	1.00		0.21
Lane Grp Cap(c), veh/h	28	1283	574	116	1456	651	44	115	114	577	676	687
V/C Ratio(X)	0.53	0.88	0.07	0.59	0.67	0.51	0.64	0.63	0.66	0.18	0.09	0.09
Avail Cap(c_a), veh/h	84	1464	655	153	1593	712	84	306	302	577	676	687
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	32.8	15.8	46.4	6.8	0.5	53.0	50.1	50.2	25.3	21.7	21.7
Incr Delay (d2), s/veh	14.8	5.8	0.1	3.1	0.6	0.4	14.3	23.4	26.2	0.1	0.1	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	0.6	17.0	0.7	2.0	5.5	0.8	1.0	2.9	3.1	2.2	1.2	1.2
LnGrp Delay(d),s/veh	68.5	38.6	15.9	49.5	7.5	0.9	67.4	73.5	76.4	25.4	21.8	21.8
LnGrp LOS	E	D	B	D	A	A	E	E	E	C	C	C
Approach Vol, veh/h		1181			1375			176			225	
Approach Delay, s/veh		38.2			7.9			73.8			23.5	
Approach LOS		D			A			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	42.3	11.7	11.7	44.4	7.4	46.5	6.3	49.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.0	19.0	9.5	45.5	5.5	31.5	5.5	49.5				
Max Q Clear Time (g_c+I1), s	6.8	6.6	6.0	34.7	3.8	4.4	3.0	13.9				
Green Ext Time (p_c), s	0.7	0.5	2.3	5.2	0.0	0.9	0.0	8.7				
Intersection Summary												
HCM 2010 Ctrl Delay			25.1									
HCM 2010 LOS			C									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	147	990	0	0	875	16	0	0	0	118	0	256
Future Volume (veh/h)	147	990	0	0	875	16	0	0	0	118	0	256
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	155	1042	0	0	921	17	0	0	0	124	0	269
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	1256	562	81	1038	464	0	883	0	735	0	751
Arrive On Green	0.11	0.35	0.00	0.00	0.59	0.59	0.00	0.00	0.00	0.47	0.00	0.47
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	0	1863	0	1412	0	1583
Grp Volume(v), veh/h	155	1042	0	0	921	17	0	0	0	124	0	269
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	0	1863	0	1412	0	1583
Q Serve(g_s), s	9.9	29.6	0.0	0.0	24.7	0.5	0.0	0.0	0.0	5.6	0.0	11.8
Cycle Q Clear(g_c), s	9.9	29.6	0.0	0.0	24.7	0.5	0.0	0.0	0.0	5.6	0.0	11.8
Prop In Lane	1.00		1.00	1.00		1.00	0.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	1256	562	81	1038	464	0	883	0	735	0	751
V/C Ratio(X)	0.84	0.83	0.00	0.00	0.89	0.04	0.00	0.00	0.00	0.17	0.00	0.36
Avail Cap(c_a), veh/h	344	2043	914	84	1496	669	0	883	0	735	0	751
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.0	32.5	0.0	0.0	21.2	16.2	0.0	0.0	0.0	16.7	0.0	18.3
Incr Delay (d2), s/veh	5.0	0.8	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.5	0.0	1.3
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	4.9	14.6	0.0	0.0	12.5	0.2	0.0	0.0	0.0	2.3	0.0	5.4
LnGrp Delay(d),s/veh	53.0	33.2	0.0	0.0	26.1	16.2	0.0	0.0	0.0	17.2	0.0	19.7
LnGrp LOS	D	C			C	B				B		B
Approach Vol, veh/h		1197			938			0			393	
Approach Delay, s/veh		35.8			25.9			0.0			18.9	
Approach LOS		D			C						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		56.6	9.8	43.5		56.6	16.6	36.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		27.5	5.5	63.5		27.5	22.5	46.5				
Max Q Clear Time (g_c+I1), s		0.0	0.0	31.6		13.8	11.9	26.7				
Green Ext Time (p_c), s		0.0	0.0	7.4		1.4	0.3	5.6				
Intersection Summary												
HCM 2010 Ctrl Delay			29.5									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 65.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	↕
Traffic Vol, veh/h	8	27	320	38	38	43	421	1326	33	33	1340	24
Future Vol, veh/h	8	27	320	38	38	43	421	1326	33	33	1340	24
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	-	-	-	-	-	-	300	-	-	-	-	250
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	28	337	40	40	45	443	1396	35	35	1411	25

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3822	3797	1411	3962	3779	1413	1411	0	0	1431	0	0
Stage 1	1480	1480	-	2299	2299	-	-	-	-	-	-	-
Stage 2	2342	2317	-	1663	1480	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 2	~ 4	~ 169	~ 2	~ 4	169	483	-	-	475	-	-
Stage 1	156	189	-	52	73	-	-	-	-	-	-	-
Stage 2	49	72	-	123	189	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	0	0	~ 169	-	0	169	483	-	-	475	-	-
Mov Cap-2 Maneuver	0	0	-	-	0	-	-	-	-	-	-	-
Stage 1	13	119	-	~ 4	~ 6	-	-	-	-	-	-	-
Stage 2	-	~ 6	-	-	119	-	-	-	-	-	-	-

























Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 607.8		12.4	0.3
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	483	-	-	169	-	475	-
HCM Lane V/C Ratio	0.918	-	-	2.211	-	0.073	-
HCM Control Delay (s)	52.4	-	-	\$ 607.8	-	13.2	-
HCM Lane LOS	F	-	-	F	-	B	-
HCM 95th %tile Q(veh)	10.6	-	-	30.2	-	0.2	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary













Interim Year Without Project PM Peak Hour
 4: US-395 & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	569	391	328	615	205	372	1133	150	216	968	71
Future Volume (veh/h)	144	569	391	328	615	205	372	1133	150	216	968	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	152	599	412	345	647	216	392	1193	158	227	1019	75
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	688	308	350	740	331	374	1372	614	237	1082	484
Arrive On Green	0.13	0.26	0.26	0.11	0.21	0.21	0.07	0.13	0.13	0.14	0.31	0.31
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	152	599	412	345	647	216	392	1193	158	227	1019	75
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	9.8	17.8	13.3	12.3	19.5	9.9	24.5	36.4	6.7	14.8	30.9	2.8
Cycle Q Clear(g_c), s	9.8	17.8	13.3	12.3	19.5	9.9	24.5	36.4	6.7	14.8	30.9	2.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	688	308	350	740	331	374	1372	614	237	1082	484
V/C Ratio(X)	0.92	0.87	1.34	0.99	0.87	0.65	1.05	0.87	0.26	0.96	0.94	0.15
Avail Cap(c_a), veh/h	166	740	331	350	804	360	374	1372	614	237	1082	484
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	39.5	15.8	48.7	42.1	20.6	51.0	45.2	15.6	46.9	37.2	15.2
Incr Delay (d2), s/veh	45.9	10.5	173.1	34.4	6.6	2.4	59.4	7.7	1.0	46.8	16.5	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	6.7	9.7	20.5	6.9	10.2	4.5	17.6	19.3	3.1	10.0	17.5	1.3
LnGrp Delay(d),s/veh	93.3	50.0	188.9	83.1	48.7	22.9	110.4	53.0	16.6	93.7	53.7	15.9
LnGrp LOS	F	D	F	F	D	C	F	D	B	F	D	B
Approach Vol, veh/h		1163			1208			1743			1321	
Approach Delay, s/veh		104.8			53.9			62.6			58.5	
Approach LOS		F			D			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	47.1	17.0	25.9	29.0	38.1	15.4	27.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	41.0	12.5	23.0	24.5	32.0	10.5	25.0				
Max Q Clear Time (g_c+I1), s	16.8	38.4	14.3	19.8	26.5	32.9	11.8	21.5				
Green Ext Time (p_c), s	0.0	2.4	0.0	1.6	0.0	0.0	0.0	1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			68.7									
HCM 2010 LOS			E									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary
























Interim Year Without Project PM Peak Hour

5: US-395

								
Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	40	2	124	1637	1785	0		
Future Volume (veh/h)	40	2	124	1637	1785	0		
Number	7	14	5	2	6	16		
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		
Adj Sat Flow, veh/h/ln	1765	1863	1765	1863	1863	1863		
Adj Flow Rate, veh/h	42	2	131	1723	1879	0		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	56	53	394	3131	2156	964		
Arrive On Green	0.03	0.03	0.47	1.00	0.61	0.00		
Sat Flow, veh/h	1681	1583	1681	3632	3632	1583		
Grp Volume(v), veh/h	42	2	131	1723	1879	0		
Grp Sat Flow(s),veh/h/ln	1681	1583	1681	1770	1770	1583		
Q Serve(g_s), s	2.7	0.1	5.4	0.0	48.7	0.0		
Cycle Q Clear(g_c), s	2.7	0.1	5.4	0.0	48.7	0.0		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	56	53	394	3131	2156	964		
V/C Ratio(X)	0.74	0.04	0.33	0.55	0.87	0.00		
Avail Cap(c_a), veh/h	275	259	394	3131	2156	964		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.45	0.45	1.00	0.00		
Uniform Delay (d), s/veh	52.7	51.4	23.8	0.0	17.9	0.0		
Incr Delay (d2), s/veh	17.4	0.3	0.2	0.3	5.2	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	1.5	0.1	2.5	0.1	25.0	0.0		
LnGrp Delay(d),s/veh	70.0	51.7	24.0	0.3	23.1	0.0		
LnGrp LOS	E	D	C	A	C			
Approach Vol, veh/h	44			1854	1879			
Approach Delay, s/veh	69.2			2.0	23.1			
Approach LOS	E			A	C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		101.8		8.2	30.3	71.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		83.0		18.0	11.5	67.0		
Max Q Clear Time (g_c+I1), s		2.0		4.7	7.4	50.7		
Green Ext Time (p_c), s		21.4		0.1	3.4	11.3		
Intersection Summary								
HCM 2010 Ctrl Delay			13.3					
HCM 2010 LOS			B					
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 6: US-395 & Dos Palmas Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	208	53	74	17	47	105	59	1477	39	114	1380	245
Future Volume (veh/h)	208	53	74	17	47	105	59	1477	39	114	1380	245
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	219	56	78	18	49	111	62	1555	41	120	1453	258
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	530	451	209	62	139	217	1577	705	247	1397	244
Arrive On Green	0.12	0.28	0.28	0.12	0.12	0.12	0.04	0.15	0.15	0.29	0.93	0.93
Sat Flow, veh/h	1681	1863	1583	1185	508	1151	1681	3539	1583	1681	3013	526
Grp Volume(v), veh/h	219	56	78	18	0	160	62	1555	41	120	843	868
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1185	0	1660	1681	1770	1583	1681	1770	1770
Q Serve(g_s), s	13.5	2.4	4.1	1.5	0.0	10.3	3.9	48.2	2.5	6.5	51.0	51.0
Cycle Q Clear(g_c), s	13.5	2.4	4.1	1.5	0.0	10.3	3.9	48.2	2.5	6.5	51.0	51.0
Prop In Lane	1.00		1.00	1.00		0.69	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	206	530	451	209	0	201	217	1577	705	247	820	821
V/C Ratio(X)	1.06	0.11	0.17	0.09	0.00	0.80	0.29	0.99	0.06	0.49	1.03	1.06
Avail Cap(c_a), veh/h	206	677	576	302	0	332	217	1577	705	247	820	821
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.40	0.40	0.40	0.62	0.62	0.62
Uniform Delay (d), s/veh	48.2	29.0	29.6	43.1	0.0	47.0	47.8	46.6	27.1	35.4	4.0	4.0
Incr Delay (d2), s/veh	79.9	0.1	0.2	0.2	0.0	7.0	0.3	11.6	0.1	0.9	32.1	41.6
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	10.8	1.3	1.8	0.5	0.0	5.1	1.9	26.2	1.1	3.1	26.5	28.6
LnGrp Delay(d),s/veh	128.2	29.1	29.8	43.3	0.0	54.0	48.0	58.2	27.1	36.3	36.1	45.6
LnGrp LOS	F	C	C	D		D	D	E	C	D	F	F
Approach Vol, veh/h		353			178			1658			1831	
Approach Delay, s/veh		90.7			52.9			57.0			40.6	
Approach LOS		F			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	53.5		35.8	18.7	55.5	18.0	17.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	49.0		40.0	5.5	51.0	13.5	22.0				
Max Q Clear Time (g_c+I1), s	8.5	50.2		6.1	5.9	53.0	15.5	12.3				
Green Ext Time (p_c), s	0.0	0.0		1.6	0.0	0.0	0.0	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			52.3									
HCM 2010 LOS			D									






















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 7: US-395 & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	94	53	64	120	221	128	1274	103	277	1085	112
Future Volume (veh/h)	84	94	53	64	120	221	128	1274	103	277	1085	112
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	88	99	56	67	126	233	135	1341	108	292	1142	118
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	491	417	324	155	286	252	1502	672	318	1641	734
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.20	0.56	0.56	0.19	0.46	0.46
Sat Flow, veh/h	965	1863	1583	1162	587	1085	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	88	99	56	67	0	359	135	1341	108	292	1142	118
Grp Sat Flow(s),veh/h/ln	965	1863	1583	1162	0	1671	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	6.8	4.5	3.0	5.2	0.0	22.2	7.9	36.6	3.6	18.8	28.1	4.8
Cycle Q Clear(g_c), s	29.0	4.5	3.0	9.8	0.0	22.2	7.9	36.6	3.6	18.8	28.1	4.8
Prop In Lane	1.00		1.00	1.00		0.65	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	491	417	324	0	441	252	1502	672	318	1641	734
V/C Ratio(X)	0.70	0.20	0.13	0.21	0.00	0.81	0.54	0.89	0.16	0.92	0.70	0.16
Avail Cap(c_a), veh/h	125	491	417	324	0	441	252	1502	672	328	1641	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.80	0.80	0.80	0.50	0.50	0.50
Uniform Delay (d), s/veh	52.7	31.5	30.9	35.3	0.0	38.0	40.6	21.8	14.6	43.8	23.4	17.1
Incr Delay (d2), s/veh	16.0	0.2	0.1	0.3	0.0	11.2	1.8	7.0	0.4	17.6	1.2	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	3.2	2.4	1.3	1.7	0.0	11.5	3.8	19.2	1.6	10.2	13.9	2.1
LnGrp Delay(d),s/veh	68.7	31.7	31.1	35.6	0.0	49.2	42.4	28.8	15.0	61.3	24.6	17.3
LnGrp LOS	E	C	C	D		D	D	C	B	E	C	B
Approach Vol, veh/h		243			426			1584			1552	
Approach Delay, s/veh		44.9			47.1			29.0			30.9	
Approach LOS		D			D			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.3	51.2		33.5	21.0	55.5		33.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	21.5	46.0		29.0	16.5	51.0		29.0				
Max Q Clear Time (g_c+I1), s	20.8	38.6		31.0	9.9	30.1		24.2				
Green Ext Time (p_c), s	0.1	4.9		0.0	4.5	7.8		1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			32.8									
HCM 2010 LOS			C									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 8: US-395 & La Mesa Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	65	11	11	43	11	5	1622	16	16	1261	5
Future Volume (veh/h)	11	65	11	11	43	11	5	1622	16	16	1261	5
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1900	1765	1863	1900	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	12	68	12	12	45	12	5	1707	17	17	1327	5
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	121	114	20	105	105	28	358	3030	30	252	3052	11
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.84	0.84	0.84	0.84	0.84	0.84
Sat Flow, veh/h	1270	1543	272	1244	1418	378	388	3590	36	266	3616	14
Grp Volume(v), veh/h	12	0	80	12	0	57	5	840	884	17	649	683
Grp Sat Flow(s),veh/h/ln	1270	0	1815	1244	0	1796	388	1770	1856	266	1770	1860
Q Serve(g_s), s	1.0	0.0	4.7	1.0	0.0	3.3	0.4	15.5	15.6	2.2	9.9	9.9
Cycle Q Clear(g_c), s	4.3	0.0	4.7	5.7	0.0	3.3	10.3	15.5	15.6	17.8	9.9	9.9
Prop In Lane	1.00		0.15	1.00		0.21	1.00		0.02	1.00		0.01
Lane Grp Cap(c), veh/h	121	0	135	105	0	133	358	1494	1567	252	1494	1570
V/C Ratio(X)	0.10	0.00	0.59	0.11	0.00	0.43	0.01	0.56	0.56	0.07	0.43	0.43
Avail Cap(c_a), veh/h	252	0	322	233	0	318	358	1494	1567	252	1494	1570
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	0.35	0.35	0.35	0.77	0.77	0.77
Uniform Delay (d), s/veh	50.8	0.0	49.3	52.1	0.0	48.7	3.4	2.5	2.6	5.2	2.1	2.1
Incr Delay (d2), s/veh	0.4	0.0	4.1	0.5	0.0	2.2	0.0	0.5	0.5	0.4	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	0.4	0.0	2.5	0.4	0.0	1.7	0.0	7.5	7.8	0.2	5.0	5.2
LnGrp Delay(d),s/veh	51.1	0.0	53.4	52.6	0.0	50.8	3.4	3.1	3.1	5.6	2.8	2.8
LnGrp LOS	D		D	D		D	A	A	A	A	A	A
Approach Vol, veh/h		92			69			1729			1349	
Approach Delay, s/veh		53.1			51.1			3.1			2.8	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		97.3		12.7		97.3		12.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		81.5		19.5		81.5		19.5				
Max Q Clear Time (g_c+I1), s		17.6		6.7		19.8		7.7				
Green Ext Time (p_c), s		42.4		0.5		41.4		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			5.4									
HCM 2010 LOS			A									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 9: US-395 & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	490	143	137	426	217	292	1164	326	239	1002	36
Future Volume (veh/h)	58	490	143	137	426	217	292	1164	326	239	1002	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	61	516	151	144	448	228	307	1225	343	252	1055	38
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	644	288	145	582	260	435	1512	676	237	1077	39
Arrive On Green	0.10	0.18	0.18	0.09	0.16	0.16	0.26	0.43	0.43	0.14	0.31	0.31
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3485	126
Grp Volume(v), veh/h	61	516	151	144	448	228	307	1225	343	252	536	557
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1841
Q Serve(g_s), s	3.7	15.4	5.5	9.4	13.3	11.3	18.2	33.4	17.4	15.5	33.0	33.0
Cycle Q Clear(g_c), s	3.7	15.4	5.5	9.4	13.3	11.3	18.2	33.4	17.4	15.5	33.0	33.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	175	644	288	145	582	260	435	1512	676	237	547	569
V/C Ratio(X)	0.35	0.80	0.52	0.99	0.77	0.88	0.71	0.81	0.51	1.06	0.98	0.98
Avail Cap(c_a), veh/h	175	933	417	145	933	417	435	1512	676	237	547	569
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	0.57	0.57	0.57	1.00	1.00	1.00	0.90	0.90	0.90
Uniform Delay (d), s/veh	45.8	43.1	13.8	50.2	44.0	24.1	36.9	27.6	23.0	47.3	37.7	37.7
Incr Delay (d2), s/veh	1.2	3.3	1.5	54.1	1.3	7.1	5.1	4.8	2.7	73.5	31.8	31.1
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	1.8	7.8	2.5	6.5	6.6	5.5	9.1	17.2	8.1	12.0	20.9	21.6
LnGrp Delay(d),s/veh	47.0	46.4	15.3	104.3	45.2	31.3	42.1	32.4	25.7	120.7	69.5	68.8
LnGrp LOS	D	D	B	F	D	C	D	C	C	F	E	E
Approach Vol, veh/h		728			820			1875			1345	
Approach Delay, s/veh		40.0			51.7			32.8			78.8	
Approach LOS		D			D			C			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	51.5	14.0	24.5	33.0	38.5	15.9	22.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	38.0	9.5	29.0	19.5	34.0	9.5	29.0				
Max Q Clear Time (g_c+I1), s	17.5	35.4	11.4	17.4	20.2	35.0	5.7	15.3				
Green Ext Time (p_c), s	0.0	2.1	0.0	2.6	0.0	0.0	1.3	2.8				
Intersection Summary												
HCM 2010 Ctrl Delay			50.1									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 10: Palmdale Road (SR-18) & Cantina Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	918	27	27	937	159	22	5	22	201	5	26
Future Volume (veh/h)	7	918	27	27	937	159	22	5	22	201	5	26
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1667	1863	1900
Adj Flow Rate, veh/h	7	966	28	28	986	167	23	5	23	212	5	27
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	1106	495	46	1167	522	36	12	56	932	82	441
Arrive On Green	0.02	0.62	0.62	0.03	0.33	0.33	0.02	0.04	0.04	0.30	0.32	0.32
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	291	1336	3079	253	1368
Grp Volume(v), veh/h	7	966	28	28	986	167	23	0	28	212	0	32
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	0	1627	1540	0	1621
Q Serve(g_s), s	0.5	24.8	0.5	1.7	28.5	8.7	1.5	0.0	1.8	5.7	0.0	1.5
Cycle Q Clear(g_c), s	0.5	24.8	0.5	1.7	28.5	8.7	1.5	0.0	1.8	5.7	0.0	1.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.82	1.00		0.84
Lane Grp Cap(c), veh/h	15	1106	495	46	1167	522	36	0	68	932	0	523
V/C Ratio(X)	0.48	0.87	0.06	0.60	0.84	0.32	0.63	0.00	0.41	0.23	0.00	0.06
Avail Cap(c_a), veh/h	84	1464	655	89	1464	655	84	0	318	932	0	523
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	0.85	0.85	0.85	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.8	18.8	5.6	53.0	34.2	27.6	53.4	0.0	51.4	28.7	0.0	25.7
Incr Delay (d2), s/veh	12.5	2.7	0.0	10.2	3.3	0.3	16.6	0.0	3.9	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	12.2	0.2	1.0	14.4	3.8	0.9	0.0	0.9	2.5	0.0	0.7
LnGrp Delay(d),s/veh	66.3	21.6	5.6	63.2	37.6	27.9	70.0	0.0	55.3	29.3	0.0	26.0
LnGrp LOS	E	C	A	E	D	C	E		E	C		C
Approach Vol, veh/h		1001			1181			51			244	
Approach Delay, s/veh		21.5			36.8			61.9			28.9	
Approach LOS		C			D			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.8	9.1	7.4	38.9	6.9	40.0	5.5	40.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	21.5	5.5	45.5	5.5	35.5	5.5	45.5				
Max Q Clear Time (g_c+I1), s	7.7	3.8	3.7	26.8	3.5	3.5	2.5	30.5				
Green Ext Time (p_c), s	0.6	0.1	0.0	5.8	0.0	0.1	1.7	5.8				
Intersection Summary												
HCM 2010 Ctrl Delay			30.3									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	33	131	59	82	98	26	83	48	77	7	26	34
Future Vol, veh/h	33	131	59	82	98	26	83	48	77	7	26	34
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	35	138	62	86	103	27	87	51	81	7	27	36

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	131	0	200	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	2.218	-
Pot Cap-1 Maneuver	1454	-	1372	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1454	-	1372	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	3.1	18.4	12.6
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	485	1454	-	-	1372	-	-	541
HCM Lane V/C Ratio	0.451	0.024	-	-	0.063	-	-	0.13
HCM Control Delay (s)	18.4	7.5	0	-	7.8	0	-	12.6
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	2.3	0.1	-	-	0.2	-	-	0.4

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↶	↷			↶	↷			↶	↷	↶
Traffic Vol, veh/h	0	53	155	59	0	49	95	34	0	69	155	68
Future Vol, veh/h	0	53	155	59	0	49	95	34	0	69	155	68
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	56	163	62	0	52	100	36	0	73	163	72
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	12.9	11.4	11.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	72%	0%	74%	0%	75%
Vol Right, %	0%	0%	100%	0%	28%	0%	26%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	69	155	68	53	214	49	129	29	122
LT Vol	69	0	0	53	0	49	0	29	0
Through Vol	0	155	0	0	155	0	95	0	92
RT Vol	0	0	68	0	59	0	34	0	30
Lane Flow Rate	73	163	72	56	225	52	136	31	128
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.143	0.299	0.117	0.11	0.4	0.105	0.25	0.063	0.241
Departure Headway (Hd)	7.108	6.601	5.891	7.093	6.393	7.323	6.63	7.45	6.765
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	502	542	605	503	561	487	538	478	527
Service Time	4.884	4.377	3.666	4.867	4.167	5.106	4.413	5.239	4.554
HCM Lane V/C Ratio	0.145	0.301	0.119	0.111	0.401	0.107	0.253	0.065	0.243
HCM Control Delay	11.1	12.2	9.5	10.8	13.4	11	11.6	10.7	11.7
HCM Lane LOS	B	B	A	B	B	B	B	B	B
HCM 95th-tile Q	0.5	1.2	0.4	0.4	1.9	0.3	1	0.2	0.9

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↶	↷	
Traffic Vol, veh/h	0	29	92	30
Future Vol, veh/h	0	29	92	30
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	31	97	32
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	11.5
HCM LOS	B

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	15	155	8	0	64	153	200	0	6	67	88
Future Vol, veh/h	0	15	155	8	0	64	153	200	0	6	67	88
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	16	163	8	0	67	161	211	0	6	71	93
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	11	11.9	10.7
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	20%	0%	100%	87%	0%	100%	20%	0%	100%
Vol Right, %	0%	0%	80%	0%	0%	13%	0%	0%	80%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	45	110	15	103	60	64	102	251	163	31
LT Vol	6	0	0	15	0	0	64	0	0	163	0
Through Vol	0	45	22	0	103	52	0	102	51	0	31
RT Vol	0	0	88	0	0	8	0	0	200	0	0
Lane Flow Rate	6	47	116	16	109	63	67	107	264	172	33
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.013	0.091	0.206	0.032	0.206	0.117	0.128	0.189	0.425	0.345	0.062
Departure Headway (Hd)	7.436	6.936	6.378	7.305	6.805	6.711	6.844	6.344	5.786	7.248	6.748
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	514	560	488	525	531	522	564	621	494	528
Service Time	5.21	4.71	4.152	5.078	4.578	4.484	4.605	4.105	3.547	5.018	4.518
HCM Lane V/C Ratio	0.013	0.091	0.207	0.033	0.208	0.119	0.128	0.19	0.425	0.348	0.063
HCM Control Delay	10.3	10.4	10.8	10.3	11.4	10.4	10.6	10.6	12.8	13.8	10
HCM Lane LOS	B	B	B	B	B	B	B	B	B	B	A
HCM 95th-tile Q	0	0.3	0.8	0.1	0.8	0.4	0.4	0.7	2.1	1.5	0.2

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕	
Traffic Vol, veh/h	0	163	47	8
Future Vol, veh/h	0	163	47	8
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	172	49	8
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	12.8
HCM LOS	B

Intersection	
Intersection Delay, s/veh	9.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↵			↵	↵			↵	↵↵	
Traffic Vol, veh/h	0	19	155	28	0	46	123	10	0	18	47	36
Future Vol, veh/h	0	19	155	28	0	46	123	10	0	18	47	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	20	163	29	0	48	129	11	0	19	49	38
Number of Lanes	0	1	1	0	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	10.4	9.8	9
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	24%	0%
Vol Thru, %	0%	100%	30%	0%	85%	0%	92%	76%	64%
Vol Right, %	0%	0%	70%	0%	15%	0%	8%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	31	52	19	183	46	133	45	53
LT Vol	18	0	0	19	0	46	0	11	0
Through Vol	0	31	16	0	155	0	123	34	34
RT Vol	0	0	36	0	28	0	10	0	19
Lane Flow Rate	19	33	54	20	193	48	140	47	56
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.034	0.055	0.084	0.034	0.292	0.084	0.22	0.081	0.09
Departure Headway (Hd)	6.542	6.038	5.545	6.16	5.559	6.21	5.654	6.172	5.794
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	549	595	648	584	651	581	638	583	620
Service Time	4.258	3.753	3.261	3.869	3.259	3.91	3.354	3.887	3.51
HCM Lane V/C Ratio	0.035	0.055	0.083	0.034	0.296	0.083	0.219	0.081	0.09
HCM Control Delay	9.5	9.1	8.8	9.1	10.5	9.5	9.9	9.4	9.1
HCM Lane LOS	A	A	A	A	B	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.3	0.1	1.2	0.3	0.8	0.3	0.3

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			←T	
Traffic Vol, veh/h	0	11	68	19
Future Vol, veh/h	0	11	68	19
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	12	72	20
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.2
HCM LOS	A

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	17	303	64	0	135	381	5	0	70	63	100
Future Vol, veh/h	0	17	303	64	0	135	381	5	0	70	63	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	18	319	67	0	142	401	5	0	74	66	105
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	14.4	15.1	12.4
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	17%	0%	100%	61%	0%	100%	96%	0%	100%
Vol Right, %	0%	0%	83%	0%	0%	39%	0%	0%	4%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	42	121	17	202	165	135	254	132	35	59
LT Vol	70	0	0	17	0	0	135	0	0	35	0
Through Vol	0	42	21	0	202	101	0	254	127	0	59
RT Vol	0	0	100	0	0	64	0	0	5	0	0
Lane Flow Rate	74	44	127	18	213	174	142	267	139	37	62
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.171	0.096	0.257	0.039	0.433	0.341	0.298	0.523	0.271	0.088	0.139
Departure Headway (Hd)	8.347	7.847	7.268	7.839	7.339	7.067	7.548	7.048	7.022	8.595	8.095
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	430	457	494	457	491	509	476	511	511	417	443
Service Time	6.092	5.592	5.014	5.579	5.079	4.807	5.287	4.787	4.761	6.342	5.842
HCM Lane V/C Ratio	0.172	0.096	0.257	0.039	0.434	0.342	0.298	0.523	0.272	0.089	0.14
HCM Control Delay	12.8	11.4	12.5	10.9	15.6	13.4	13.5	17.3	12.4	12.2	12.2
HCM Lane LOS	B	B	B	B	C	B	B	C	B	B	B
HCM 95th-tile Q	0.6	0.3	1	0.1	2.2	1.5	1.2	3	1.1	0.3	0.5

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↑↑	
Traffic Vol, veh/h	0	35	88	20
Future Vol, veh/h	0	35	88	20
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	37	93	21
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	12
HCM LOS	B






















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 16: Topaz Road & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	599	7	91	612	181	8	41	60	108	43	28
Future Volume (veh/h)	57	599	7	91	612	181	8	41	60	108	43	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	60	631	7	96	644	191	8	43	63	114	45	29
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	782	350	185	770	228	649	845	718	688	923	784
Arrive On Green	0.05	0.22	0.22	0.11	0.29	0.29	0.01	0.45	0.45	0.05	0.50	0.50
Sat Flow, veh/h	1681	3539	1583	1681	2693	798	1681	1863	1583	1681	1863	1583
Grp Volume(v), veh/h	60	631	7	96	423	412	8	43	63	114	45	29
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1722	1681	1863	1583	1681	1863	1583
Q Serve(g_s), s	3.9	18.6	0.3	5.9	24.7	24.7	0.3	1.4	1.6	3.8	1.4	1.0
Cycle Q Clear(g_c), s	3.9	18.6	0.3	5.9	24.7	24.7	0.3	1.4	1.6	3.8	1.4	1.0
Prop In Lane	1.00		1.00	1.00		0.46	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	782	350	185	506	492	649	845	718	688	923	784
V/C Ratio(X)	0.79	0.81	0.02	0.52	0.84	0.84	0.01	0.05	0.09	0.17	0.05	0.04
Avail Cap(c_a), veh/h	206	1400	626	252	748	728	732	845	718	731	923	784
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)	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	40.6	26.1	46.2	36.9	36.9	15.9	16.8	7.2	13.5	14.4	14.3
Incr Delay (d2), s/veh	11.9	1.5	0.0	2.2	5.4	5.6	0.0	0.1	0.2	0.1	0.1	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	2.1	9.3	0.1	2.9	12.7	12.6	0.1	0.8	0.7	1.8	0.7	0.5
LnGrp Delay(d),s/veh	63.9	42.1	26.1	48.4	42.3	42.5	15.9	16.9	7.4	13.6	14.5	14.4
LnGrp LOS	E	D	C	D	D	D	B	B	A	B	B	B
Approach Vol, veh/h		698			931			114			188	
Approach Delay, s/veh		43.8			43.0			11.6			13.9	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.2	54.4	16.6	28.8	5.6	59.0	9.5	35.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	23.5	16.5	43.5	6.5	25.5	13.5	46.5				
Max Q Clear Time (g_c+I1), s	5.8	3.6	7.9	20.6	2.3	3.4	5.9	26.7				
Green Ext Time (p_c), s	0.1	0.6	3.2	3.7	0.0	0.6	0.0	4.7				
Intersection Summary												
HCM 2010 Ctrl Delay			38.6									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 17: Cobalt Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	1008	69	155	842	11	61	53	138	26	55	29
Future Volume (veh/h)	46	1008	69	155	842	11	61	53	138	26	55	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	48	1061	73	163	886	12	64	56	145	27	58	31
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	1245	557	236	1632	22	504	177	459	150	314	155
Arrive On Green	0.04	0.35	0.35	0.14	0.46	0.46	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1681	3539	1583	1681	3575	48	1234	460	1192	285	815	401
Grp Volume(v), veh/h	48	1061	73	163	439	459	64	0	201	116	0	0
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1854	1234	0	1652	1502	0	0
Q Serve(g_s), s	3.1	30.5	3.4	10.2	19.7	19.7	0.0	0.0	9.4	0.2	0.0	0.0
Cycle Q Clear(g_c), s	3.1	30.5	3.4	10.2	19.7	19.7	5.8	0.0	9.4	9.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.72	0.23		0.27
Lane Grp Cap(c), veh/h	60	1245	557	236	808	846	504	0	636	619	0	0
V/C Ratio(X)	0.80	0.85	0.13	0.69	0.54	0.54	0.13	0.00	0.32	0.19	0.00	0.00
Avail Cap(c_a), veh/h	115	1560	698	313	989	1037	504	0	636	619	0	0
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)	0.64	0.64	0.64	0.54	0.54	0.54	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.6	33.0	24.2	45.0	21.6	21.6	22.6	0.0	23.7	22.3	0.0	0.0
Incr Delay (d2), s/veh	14.0	2.6	0.1	2.2	0.3	0.3	0.5	0.0	1.3	0.7	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	1.7	15.3	1.5	4.9	9.7	10.2	1.4	0.0	4.5	2.4	0.0	0.0
LnGrp Delay(d),s/veh	66.7	35.6	24.3	47.2	21.9	21.9	23.1	0.0	25.0	23.0	0.0	0.0
LnGrp LOS	E	D	C	D	C	C	C		C	C		
Approach Vol, veh/h		1182			1061			265			116	
Approach Delay, s/veh		36.1			25.8			24.5			23.0	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		46.8	20.0	43.2		46.8	8.4	54.7				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		27.5	20.5	48.5		27.5	7.5	61.5				
Max Q Clear Time (g_c+I1), s		11.4	12.2	32.5		11.6	5.1	21.7				
Green Ext Time (p_c), s		1.8	3.4	6.2		1.8	0.0	5.9				
Intersection Summary												
HCM 2010 Ctrl Delay			30.2									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	39	154	6	0	18	203	76	0	5	9	9
Future Vol, veh/h	0	39	154	6	0	18	203	76	0	5	9	9
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	41	162	6	0	19	214	80	0	5	9	9
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.5	10.3	8.4
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	22%	20%	6%	35%
Vol Thru, %	39%	77%	68%	14%
Vol Right, %	39%	3%	26%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	199	297	132
LT Vol	5	39	18	46
Through Vol	9	154	203	19
RT Vol	9	6	76	67
Lane Flow Rate	24	209	313	139
Geometry Grp	1	1	1	1
Degree of Util (X)	0.034	0.274	0.386	0.189
Departure Headway (Hd)	5.121	4.704	4.44	4.904
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	694	760	807	728
Service Time	3.192	2.749	2.481	2.959
HCM Lane V/C Ratio	0.035	0.275	0.388	0.191
HCM Control Delay	8.4	9.5	10.3	9.1
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.1	1.1	1.8	0.7

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	46	19	67
Future Vol, veh/h	0	46	19	67
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	48	20	71
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.1
HCM LOS	A
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 19: Amethyst Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	839	94	178	901	56	114	185	95	45	277	87
Future Volume (veh/h)	72	839	94	178	901	56	114	185	95	45	277	87
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	76	883	99	187	948	59	120	195	100	47	292	92
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	973	435	215	1082	67	247	742	631	59	389	123
Arrive On Green	0.11	0.37	0.37	0.13	0.32	0.32	0.15	0.40	0.40	0.04	0.29	0.29
Sat Flow, veh/h	1681	3539	1583	1681	3385	211	1681	1863	1583	1681	1359	428
Grp Volume(v), veh/h	76	883	99	187	496	511	120	195	100	47	0	384
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1826	1681	1863	1583	1681	0	1787
Q Serve(g_s), s	4.7	26.1	3.3	12.0	29.1	29.1	7.2	7.7	4.5	3.1	0.0	21.5
Cycle Q Clear(g_c), s	4.7	26.1	3.3	12.0	29.1	29.1	7.2	7.7	4.5	3.1	0.0	21.5
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	140	973	435	215	566	583	247	742	631	59	0	512
V/C Ratio(X)	0.54	0.91	0.23	0.87	0.88	0.88	0.49	0.26	0.16	0.80	0.00	0.75
Avail Cap(c_a), veh/h	140	1046	468	252	668	689	247	742	631	115	0	512
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.40	0.40	0.40	0.98	0.98	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.9	33.6	12.6	47.1	35.4	35.4	43.1	22.2	21.2	52.7	0.0	35.7
Incr Delay (d2), s/veh	2.1	6.0	0.1	11.2	5.0	4.8	1.4	0.8	0.5	21.0	0.0	9.7
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	2.3	13.5	1.4	6.2	15.0	15.4	3.5	4.1	2.0	1.8	0.0	11.9
LnGrp Delay(d),s/veh	49.1	39.6	12.7	58.3	40.3	40.2	44.5	23.1	21.8	73.7	0.0	45.4
LnGrp LOS	D	D	B	E	D	D	D	C	C	E		D
Approach Vol, veh/h		1058			1194			415			431	
Approach Delay, s/veh		37.7			43.1			29.0			48.5	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.4	48.3	18.6	34.7	20.7	36.0	13.7	39.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	7.5	35.5	16.5	32.5	11.5	31.5	7.5	41.5				
Max Q Clear Time (g_c+I1), s	5.1	9.7	14.0	28.1	9.2	23.5	6.7	31.1				
Green Ext Time (p_c), s	0.0	1.6	0.1	2.2	0.1	1.3	0.5	4.0				
Intersection Summary												
HCM 2010 Ctrl Delay			40.1									
HCM 2010 LOS			D									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 20: Amethyst Road & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	109	83	27	139	38	138	400	26	46	377	58
Future Volume (veh/h)	45	109	83	27	139	38	138	400	26	46	377	58
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	47	115	87	28	146	40	145	421	27	48	397	61
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	257	219	44	177	49	172	1367	612	480	2017	902
Arrive On Green	0.04	0.14	0.14	0.03	0.13	0.13	0.20	0.77	0.77	0.29	0.57	0.57
Sat Flow, veh/h	1681	1863	1583	1681	1409	386	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	47	115	87	28	0	186	145	421	27	48	397	61
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1681	0	1795	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	3.0	6.2	5.5	1.8	0.0	11.1	9.1	3.9	0.4	2.3	6.0	1.4
Cycle Q Clear(g_c), s	3.0	6.2	5.5	1.8	0.0	11.1	9.1	3.9	0.4	2.3	6.0	1.4
Prop In Lane	1.00		1.00	1.00		0.22	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	64	257	219	44	0	226	172	1367	612	480	2017	902
V/C Ratio(X)	0.73	0.45	0.40	0.64	0.00	0.82	0.84	0.31	0.04	0.10	0.20	0.07
Avail Cap(c_a), veh/h	176	516	439	115	0	432	359	1367	612	480	2017	902
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	52.3	43.6	43.2	53.0	0.0	46.9	42.9	8.1	5.2	28.9	11.5	5.5
Incr Delay (d2), s/veh	14.5	1.2	1.2	14.3	0.0	7.4	10.6	0.6	0.1	0.1	0.2	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	1.7	3.3	2.5	1.0	0.0	6.0	4.7	2.0	0.2	1.1	3.0	0.6
LnGrp Delay(d),s/veh	66.8	44.8	44.4	67.4	0.0	54.3	53.5	8.7	5.4	28.9	11.6	5.6
LnGrp LOS	E	D	D	E		D	D	A	A	C	B	A
Approach Vol, veh/h		249			214			593			506	
Approach Delay, s/veh		48.8			56.0			19.5			12.5	
Approach LOS		D			E			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.9	47.0	7.4	19.7	15.7	67.2	8.7	18.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	42.5	7.5	30.5	23.5	30.5	11.5	26.5				
Max Q Clear Time (g_c+I1), s	4.3	5.9	3.8	8.2	11.1	8.0	5.0	13.1				
Green Ext Time (p_c), s	0.1	2.7	0.0	0.9	0.3	2.5	0.5	0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			26.9									
HCM 2010 LOS			C									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 21: El Evado Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	742	89	156	975	199	110	455	74	196	355	110
Future Volume (veh/h)	151	742	89	156	975	199	110	455	74	196	355	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	159	781	94	164	1026	209	116	479	78	206	374	116
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	895	401	269	1092	489	130	917	410	276	1224	713
Arrive On Green	0.10	0.25	0.25	0.16	0.31	0.31	0.08	0.26	0.26	0.16	0.35	0.35
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	159	781	94	164	1026	209	116	479	78	206	374	116
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	10.3	23.3	4.1	10.0	31.0	7.5	7.5	12.8	4.2	12.8	8.5	4.8
Cycle Q Clear(g_c), s	10.3	23.3	4.1	10.0	31.0	7.5	7.5	12.8	4.2	12.8	8.5	4.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	895	401	269	1092	489	130	917	410	276	1224	713
V/C Ratio(X)	0.90	0.87	0.23	0.61	0.94	0.43	0.89	0.52	0.19	0.75	0.31	0.16
Avail Cap(c_a), veh/h	176	1014	453	269	1110	497	130	917	410	276	1224	713
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)	0.52	0.52	0.52	0.36	0.36	0.36	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.7	39.4	20.2	43.0	37.0	12.6	50.3	34.9	31.8	43.8	26.3	17.9
Incr Delay (d2), s/veh	26.6	4.2	0.2	1.5	6.6	0.2	48.2	2.1	1.0	10.6	0.6	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	6.1	11.9	1.8	4.8	16.1	3.3	5.2	6.5	2.0	6.8	4.3	2.2
LnGrp Delay(d),s/veh	75.3	43.6	20.4	44.4	43.6	12.8	98.5	37.0	32.8	54.4	27.0	18.4
LnGrp LOS	E	D	C	D	D	B	F	D	C	D	C	B
Approach Vol, veh/h		1034			1399			673			696	
Approach Delay, s/veh		46.4			39.1			47.1			33.7	
Approach LOS		D			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.5	33.0	22.1	32.3	13.0	42.5	16.0	38.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	17.5	28.5	14.5	31.5	8.5	37.5	11.5	34.5				
Max Q Clear Time (g_c+I1), s	14.8	14.8	12.0	25.3	9.5	10.5	12.3	33.0				
Green Ext Time (p_c), s	0.9	2.6	1.7	2.6	0.0	3.2	0.0	0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			41.5									
HCM 2010 LOS			D									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 22: Amargosa Road & Palmdale Road (SR-18)

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	876	133	136	1055	113	181	401	91	184	398	210
Future Volume (veh/h)	113	876	133	136	1055	113	181	401	91	184	398	210
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	119	922	140	143	1111	119	191	422	96	194	419	221
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	145	1067	477	217	1220	546	307	785	177	222	501	262
Arrive On Green	0.09	0.30	0.30	0.13	0.34	0.34	0.18	0.27	0.27	0.13	0.22	0.22
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	2870	648	1681	2250	1175
Grp Volume(v), veh/h	119	922	140	143	1111	119	191	259	259	194	329	311
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1748	1681	1770	1655
Q Serve(g_s), s	7.7	27.1	7.5	8.9	33.0	3.9	11.5	13.7	13.9	12.5	19.5	19.8
Cycle Q Clear(g_c), s	7.7	27.1	7.5	8.9	33.0	3.9	11.5	13.7	13.9	12.5	19.5	19.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	1.00		0.71
Lane Grp Cap(c), veh/h	145	1067	477	217	1220	546	307	484	478	222	394	369
V/C Ratio(X)	0.82	0.86	0.29	0.66	0.91	0.22	0.62	0.53	0.54	0.87	0.83	0.84
Avail Cap(c_a), veh/h	176	1239	554	217	1271	569	307	484	478	252	394	369
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)	0.54	0.54	0.54	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	49.4	36.3	29.4	45.6	34.4	11.6	41.4	34.0	34.1	46.8	40.8	40.9
Incr Delay (d2), s/veh	13.3	3.3	0.2	7.1	9.7	0.2	3.8	4.2	4.4	25.0	18.4	20.5
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	4.1	13.7	3.3	4.6	17.7	1.7	5.7	7.2	7.3	7.3	11.5	11.2
LnGrp Delay(d),s/veh	62.7	39.6	29.6	52.7	44.1	11.8	45.3	38.2	38.4	71.9	59.2	61.4
LnGrp LOS	E	D	C	D	D	B	D	D	D	E	E	E
Approach Vol, veh/h		1181			1373			709			834	
Approach Delay, s/veh		40.7			42.2			40.2			63.0	
Approach LOS		D			D			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	34.6	18.7	37.7	24.6	29.0	14.0	42.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	24.5	12.5	38.5	16.5	24.5	11.5	39.5				
Max Q Clear Time (g_c+I1), s	14.5	15.9	10.9	29.1	13.5	21.8	9.7	35.0				
Green Ext Time (p_c), s	0.1	2.3	0.1	4.1	1.0	1.0	0.1	2.9				
Intersection Summary												
HCM 2010 Ctrl Delay			45.7									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year Without Project PM Peak Hour
 26: US-395 & Crossroads

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	58	133	75	57	113	141	1442	106	163	1299	174
Future Volume (veh/h)	143	58	133	75	57	113	141	1442	106	163	1299	174
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	155	63	145	82	62	123	153	1567	115	177	1412	189
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	96	222	140	72	143	181	2227	693	206	1601	716
Arrive On Green	0.11	0.20	0.20	0.04	0.14	0.14	0.11	0.46	0.46	0.12	0.48	0.48
Sat Flow, veh/h	1681	476	1095	3261	529	1050	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	155	0	208	82	0	185	153	1567	115	177	1412	189
Grp Sat Flow(s),veh/h/ln	1681	0	1571	1630	0	1579	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	9.6	0.0	12.9	2.6	0.0	12.2	9.5	27.5	4.7	11.0	40.4	8.0
Cycle Q Clear(g_c), s	9.6	0.0	12.9	2.6	0.0	12.2	9.5	27.5	4.7	11.0	40.4	8.0
Prop In Lane	1.00		0.70	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	0	318	140	0	216	181	2227	693	206	1601	716
V/C Ratio(X)	0.85	0.00	0.65	0.59	0.00	0.86	0.85	0.70	0.17	0.86	0.88	0.26
Avail Cap(c_a), veh/h	214	0	370	200	0	268	214	2450	763	261	1800	805
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	46.4	0.0	38.9	49.9	0.0	44.8	46.5	22.7	16.6	45.7	25.0	16.6
Incr Delay (d2), s/veh	23.2	0.0	3.3	3.9	0.0	19.8	22.8	0.8	0.1	19.9	5.1	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	5.7	0.0	5.9	1.3	0.0	6.5	5.6	12.4	2.0	6.3	19.8	3.3
LnGrp Delay(d),s/veh	69.6	0.0	42.2	53.7	0.0	64.7	69.3	23.6	16.7	65.6	30.1	16.8
LnGrp LOS	E		D	D		E	E	C	B	E	C	B
Approach Vol, veh/h		363			267			1835			1778	
Approach Delay, s/veh		53.9			61.3			27.0			32.2	
Approach LOS		D			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.5	53.6	9.1	26.0	15.9	55.2	16.1	19.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	54.0	6.5	25.0	13.5	57.0	13.5	18.0				
Max Q Clear Time (g_c+I1), s	13.0	29.5	4.6	14.9	11.5	42.4	11.6	14.2				
Green Ext Time (p_c), s	0.1	11.8	0.0	0.8	0.1	8.3	0.1	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			33.6									
HCM 2010 LOS			C									

INTERIM YEAR WITH PROJECT CONDITIONS

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Improved Interim Year With Phase 1 & 2 Project AM Peak Hour
 1: Palmdale Road (SR-18) & Pearmain St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	1004	62	103	755	91	5	62	5	153	176	13
Future Volume (veh/h)	7	1004	62	103	755	91	5	62	5	153	176	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	7	1057	65	108	795	96	5	65	5	161	185	14
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	1209	541	133	1443	646	11	152	12	629	1380	104
Arrive On Green	0.01	0.34	0.34	0.15	0.82	0.82	0.01	0.05	0.05	0.37	0.41	0.41
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	3334	254	1681	3338	251
Grp Volume(v), veh/h	7	1057	65	108	795	96	5	34	36	161	97	102
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	1770	1818	1681	1770	1819
Q Serve(g_s), s	0.5	30.8	2.7	6.5	8.3	0.3	0.3	2.1	2.1	7.3	3.8	3.8
Cycle Q Clear(g_c), s	0.5	30.8	2.7	6.5	8.3	0.3	0.3	2.1	2.1	7.3	3.8	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.14	1.00		0.14
Lane Grp Cap(c), veh/h	15	1209	541	133	1443	646	11	80	83	629	732	752
V/C Ratio(X)	0.48	0.87	0.12	0.81	0.55	0.15	0.46	0.42	0.43	0.26	0.13	0.14
Avail Cap(c_a), veh/h	84	1387	620	185	1580	707	84	294	302	629	732	752
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	34.0	18.6	46.0	6.8	0.3	54.5	51.1	51.1	23.8	20.0	20.0
Incr Delay (d2), s/veh	22.0	5.9	0.1	15.5	0.3	0.1	27.7	15.6	15.7	0.2	0.1	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	0.3	16.0	1.2	3.7	3.8	0.1	0.2	1.4	1.4	3.4	1.9	1.9
LnGrp Delay(d),s/veh	76.2	39.9	18.7	61.5	7.1	0.4	82.1	66.7	66.8	24.0	20.1	20.1
LnGrp LOS	E	D	B	E	A	A	F	E	E	C	C	C
Approach Vol, veh/h		1129			999			75			360	
Approach Delay, s/veh		38.9			12.3			67.8			21.9	
Approach LOS		D			B			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	45.7	9.5	12.7	42.1	5.2	50.0	5.5	49.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	19.5	18.3	11.5	43.1	5.5	31.9	5.5	49.1				
Max Q Clear Time (g_c+I1),s	9.8	4.1	8.5	32.8	2.3	5.8	2.5	10.3				
Green Ext Time (p_c), s	0.3	0.2	0.1	4.8	0.0	1.1	0.0	5.7				
Intersection Summary												
HCM 2010 Ctrl Delay				27.0								
HCM 2010 LOS				C								

SWC US395/SR18 TIA Improved Interim Year With Phase 1 & 2 Project AM Peak Hour
 HCM 2010 Signalized Intersection Summary 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↖	↗
Traffic Volume (veh/h)	63	1016	58	69	663	9	41	2	45	59	3	118
Future Volume (veh/h)	63	1016	58	69	663	9	41	2	45	59	3	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	66	1069	61	73	698	9	43	2	47	62	3	124
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	1281	573	92	1298	581	339	31	337	677	31	730
Arrive On Green	0.05	0.36	0.36	0.11	0.73	0.73	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	632	67	731	1329	68	1583
Grp Volume(v), veh/h	66	1069	61	73	698	9	92	0	0	65	0	124
Grp Sat Flow(s), veh/h	1681	3539	1583	1681	3539	1583	1430	0	0	1397	0	1583
Q Serve(g_s), s	4.3	30.4	2.8	4.7	9.6	0.2	1.3	0.0	0.0	0.0	0.0	5.0
Cycle Q Clear(g_c), s	4.3	30.4	2.8	4.7	9.6	0.2	3.6	0.0	0.0	2.2	0.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	0.47		0.51	0.95		1.00
Lane Grp Cap(c), veh/h	84	1281	573	92	1298	581	707	0	0	708	0	730
V/C Ratio(X)	0.79	0.83	0.11	0.80	0.54	0.02	0.13	0.00	0.00	0.09	0.00	0.17
Avail Cap(c_a), veh/h	206	1850	828	222	1882	842	707	0	0	708	0	730
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.51	0.51	0.51	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.7	32.1	23.3	48.4	10.6	9.3	16.9	0.0	0.0	16.6	0.0	17.4
Incr Delay (d2), s/veh	8.0	1.2	0.0	14.3	0.3	0.0	0.4	0.0	0.0	0.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	15.1	1.2	2.5	4.5	0.1	1.7	0.0	0.0	1.2	0.0	2.3
LnGrp Delay(d),s/veh	39.7	33.3	23.3	62.7	10.9	9.3	17.3	0.0	0.0	16.9	0.0	17.9
LnGrp LOS	E	C	C	E	B	A	B			B		B
Approach Vol, veh/h	1196			780			92			189		
Approach Delay, s/veh	34.2			15.7			17.3			17.5		
Approach LOS	C			B			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	55.2	10.5	44.3			55.2	10.0	44.8				
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5	4.5	4.5				
Max Green Setting (Gmax), s	24.5	14.5	57.5			24.5	13.5	58.5				
Max Q Clear Time (g_c+I1), s	15.6	6.7	32.4			7.0	6.3	11.6				
Green Ext Time (p_c), s	0.4	0.1	7.4			0.6	0.1	4.6				
Intersection Summary												
HCM 2010 Ctrl Delay		25.7										
HCM 2010 LOS		C										

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	31	27	292	22	16	22	160	1305	33	33	1011	54
Future Vol, veh/h	31	27	292	22	16	22	160	1305	33	33	1011	54
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	-	-	-	-	-	-	300	-	-	0	-	250
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	28	307	23	17	23	168	1374	35	35	1064	57

























Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	2879	1064	3058	2919
Stage 1	1134	1134	-	1728
Stage 2	1748	1745	-	1330
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	16.12	5.52	-	6.12
Critical Hdwy Stg 2	26.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	10	~ 16	~ 271	~ 8
Stage 1	246	278	-	112
Stage 2	109	140	-	191
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	~ 11	~ 271	-
Mov Cap-2 Maneuver	-	~ 11	-	~ 10
Stage 1	180	258	-	82
Stage 2	58	102	-	242

Approach	EB	WB	NB	SB
HCM Control Delay, s			1.4	0.4
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	623	-	-	-	-	484	-	-
HCM Lane V/C Ratio	0.27	-	-	-	-	-0.072	-	-
HCM Control Delay (s)	12.9	-	-	-	-	13	-	-
HCM Lane LOS	B	-	-	-	-	B	-	-
HCM 95th %tile Q(veh)	1.1	-	-	-	-	0.2	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	605	540	186	408	134	398	1054	219	181	768	62
Future Volume (veh/h)	144	605	540	186	408	134	398	1054	219	181	768	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	152	637	568	196	429	141	419	1109	231	191	808	65
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	772	345	249	544	243	313	1443	645	218	1243	556
Arrive On Green	0.19	0.29	0.29	0.08	0.15	0.15	0.37	0.82	0.82	0.13	0.35	0.35
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	152	637	568	196	429	141	419	1109	231	191	808	65
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	9.1	18.5	15.8	6.9	12.8	6.8	20.5	17.1	3.0	12.3	21.1	2.0
Cycle Q Clear(g_c), s	9.1	18.5	15.8	6.9	12.8	6.8	20.5	17.1	3.0	12.3	21.1	2.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	772	345	249	544	243	313	1443	645	218	1243	556
V/C Ratio(X)	0.62	0.83	1.65	0.79	0.79	0.58	1.34	0.77	0.36	0.87	0.65	0.12
Avail Cap(c_a), veh/h	244	901	403	266	804	360	313	1443	645	237	1243	556
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	37.1	16.9	49.6	44.8	24.3	34.5	7.6	3.4	47.0	30.0	10.2
Incr Delay (d2), s/veh	4.9	5.6	303.1	11.2	2.6	1.7	172.1	4.0	1.5	27.1	2.6	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	4.6	9.6	35.9	3.3	6.5	3.1	24.4	8.5	1.5	7.3	10.8	0.9
LnGrp Delay(d),s/veh	46.5	42.7	320.0	60.9	47.4	26.1	206.6	11.6	4.9	74.1	32.7	10.6
LnGrp LOS	D	D	F	E	D	C	F	B	A	E	C	B
Approach Vol, veh/h		1357			766			1759			1064	
Approach Delay, s/veh		159.2			46.9			57.2			38.7	
Approach LOS		F			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.8	49.3	13.4	28.5	25.0	43.1	20.5	21.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	55	39.0	9.5	28.0	20.5	34.0	12.5	25.0				
Max Q Clear Time (g_c+I1), s	14.5	19.1	8.9	20.5	22.5	23.1	11.1	14.8				
Green Ext Time (p_c), s	0.1	7.8	0.0	3.5	0.0	3.7	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay				79.6								
HCM 2010 LOS				E								



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	79	87	179	1591	1470	24		
Future Volume (veh/h)	79	87	179	1591	1470	24		
Number	7	14	5	2	6	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00				1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h	1765	1863	1765	1863	1863	1863		
Adj Flow Rate, veh/h	83	92	188	1675	1547	25		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	131	123	217	2975	2373	1062		
Arrive On Green	0.08	0.08	0.13	0.84	1.00	1.00		
Sat Flow, veh/h	1681	1583	1681	3632	3632	1583		
Grp Volume(v), veh/h	83	92	188	1675	1547	25		
Grp Sat Flow(s), veh/h	1681	1583	1681	3632	3632	1583		
Q Serve(g_s), s	5.3	6.3	12.1	15.8	0.0	0.0		
Cycle Q Clear(g_c), s	5.3	6.3	12.1	15.8	0.0	0.0		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	131	123	217	2975	2373	1062		
V/C Ratio(X)	0.64	0.75	0.87	0.56	0.65	0.02		
Avail Cap(c_a), veh/h	175	259	283	2975	2373	1062		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00		
Upstream Filter(I)	1.00	1.00	0.18	0.18	1.00	1.00		
Uniform Delay (d), s	49.2	49.7	47.0	2.7	0.0	0.0		
Incr Delay (d2), s/veh	5.0	8.7	4.2	0.1	1.4	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	5.7	5.8	7.5	0.5	0.0			
LnGrp Delay(d),s/veh	4.3	58.4	51.2	2.8	1.4	0.0		
LnGrp LOS	D	E	D	A	A	A		
Approach Vol, veh/h	175			1863	1572			
Approach Delay, s/veh	58.4			7.7	1.4			
Approach LOS	E			A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		97.0		13.0	18.7	78.3		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax), s		83.0		18.0	18.5	60.0		
Max Q Clear Time (g_c+I), s		17.8		8.3	14.1	2.0		
Green Ext Time (p_c), s		18.5		0.3	0.2	15.7		
Intersection Summary								
HCM 2010 Ctrl Delay			7.3					
HCM 2010 LOS			A					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	239	50	78	49	45	296	29	1280	26	184	1356	153
Future Volume (veh/h)	239	50	78	49	45	296	29	1280	26	184	1356	153
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	252	53	82	52	47	312	31	1347	27	194	1427	161
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	252	728	619	302	42	281	84	1319	590	191	1401	157
Arrive On Green	0.15	0.39	0.39	0.20	0.20	0.20	0.03	0.25	0.25	0.11	0.44	0.44
Sat Flow, veh/h	1681	1863	1583	1184	211	1404	1681	3539	1583	1681	3210	359
Grp Volume(v), veh/h	252	53	82	52	0	359	31	1347	27	194	782	806
Grp Sat Flow(s), veh/h/ln	1681	1863	1583	1184	0	1615	1681	1770	1583	1681	1770	1799
Q Serve(g_s), s	16.5	2.0	3.7	4.0	0.0	22.0	2.0	41.0	1.4	12.5	48.0	48.0
Cycle Q Clear(g_c), s	16.5	2.0	3.7	4.0	0.0	22.0	2.0	41.0	1.4	12.5	48.0	48.0
Prop In Lane	1.00	1.00	1.00	1.00	0.87	1.00	1.00	1.00	1.00	1.00	0.20	0.20
Lane Grp Cap(c), veh/h	252	728	619	302	0	323	84	1319	590	191	772	785
V/C Ratio(X)	1.00	0.07	0.13	0.17	0.00	1.11	0.37	1.02	0.05	1.02	1.01	1.03
Avail Cap(c_a), veh/h	252	728	619	302	0	323	84	1319	590	191	772	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.43	0.43	0.43	0.67	0.67	0.67
Uniform Delay (d), s/veh	46.7	21.0	21.5	36.8	0.0	44.0	51.5	41.3	26.4	48.8	31.0	31.0
Incr Delay (d2), s/veh	6.6	0.0	0.1	0.3	0.0	83.5	1.2	21.8	0.1	57.5	29.7	33.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.0	1.6	1.3	0.0	17.3	1.0	24.0	0.6	8.8	29.8	31.0	31.0
LnGrp Delay(d), s/veh	48.3	21.0	21.6	37.1	0.0	127.5	52.6	63.1	26.5	106.4	60.7	64.3
LnGrp LOS	F	C	C	D		F	D	F	C	F	F	F
Approach Vol, veh/h		387			411			1405			1782	
Approach Delay, s/veh		74.7			116.1			62.1			67.3	
Approach LOS		E			F			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+R), s	45.5			47.5	10.0	52.5	21.0	26.5				
Change Period (Y+R), s	4.5			4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	43.0			43.0	5.5	48.0	16.5	22.0				
Max Q Clear Time (G+Y+R), s	44.5			5.7	4.0	50.0	18.5	24.0				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				71.2								
HCM 2010 LOS				E								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	89	106	121	115	88	421	72	864	48	335	1010	113
Future Volume (veh/h)	89	106	121	115	88	421	72	864	48	335	1010	113
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	94	112	127	121	93	443	76	909	51	353	1063	119
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	669	569	408	101	482	145	1046	468	374	1528	684
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.17	0.59	0.59	0.15	0.29	0.29
Sat Flow, veh/h	820	1863	1583	1077	282	1344	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	112	127	121	0	536	76	909	51	353	1063	119	
Grp Sat Flow(s), veh/h	820	1863	1583	1077	0	1626	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	4.8	4.5	6.1	9.5	0.0	34.7	4.5	23.8	1.5	22.9	29.4	6.2
Cycle Q Clear(g_c), s	39.5	4.5	6.1	14.0	0.0	34.7	4.5	23.8	1.5	22.9	29.4	6.2
Prop In Lane	1.00		1.00	1.00		0.83	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	101	669	569	408	0	584	145	1046	468	374	1528	684
V/C Ratio(X)	0.93	0.17	0.22	0.30	0.00	0.92	0.52	0.87	0.11	0.94	0.70	0.17
Avail Cap(c_a), veh/h	101	669	569	408	0	584	145	1046	468	374	1528	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.94	0.94	0.94	0.52	0.52	0.52
Uniform Delay (d), s/veh	54.1	24.0	24.6	28.8	0.0	33.7	43.4	20.7	16.2	46.1	32.7	24.4
Incr Delay (d2), s/veh	6.3	0.1	0.2	0.4	0.0	19.7	3.2	9.3	0.4	20.8	1.4	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	1.2	2.3	2.7	2.9	0.0	18.7	2.2	12.7	0.7	12.8	14.7	2.8
LnGrp Delay(d), s/veh	20.4	24.2	24.8	29.2	0.0	53.4	46.6	30.0	16.6	66.9	34.0	24.7
LnGrp LOS	F	C	C	C		D	D	C	B	E	C	C
Approach Vol, veh/h		333			657			1036			1535	
Approach Delay, s/veh		51.5			48.9			30.6			40.9	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	49.0	37.0		44.0	14.0	52.0		44.0				
Change Period (Y+R), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (G_max), s	32.5	32.5		39.5	9.5	47.5		39.5				
Max Q Clear Time (Q_clr), s	24.9	25.8		41.5	6.5	31.4		36.7				
Green Ext Time (p_c), s	0.0	3.0		0.0	0.0	6.3		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay			40.4									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	8	33	5	11	49	16	5	1053	5	16	1404	7
Future Volume (veh/h)	8	33	5	11	49	16	5	1053	5	16	1404	7
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1900	1765	1863	1900	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	8	35	5	12	52	17	5	1108	5	17	1478	7
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	99	14	118	83	27	352	3094	14	444	3093	15
Arrive On Green	0.06	0.06	0.06	0.06	0.06	0.06	0.86	0.86	0.86	1.00	1.00	1.00
Sat Flow, veh/h	1257	1595	228	1290	1345	440	335	3613	16	478	3612	17
Grp Volume(v), veh/h	8	0	40	12	0	69	5	543	570	17	724	761
Grp Sat Flow(s), veh/h	1257	0	1823	1290	0	1785	335	1770	1860	478	1770	1860
Q Serve(g_s), s	0.7	0.0	2.3	1.0	0.0	4.1	0.2	7.0	7.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	2.3	3.3	0.0	4.1	0.2	7.0	7.0	7.3	0.0	0.0
Prop In Lane	1.00		0.13	1.00		0.25	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	96	0	113	118	0	110	352	1515	1593	444	1515	1593
V/C Ratio(X)	0.08	0.00	0.35	0.10	0.00	0.62	0.01	0.36	0.36	0.04	0.48	0.48
Avail Cap(c_a), veh/h	264	0	356	290	0	349	352	1515	1593	444	1515	1593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.75	0.75	0.75	0.81	0.81	0.81
Uniform Delay (d), s	52.7	0.0	49.5	51.1	0.0	50.4	1.2	1.6	1.6	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	1.9	0.4	0.0	5.7	0.1	0.5	0.5	0.1	0.9	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	0.0	0.0	1.2	0.4	0.0	2.2	0.0	3.5	3.7	0.1	0.4	0.4
LnGrp Delay(d), s/veh	58.1	0.0	51.4	51.5	0.0	56.0	1.2	2.1	2.1	0.4	0.9	0.8
LnGrp LOS	D		D	D		E	A	A	A	A	A	A
Approach Vol, veh/h		48			81			1118			1502	
Approach Delay, s/veh		51.7			55.3			2.1			0.9	
Approach LOS		D			E			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		98.7		11.3		98.7		11.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		79.5		21.5		79.5		21.5				
Max Q Clear Time (g_c+I1), s		9.0		6.8		9.3		6.1				
Green Ext Time (p_c), s		7.7		0.1		13.2		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				3.9								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	370	370	220	258	334	166	133	800	95	184	1093	34
Future Volume (veh/h)	370	370	220	258	334	166	133	800	95	184	1093	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	71	389	232	272	352	175	140	842	100	194	1151	36
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	520	233	252	862	386	326	1475	660	206	1210	38
Arrive On Green	0.05	0.15	0.15	0.15	0.24	0.24	0.19	0.42	0.42	0.12	0.35	0.35
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3503	110
Grp Volume(v), veh/h	389	232	272	352	175	140	842	100	194	581	606	
Grp Sat Flow(s), veh/h	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1843	
Q Serve(g_s), s	4.6	11.6	10.9	16.5	9.2	10.3	8.1	20.0	4.3	12.6	35.2	35.2
Cycle Q Clear(g_c), s	4.6	11.6	10.9	16.5	9.2	10.3	8.1	20.0	4.3	12.6	35.2	35.2
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.06	
Lane Grp Cap(c), veh/h	90	520	233	252	862	386	326	1475	660	206	611	637
V/C Ratio(X)	0.79	0.75	1.00	1.08	0.41	0.45	0.43	0.57	0.15	0.94	0.95	0.95
Avail Cap(c_a), veh/h	160	933	417	252	1126	504	326	1475	660	206	611	637
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	0.82	0.82	0.82	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	51.5	45.0	21.5	46.7	34.9	35.4	39.0	24.6	20.0	47.9	35.1	35.1
Incr Delay (d2), s/veh	4.3	2.2	31.8	73.9	0.3	0.7	0.9	1.6	0.5	42.2	23.8	23.3
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	5.8	6.8	12.8	4.5	4.6	3.8	10.0	2.0	8.2	21.2	22.0	
LnGrp Delay(d), s/veh	65.7	47.1	53.3	120.6	35.2	36.1	39.9	26.2	20.5	90.1	58.9	58.4
LnGrp LOS	E	D	D	F	D	D	D	C	C	F	E	E
Approach Vol, veh/h	692			799			1082			1381		
Approach Delay, s/veh	51.1			64.5			27.4			63.1		
Approach LOS	D			E			C			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	45.0	50.3	21.0	20.7	25.8	42.5	10.4	31.3				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	33.0	33.0	16.5	29.0	8.5	38.0	10.5	35.0				
Max Q Clear Time (t_c), s	12.0	12.0	18.5	13.6	10.1	37.2	6.6	12.3				
Green Ext Time (p_c), s	0.0	4.0	0.0	2.6	0.0	0.5	0.0	2.4				
Intersection Summary												
HCM 2010 Ctrl Delay			51.5									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	8	1057	16	16	763	71	22	5	22	86	5	10
Future Volume (veh/h)	8	1057	16	16	763	71	22	5	22	86	5	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1863	1863	1863	1765	1863	1900	1667	1863	1900
Adj Flow Rate, veh/h	8	1113	17	17	803	75	23	5	23	91	5	11
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	1267	567	33	981	439	39	12	53	859	153	337
Arrive On Green	0.13	0.48	0.48	0.02	0.28	0.28	0.02	0.04	0.04	0.28	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	291	1336	3079	519	1142
Grp Volume(v), veh/h	8	1113	17	17	803	75	23	0	28	91	0	16
Grp Sat Flow(s), veh/h	1681	3539	1583	1774	3539	1583	1681	0	1627	1540	0	1661
Q Serve(g_s), s	0.5	31.2	0.4	1.0	23.3	4.0	1.5	0.0	1.9	2.4	0.0	0.8
Cycle Q Clear(g_c), s	0.5	31.2	0.4	1.0	23.3	4.0	1.5	0.0	1.9	2.4	0.0	0.8
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.82	1.00	1.00	0.69	1.00
Lane Grp Cap(c), veh/h	166	1267	567	33	981	439	39	0	64	859	0	491
V/C Ratio(X)	0.05	0.88	0.03	0.52	0.82	0.17	0.60	0.00	0.43	0.11	0.00	0.03
Avail Cap(c_a), veh/h	166	1560	698	89	1560	698	84	0	288	859	0	491
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.67	0.67	0.67	0.92	0.92	0.92	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.7	7.1	53.5	37.2	30.2	53.2	0.0	51.6	29.5	0.0	27.6	0.0
Incr Delay (d2), s/veh	0.1	3.6	0.0	11.3	1.8	0.2	13.8	0.0	4.6	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	0.0	0.0	0.0
%ile BackOfQ(50%), veh	15.8	0.2	0.6	11.6	1.7	0.8	0.0	0.9	1.1	0.0	0.4	0.0
LnGrp Delay(d), s/veh	30.2	7.1	64.8	38.9	30.3	67.1	0.0	56.2	29.7	0.0	27.7	0.0
LnGrp LOS	D	C	A	E	D	C	E		E	C		C
Approach Vol, veh/h	1138			895			51			107		
Approach Delay, s/veh	30.0			38.7			61.1			29.4		
Approach LOS	C			D			E			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	8.9	6.5	43.9	7.0	37.0	15.4	35.0					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	19.5	5.5	48.5	5.5	32.5	5.5	48.5					
Max Q Clear Time (g_c+I), s	13.9	3.0	33.2	3.5	2.8	2.5	25.3					
Green Ext Time (p_c), s	0.2	0.1	0.0	6.2	0.0	0.0	5.2					
Intersection Summary												
HCM 2010 Ctrl Delay			34.3									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 14.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	170	45	123	211	14	118	28	160	24	31	19
Future Vol, veh/h	16	170	45	123	211	14	118	28	160	24	31	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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	179	47	129	222	15	124	29	168	25	33	20

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	237	0	0	226
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1330	-	-	1342
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1330	-	-	1342
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	2.8	36.7	21.5
HCM LOS			E	C

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	420	1330	-	-	1342	-	-	296
HCM Lane V/C Ratio	0.767	0.013	-	-	-0.096	-	-	-0.263
HCM Control Delay (s)	36.7	7.7	0	-	8	0	-	21.5
HCM Lane LOS	E	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	6.5	0	-	-	0.3	-	-	1

Intersection

Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↖	↗	↖	↗
Traffic Vol, veh/h	35	143	92	91	131	17	138	174	197	107	139	36
Future Vol, veh/h	35	143	92	91	131	17	138	174	197	107	139	36
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	151	97	96	138	18	145	183	207	113	146	38
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay	20	15.7	15.5	16.4
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	61%	0%	89%	0%	79%
Vol Right, %	0%	0%	100%	0%	39%	0%	11%	0%	21%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	174	197	35	235	91	148	107	175
LT Vol	138	0	0	35	0	91	0	107	0
Through Vol	0	174	0	0	143	0	131	0	139
RT Vol	0	0	197	0	92	0	17	0	36
Lane Flow Rate	145	183	207	37	247	96	156	113	184
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.342	0.405	0.417	0.092	0.565	0.242	0.368	0.281	0.425
Departure Headway (Hd)	8.465	7.952	7.233	9.01	8.218	9.103	8.508	8.967	8.302
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	427	454	500	399	440	395	422	401	433
Service Time	6.184	5.67	4.952	6.733	5.94	6.859	6.263	6.719	6.054
HCM Lane V/C Ratio	0.34	0.403	0.414	0.093	0.561	0.243	0.37	0.282	0.425
HCM Control Delay	15.5	16	15	12.6	21.1	14.8	16.2	15.2	17.1
HCM Lane LOS	C	C	B	B	C	B	C	C	C
HCM 95th-tile Q	1.5	1.9	2	0.3	3.4	0.9	1.7	1.1	2.1

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↵↵		↵	↵↵		↵	↵↵		↵	↵↵	
Traffic Vol, veh/h	46	145	24	31	153	226	10	129	79	228	108	52
Future Vol, veh/h	46	145	24	31	153	226	10	129	79	228	108	52
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	153	25	33	161	238	11	136	83	240	114	55
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	12.2	15.7	12.5	15.8
HCM LOS	B	C	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	35%	0%	100%	67%	0%	100%	18%	0%	100%	41%
Vol Right, %	0%	0%	65%	0%	0%	33%	0%	0%	82%	0%	0%	59%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	86	122	46	97	72	31	102	277	228	72	88
LT Vol	10	0	0	46	0	0	31	0	0	228	0	0
Through Vol	0	86	43	0	97	48	0	102	51	0	72	36
RT Vol	0	0	79	0	0	24	0	0	226	0	0	52
Lane Flow Rate	11	91	128	48	102	76	33	107	292	240	76	93
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.024	0.196	0.262	0.111	0.22	0.16	0.071	0.219	0.549	0.522	0.154	0.178
Departure Headway (Hd)	8.287	7.787	7.334	8.28	7.787	7.548	7.845	7.345	6.774	7.834	7.334	6.92
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	432	461	489	433	461	475	457	489	534	461	489	518
Service Time	6.038	5.538	5.085	6.031	5.531	5.299	5.588	5.088	4.517	5.581	5.081	4.668
HCM Lane V/C Ratio	0.025	0.197	0.262	0.111	0.221	0.16	0.072	0.219	0.547	0.521	0.155	0.18
HCM Control Delay	11.2	12.4	12.7	12.1	12.7	11.7	11.2	12.1	17.5	18.9	11.4	11.2
HCM Lane LOS	B	B	B	B	B	B	B	B	C	C	B	B
HCM 95th-tile Q	0.1	0.7	1	0.4	0.8	0.6	0.2	0.8	3.3	3	0.5	0.6

Intersection

Intersection Delay, ~~26.4h~~
 Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	68	286	38	106	223	77	11	230	88	76	155	30
Future Vol, veh/h	68	286	38	106	223	77	11	230	88	76	155	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	301	40	112	235	81	12	242	93	80	163	32
Number of Lanes	1	1	0	1	1	0	1	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	36.4	28.9	18	18.1
HCM LOS	E	D	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	50%	0%
Vol Thru, %	0%	100%	47%	0%	88%	0%	74%	50%	72%
Vol Right, %	0%	0%	53%	0%	12%	0%	26%	0%	28%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	153	165	68	324	106	300	154	108
LT Vol	11	0	0	68	0	106	0	76	0
Through Vol	0	153	77	0	286	0	223	78	78
RT Vol	0	0	88	0	38	0	77	0	30
Lane Flow Rate	12	161	173	72	341	112	316	162	113
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.031	0.413	0.424	0.185	0.823	0.288	0.754	0.434	0.289
Departure Headway (Hd)	9.72	9.201	8.813	9.289	8.691	9.295	8.595	9.665	9.203
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	368	391	407	386	416	386	420	372	389
Service Time	7.495	6.976	6.587	7.06	6.461	7.067	6.367	7.445	6.982
HCM Lane V/C Ratio	0.033	0.412	0.425	0.187	0.82	0.29	0.752	0.435	0.29
HCM Control Delay	12.8	18.3	18	14.2	41.1	15.8	33.5	19.7	15.7
HCM Lane LOS	B	C	C	B	E	C	D	C	C
HCM 95th-tile Q	0.1	2	2.1	0.7	7.6	1.2	6.2	2.1	1.2

Intersection

Intersection Delay, s/veh
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵ ↑↑			↵ ↑↑			↵ ↑↑			↵ ↑↑		
Traffic Vol, veh/h	75	392	89	98	316	110	115	176	128	111	133	96
Future Vol, veh/h	75	392	89	98	316	110	115	176	128	111	133	96
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	413	94	103	333	116	121	185	135	117	140	101
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	28	23.5	19.9	18.3
HCM LOS	D	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	31%	0%	100%	59%	0%	100%	49%	0%	100%	32%
Vol Right, %	0%	0%	69%	0%	0%	41%	0%	0%	51%	0%	0%	68%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	117	187	75	261	220	98	211	215	111	89	140
LT Vol	115	0	0	75	0	0	98	0	0	111	0	0
Through Vol	0	117	59	0	261	131	0	211	105	0	89	44
RT Vol	0	0	128	0	0	89	0	0	110	0	0	96
Lane Flow Rate	121	124	196	79	275	231	103	222	227	117	93	148
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.351	0.341	0.516	0.220	0.729	0.594	0.290	0.593	0.583	0.346	0.264	0.398
Departure Headway (Hd)	0.44	9.94	9.46	0.035	9.535	9.252	0.123	9.623	9.265	0.674	0.174	9.695
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	344	361	379	357	380	388	354	375	388	337	352	371
Service Time	8.227	7.727	7.247	7.818	7.318	7.034	7.906	7.406	7.048	8.464	7.964	7.485
HCM Lane V/C Ratio	0.352	0.343	0.517	0.221	0.724	0.595	0.291	0.592	0.585	0.347	0.264	0.399
HCM Control Delay	18.8	17.8	22	15.6	34.2	24.8	17	25.6	24.3	19.1	16.6	18.8
HCM Lane LOS	C	C	C	C	D	C	C	D	C	C	C	C
HCM 95th-tile Q	1.5	1.5	2.8	0.8	5.6	3.7	1.2	3.7	3.6	1.5	1	1.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	30	497	11	60	414	90	11	61	121	164	50	73
Future Volume (veh/h)	30	497	11	60	414	90	11	61	121	164	50	73
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	32	523	12	63	436	95	12	64	127	173	53	77
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	48	657	294	80	593	128	815	449	381	894	584	497
Arrive On Green	0.03	0.19	0.19	0.05	0.20	0.20	0.29	0.24	0.24	0.36	0.31	0.31
Sat Flow, veh/h	1681	3539	1583	1681	2896	626	1681	1863	1583	1681	1863	1583
Grp Volume(v), veh/h	32	523	12	63	265	266	12	64	127	173	53	77
Grp Sat Flow(s), veh/h	1681	1770	1583	1681	1770	1752	1681	1863	1583	1681	1863	1583
Q Serve(g_s), s	2.1	15.5	0.7	4.1	15.4	15.6	0.0	3.0	7.3	0.0	2.2	3.2
Cycle Q Clear(g_c), s	2.1	15.5	0.7	4.1	15.4	15.6	0.0	3.0	7.3	0.0	2.2	3.2
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	48	657	294	80	363	359	815	449	381	894	584	497
V/C Ratio(X)	0.67	0.80	0.04	0.79	0.73	0.74	0.01	0.14	0.33	0.19	0.09	0.16
Avail Cap(c_a), veh/h	30	1207	540	206	684	677	815	449	381	894	584	497
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)	0.77	0.77	0.77	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	42.8	36.8	51.8	40.9	41.0	13.3	32.8	34.5	12.7	26.7	19.2
Incr Delay (d2), s/veh	1.9	1.8	0.0	15.5	2.9	3.0	0.0	0.7	2.3	0.1	0.3	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	7.7	0.3	2.2	7.8	7.8	0.2	1.6	3.4	2.8	1.2	1.5	
LnGrp Delay(d),s/veh	41.9	44.6	36.8	67.3	43.8	44.0	13.3	33.5	36.8	12.8	27.0	19.9
LnGrp LOS	E	D	D	E	D	D	B	C	D	B	C	B
Approach Vol, veh/h		567			594			203			303	
Approach Delay, s/veh		45.5			46.4			34.4			17.1	
Approach LOS		D			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	4.3	31.0	9.7	24.9	36.3	39.0	7.6	27.0				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	26.5	13.5	37.5	6.5	34.5	8.5	42.5					
Max Q Clear Time (g_c+I), s	11.3	6.1	17.5	2.0	5.2	4.1	17.6					
Green Ext Time (p_c), s	0.3	0.6	0.1	2.9	0.0	0.4	0.0	2.7				
Intersection Summary												
HCM 2010 Ctrl Delay		39.3										
HCM 2010 LOS		D										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↕	↖
Traffic Volume (veh/h)	22	701	226	219	546	7	165	199	261	11	266	12
Future Volume (veh/h)	22	701	226	219	546	7	165	199	261	11	266	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	23	738	238	231	575	7	174	209	275	12	280	13
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	39	860	385	261	1344	16	511	350	461	48	821	37
Arrive On Green	0.02	0.24	0.24	0.16	0.38	0.38	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1681	3539	1583	1681	3581	44	1025	731	962	28	1713	78
Grp Volume(v), veh/h	23	738	238	231	284	298	174	0	484	305	0	0
Grp Sat Flow(s), veh/h	1681	1770	1583	1681	1770	1855	1025	0	1693	1819	0	0
Q Serve(g_s), s	1.5	21.9	14.7	14.8	13.1	13.1	6.2	0.0	22.9	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	21.9	14.7	14.8	13.1	13.1	17.6	0.0	22.9	11.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.57	0.04		0.04
Lane Grp Cap(c), veh/h	39	860	385	261	664	696	511	0	811	905	0	0
V/C Ratio(X)	0.60	0.86	0.62	0.88	0.43	0.43	0.34	0.00	0.60	0.34	0.00	0.00
Avail Cap(c_a), veh/h	84	981	439	344	764	801	511	0	811	905	0	0
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)	0.57	0.57	0.57	0.70	0.70	0.70	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.2	39.8	37.1	45.5	25.6	25.6	20.3	0.0	20.9	17.9	0.0	0.0
Incr Delay (d2), s/veh	8.1	4.1	1.2	14.2	0.3	0.3	1.8	0.0	3.2	1.0	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	11.2	6.5	7.9	6.4	6.8	3.8	0.0	11.3	6.0	0.0	0.0	0.0
LnGrp Delay(d), s/veh	1.3	43.9	38.3	59.7	25.9	25.9	22.1	0.0	24.1	18.9	0.0	0.0
LnGrp LOS	E	D	D	E	C	C	C		C	B		
Approach Vol, veh/h		999			813			658			305	
Approach Delay, s/veh		43.0			35.5			23.6			18.9	
Approach LOS		D			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		57.2	21.6	31.2		57.2	7.0	45.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		43.5	22.5	30.5		43.5	5.5	47.5				
Max Q Clear Time (g_c+I), s		24.9	16.8	23.9		13.3	3.5	15.1				
Green Ext Time (p_c), s		3.7	0.3	2.8		1.8	0.0	3.1				
Intersection Summary												
HCM 2010 Ctrl Delay			33.5									
HCM 2010 LOS			C									

Intersection

Intersection Delay, s/veh
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	126	312	9	11	199	104	10	36	19	191	28	109
Future Vol, veh/h	126	312	9	11	199	104	10	36	19	191	28	109
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	133	328	9	12	209	109	11	38	20	201	29	115
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	28	16.6	11.4	19.1
HCM LOS	D	C	B	C

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	15%	28%	4%	58%
Vol Thru, %	55%	70%	63%	9%
Vol Right, %	29%	2%	33%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	447	314	328
LT Vol	10	126	11	191
Through Vol	36	312	199	28
RT Vol	19	9	104	109
Lane Flow Rate	68	471	331	345
Geometry Grp	1	1	1	1
Degree of Util (X)	0.136	0.789	0.558	0.613
Departure Headway (Hd)	7.171	6.035	6.074	6.387
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	497	598	592	563
Service Time	5.251	4.082	4.127	4.437
HCM Lane V/C Ratio	0.137	0.788	0.559	0.613
HCM Control Delay	11.4	28	16.6	19.1
HCM Lane LOS	B	D	C	C
HCM 95th-tile Q	0.5	7.6	3.4	4.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	82	870	68	100	565	18	97	251	194	65	249	97
Future Volume (veh/h)	82	870	68	100	565	18	97	251	194	65	249	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	86	916	72	105	595	19	102	264	204	68	262	102
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	1034	463	129	719	23	273	601	511	243	389	151
Arrive On Green	0.16	0.29	0.29	0.08	0.21	0.21	0.16	0.32	0.32	0.14	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	1681	3501	112	1681	1863	1583	1681	1278	497
Grp Volume(v), veh/h	86	916	72	105	301	313	102	264	204	68	0	364
Grp Sat Flow(s), veh/h/ln	1765	1770	1583	1681	1770	1843	1681	1863	1583	1681	0	1775
Q Serve(g_s), s	5.0	27.2	2.4	6.8	17.9	17.9	6.0	12.3	8.4	4.0	0.0	19.7
Cycle Q Clear(g_c), s	5.0	27.2	2.4	6.8	17.9	17.9	6.0	12.3	8.4	4.0	0.0	19.7
Prop In Lane	1.00	1.00	1.00	1.00	0.06	1.00	1.00	1.00	1.00	1.00	0.28	0.28
Lane Grp Cap(c), veh/h	275	1034	463	129	364	379	273	601	511	243	0	541
V/C Ratio(X)	0.31	0.89	0.16	0.81	0.83	0.83	0.37	0.44	0.40	0.28	0.00	0.67
Avail Cap(c_a), veh/h	275	1142	511	176	555	578	273	601	511	243	0	541
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)	0.47	0.47	0.47	0.84	0.84	0.84	0.92	0.92	0.92	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.5	37.2	12.4	50.0	41.8	41.8	41.1	29.4	17.0	42.0	0.0	33.5
Incr Delay (d2), s/veh	0.3	4.0	0.1	15.8	5.2	5.1	0.8	2.1	2.1	0.6	0.0	6.6
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	13.8	1.1	3.7	9.3	9.7	2.8	6.7	4.0	1.9	0.0	10.6	10.6
LnGrp Delay(d),s/veh	40.8	41.2	12.4	65.8	47.1	46.9	41.8	31.5	19.1	42.6	0.0	40.0
LnGrp LOS	D	D	B	E	D	D	D	C	B	D		D
Approach Vol, veh/h	1074			719			570			432		
Approach Delay, s/veh	39.3			49.8			28.9			40.4		
Approach LOS	D			D			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	40.0	40.0	13.0	36.6	22.4	38.0	22.5	27.1				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	35.5	35.5	11.5	35.5	11.5	33.5	12.5	34.5				
Max Q Clear Time (G+Y+R), s	11.3	8.8	29.2	8.0	21.7	7.0	19.9					
Green Ext Time (p_c), s	1.9	0.0	3.0	0.1	1.5	0.1	2.7					
Intersection Summary												
HCM 2010 Ctrl Delay			40.0									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	15	244	171	55	114	55	131	440	85	165	384	63
Future Volume (veh/h)	15	244	171	55	114	55	131	440	85	165	384	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	121	257	180	58	120	58	138	463	89	174	404	66
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	310	264	74	145	70	164	885	396	632	1871	837
Arrive On Green	0.09	0.17	0.17	0.04	0.12	0.12	0.19	0.50	0.50	0.38	0.53	0.53
Sat Flow, veh/h	1681	1863	1583	1681	1188	574	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	21	257	180	58	0	178	138	463	89	174	404	66
Grp Sat Flow(s), veh/h	1681	1863	1583	1681	0	1761	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	7.8	14.7	11.8	3.8	0.0	10.9	8.7	9.7	2.9	7.9	6.7	1.4
Cycle Q Clear(g_c), s	7.8	14.7	11.8	3.8	0.0	10.9	8.7	9.7	2.9	7.9	6.7	1.4
Prop In Lane	1.00	1.00	1.00	1.00	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	148	310	264	74	0	215	164	885	396	632	1871	837
V/C Ratio(X)	0.82	0.83	0.68	0.79	0.00	0.83	0.84	0.52	0.22	0.28	0.22	0.08
Avail Cap(c_a), veh/h	267	500	425	176	0	376	283	885	396	632	1871	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	49.5	44.3	43.1	52.1	0.0	47.1	43.5	23.1	14.9	23.9	13.8	5.2
Incr Delay (d2), s/veh	10.4	6.2	3.1	16.8	0.0	7.8	11.0	2.2	1.3	0.2	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	8.1	5.4	2.1	0.0	5.8	4.5	4.9	1.4	3.7	3.3	0.7	0.7
LnGrp Delay(d),s/veh	59.7	50.5	46.2	68.9	0.0	54.9	54.5	25.3	16.2	24.1	14.0	5.4
LnGrp LOS	E	D	D	E		D	D	C	B	C	B	A
Approach Vol, veh/h		558			236			690			644	
Approach Delay, s/veh		51.1			58.4			29.9			15.9	
Approach LOS		D			E			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	45.0	32.0	9.3	22.8	15.2	62.6	14.2	18.0				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G), s	27.5	27.5	11.5	29.5	18.5	32.5	17.5	23.5				
Max Q Clear Time (g_c+I), s	11.3	5.8	16.7	10.7	8.7	9.8	12.9					
Green Ext Time (p_c), s	2.6	0.0	1.6	0.2	2.5	0.2	0.6					
Intersection Summary												
HCM 2010 Ctrl Delay		34.4										
HCM 2010 LOS		C										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	857	890	73	55	434	90	97	288	147	226	330	119
Future Volume (veh/h)	857	890	73	55	434	90	97	288	147	226	330	119
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	165	937	77	58	457	95	102	303	155	238	347	125
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	194	1060	474	73	805	360	126	724	324	485	1481	846
Arrive On Green	0.12	0.30	0.30	0.04	0.23	0.23	0.07	0.20	0.20	0.29	0.42	0.42
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	65	937	77	58	457	95	102	303	155	238	347	125
Grp Sat Flow(s), veh/h	65	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	10.6	27.7	3.1	3.8	12.6	2.8	6.6	8.2	9.5	12.9	7.0	4.4
Cycle Q Clear(g_c), s	10.6	27.7	3.1	3.8	12.6	2.8	6.6	8.2	9.5	12.9	7.0	4.4
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	194	1060	474	73	805	360	126	724	324	485	1481	846
V/C Ratio(X)	0.85	0.88	0.16	0.79	0.57	0.26	0.81	0.42	0.48	0.49	0.23	0.15
Avail Cap(c_a), veh/h	198	1174	525	115	805	360	176	724	324	485	1481	846
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)	0.59	0.59	0.59	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.1	36.7	17.1	52.1	37.7	9.5	50.1	38.1	38.6	32.4	20.6	13.0
Incr Delay (d2), s/veh	8.3	4.8	0.1	11.6	0.6	0.2	17.3	1.8	5.0	0.8	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%), s/h	14.2	14.2	1.4	2.0	6.2	1.2	3.7	4.2	4.6	6.1	3.5	2.0
LnGrp Delay(d), s/veh	36.0	41.5	17.2	63.7	38.3	9.7	67.4	39.8	43.6	33.2	21.0	13.3
LnGrp LOS	E	D	B	E	D	A	E	D	D	C	C	B
Approach Vol, veh/h	1179			610			560			710		
Approach Delay, s/veh	42.0			36.2			45.9			23.7		
Approach LOS	D			D			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	30.3	27.0	9.3	37.4	12.7	50.5	17.2	29.5				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	22.5	22.5	7.5	36.5	11.5	36.5	19.5	24.5				
Max Q Clear Time (G+Y+R), s	11.5	11.5	5.8	29.7	8.6	9.0	12.6	14.6				
Green Ext Time (p_c), s	1.7	1.7	0.0	3.2	0.1	2.5	0.2	2.0				
Intersection Summary												
HCM 2010 Ctrl Delay			37.3									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	1033	1033	118	64	575	99	118	290	69	177	261	86
Future Volume (veh/h)	1033	1033	118	64	575	99	118	290	69	177	261	86
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	1211	1087	124	67	605	104	124	305	73	186	275	91
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	322	1232	551	84	732	328	331	881	208	215	634	205
Arrive On Green	0.19	0.35	0.35	0.05	0.21	0.21	0.20	0.31	0.31	0.13	0.24	0.24
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	2844	671	1681	2630	852
Grp Volume(v), veh/h	11087	124	67	605	104	124	188	190	186	183	183	
Grp Sat Flow(s), veh/h	1770	1583	1681	1770	1583	1681	1770	1744	1681	1770	1712	
Q Serve(g_s), s	12.8	31.8	6.1	4.3	18.0	4.5	7.0	9.0	9.3	11.9	9.6	10.0
Cycle Q Clear(g_c), s	12.8	31.8	6.1	4.3	18.0	4.5	7.0	9.0	9.3	11.9	9.6	10.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	0.38	1.00	0.50			
Lane Grp Cap(c), veh/h	1232	551	84	732	328	331	548	541	215	426	413	
V/C Ratio(X)	0.66	0.88	0.23	0.79	0.83	0.32	0.37	0.34	0.35	0.86	0.43	0.44
Avail Cap(c_a), veh/h	1367	612	115	917	410	331	548	541	298	426	413	
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)	0.59	0.59	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	25.4	51.7	41.7	20.0	38.3	29.3	29.4	47.0	35.3	35.5	
Incr Delay (d2), s/veh	4.1	0.1	22.9	5.1	0.6	0.7	1.7	1.8	17.0	3.1	3.4	
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	
%ile BackOfQ(50%), veh	16.2	2.7	2.5	9.3	2.0	3.3	4.6	4.8	6.5	5.1	5.1	
LnGrp Delay(d), s/veh	37.8	25.5	74.5	46.8	20.6	39.0	31.0	31.2	64.0	38.5	38.9	
LnGrp LOS	D	D	C	E	D	C	D	C	C	E	D	D
Approach Vol, veh/h	1422			776			502		552			
Approach Delay, s/veh	37.6			45.7			33.0		47.2			
Approach LOS	D			D			C		D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	38.6	10.0	42.8	26.2	31.0	25.5	27.3					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G), s	22.5	7.5	42.5	15.5	26.5	21.5	28.5					
Max Q Clear Time (G+Y), s	11.3	6.3	33.8	9.0	12.0	14.8	20.0					
Green Ext Time (p_c), s	1.5	0.0	4.5	0.1	1.6	0.3	2.8					
Intersection Summary												
HCM 2010 Ctrl Delay			40.5									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑		↑
Traffic Vol, veh/h	1170	6	0	862	0	46
Future Vol, veh/h	1170	6	0	862	0	46
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	-	-	-	0
Veh in Median Storage#	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1232	6	0	907	0	48

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 616
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 433
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 433
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14.4
HCM LOS			B

Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	433	-	-	-
HCM Lane V/C Ratio	0.112	-	-	-
HCM Control Delay (s)	14.4	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection























Int Delay, s/veh 0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↕↕	↕↕	↗
Traffic Vol, veh/h	0	41	0	1681	1484	31
Future Vol, veh/h	0	41	0	1681	1484	31
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	-	-	-	0
Veh in Median Storage#	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	43	0	1769	1562	33

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 781	-	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	- 6.94	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	- 3.32	-	-
Pot Cap-1 Maneuver	0 338	0	-
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	- 338	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

























Approach	EB	NB	SB
HCM Control Delay, s	17.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR
Capacity (veh/h)	-	338	-	-
HCM Lane V/C Ratio	-	0.128	-	-
HCM Control Delay (s)	-	17.2	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.4	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	42	62	32	35	56	64	1279	61	86	1099	85
Future Volume (veh/h)	81	42	62	32	35	56	64	1279	61	86	1099	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	88	46	67	35	38	61	70	1390	66	93	1195	92
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	83	120	120	59	95	96	2261	704	119	1619	724
Arrive On Green	0.07	0.13	0.13	0.04	0.10	0.10	0.06	0.47	0.47	0.07	0.48	0.48
Sat Flow, veh/h	1681	650	947	3261	611	981	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	88	0	113	35	0	99	70	1390	66	93	1195	92
Grp Sat Flow(s),veh/h/ln	1681	0	1598	1630	0	1592	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	3.1	0.0	4.0	0.6	0.0	3.6	2.5	13.1	1.5	3.3	17.4	2.1
Cycle Q Clear(g_c), s	3.1	0.0	4.0	0.6	0.0	3.6	2.5	13.1	1.5	3.3	17.4	2.1
Prop In Lane	1.00		0.59	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	112	0	203	120	0	154	96	2261	704	119	1619	724
V/C Ratio(X)	0.79	0.00	0.56	0.29	0.00	0.64	0.73	0.61	0.09	0.78	0.74	0.13
Avail Cap(c_a), veh/h	346	0	671	295	0	485	291	4564	1421	374	3342	1495
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	27.9	0.0	24.9	28.5	0.0	26.4	28.2	12.0	8.9	27.8	12.6	8.6
Incr Delay (d2), s/veh	11.4	0.0	2.4	1.3	0.0	4.4	10.1	0.3	0.1	10.8	0.7	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	1.8	0.0	1.9	0.3	0.0	1.8	1.4	5.7	0.6	1.9	8.1	0.8
LnGrp Delay(d),s/veh	39.3	0.0	27.3	29.8	0.0	30.8	38.3	12.3	9.0	38.5	13.3	8.7
LnGrp LOS	D		C	C		C	D	B	A	D	B	A
Approach Vol, veh/h		201			134			1526			1380	
Approach Delay, s/veh		32.6			30.5			13.3			14.7	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	33.0	6.7	12.2	8.0	33.8	8.5	10.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	35	57.5	5.5	25.5	10.5	60.5	12.5	18.5				
Max Q Clear Time (g_c+I1),s	5.8	15.1	2.6	6.0	4.5	19.4	5.1	5.6				
Green Ext Time (p_c), s	0.1	11.9	0.0	0.5	0.1	9.9	0.1	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			15.8									
HCM 2010 LOS			B									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Interim Year With Phase 1 & 2 Project PM Peak Hour
 1: Palmdale Road (SR-18) & Pearmain St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	1093	38	65	948	326	27	114	27	109	103	12
Future Volume (veh/h)	14	1093	38	65	948	326	27	114	27	109	103	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	15	1151	40	68	998	343	28	120	28	115	108	13
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	1304	583	87	1417	634	44	187	42	595	1253	149
Arrive On Green	0.02	0.37	0.37	0.10	0.80	0.80	0.03	0.07	0.07	0.35	0.39	0.39
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	2867	651	1681	3188	378
Grp Volume(v), veh/h	15	1151	40	68	998	343	28	73	75	115	59	62
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	1770	1748	1681	1770	1796
Q Serve(g_s), s	1.0	33.5	1.5	4.1	14.2	2.3	1.8	4.4	4.6	5.2	2.3	2.4
Cycle Q Clear(g_c), s	1.0	33.5	1.5	4.1	14.2	2.3	1.8	4.4	4.6	5.2	2.3	2.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.37	1.00		0.21
Lane Grp Cap(c), veh/h	28	1304	583	87	1417	634	44	115	114	595	695	706
V/C Ratio(X)	0.53	0.88	0.07	0.78	0.70	0.54	0.64	0.63	0.66	0.19	0.09	0.09
Avail Cap(c_a), veh/h	84	1464	655	153	1593	712	84	306	302	595	695	706
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.66	0.66	0.66	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	32.5	15.5	49.1	8.0	0.6	53.0	50.1	50.2	24.6	21.0	21.0
Incr Delay (d2), s/veh	14.8	6.2	0.0	9.8	0.8	0.5	14.3	23.4	26.2	0.2	0.1	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	0.6	17.4	0.7	2.2	6.5	0.8	1.0	2.9	3.1	2.5	1.1	1.2
LnGrp Delay(d),s/veh	68.5	38.7	15.5	58.8	8.8	1.0	67.4	73.5	76.4	24.8	21.0	21.0
LnGrp LOS	E	D	B	E	A	A	E	E	E	C	C	C
Approach Vol, veh/h		1206			1409			176			236	
Approach Delay, s/veh		38.3			9.3			73.8			22.9	
Approach LOS		D			A			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	43.4	11.7	9.9	45.0	7.4	47.7	6.3	48.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.0	19.0	9.5	45.5	5.5	31.5	5.5	49.5				
Max Q Clear Time (g_c+l1), s	7.2	6.6	6.1	35.5	3.8	4.4	3.0	16.2				
Green Ext Time (p_c), s	0.2	0.5	0.0	5.0	0.0	0.6	0.0	8.7				
Intersection Summary												
HCM 2010 Ctrl Delay			25.7									
HCM 2010 LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↕	↖
Traffic Volume (veh/h)	147	957	66	103	834	16	72	3	61	118	3	256
Future Volume (veh/h)	147	957	66	103	834	16	72	3	61	118	3	256
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	155	1007	69	108	878	17	76	3	64	124	3	269
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	1223	547	84	997	446	332	26	250	662	15	763
Arrive On Green	0.11	0.35	0.35	0.10	0.56	0.56	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	586	55	519	1241	32	1583
Grp Volume(v), veh/h	155	1007	69	108	878	17	143	0	0	127	0	269
Grp Sat Flow(s), veh/h	1681	3539	1583	1681	3539	1583	1160	0	0	1272	0	1583
Q Serve(g_s), s	9.9	28.6	3.3	5.5	23.6	0.5	5.4	0.0	0.0	0.0	0.0	11.7
Cycle Q Clear(g_c), s	9.9	28.6	3.3	5.5	23.6	0.5	13.1	0.0	0.0	7.6	0.0	11.7
Prop In Lane	1.00		1.00	1.00		1.00	0.53		0.45	0.98		1.00
Lane Grp Cap(c), veh/h	191	1223	547	84	997	446	609	0	0	678	0	763
V/C Ratio(X)	0.81	0.82	0.13	1.29	0.88	0.04	0.23	0.00	0.00	0.19	0.00	0.35
Avail Cap(c_a), veh/h	144	2043	914	84	1496	669	609	0	0	678	0	763
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.49	0.49	0.49	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	32.9	24.6	49.5	22.4	17.4	18.8	0.0	0.0	16.7	0.0	17.8
Incr Delay (d2), s/veh	4.1	0.7	0.1	192.6	4.3	0.0	0.9	0.0	0.0	0.6	0.0	1.3
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	14.1	1.4	7.0	11.8	0.2	2.9	0.0	0.0	0.0	2.4	0.0	5.4
LnGrp Delay(d), s/veh	31.6	33.6	24.7	242.1	26.7	17.4	19.7	0.0	0.0	17.4	0.0	19.1
LnGrp LOS	D	C	C	F	C	B	B			B		B
Approach Vol, veh/h	1231			1003			143			396		
Approach Delay, s/veh	35.4			49.8			19.7			18.5		
Approach LOS	D			D			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	57.5	10.0	42.5		57.5	17.0	35.5					
Change Period (Y+Rc), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (Gmax), s	27.5	5.5	63.5		27.5	22.5	46.5					
Max Q Clear Time (g_c+I), s	15.4	7.5	30.6		13.7	11.9	25.6					
Green Ext Time (p_c), s	0.6	0.0	7.4		1.4	0.3	5.4					
Intersection Summary												
HCM 2010 Ctrl Delay			37.4									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 71.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↑	↑			↑	↑
Traffic Vol, veh/h	8	27	327	38	38	43	427	1349	33	33	1363	24
Future Vol, veh/h	8	27	327	38	38	43	427	1349	33	33	1363	24
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	-	-	-	-	-	-	300	-	-	-	-	250
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	28	344	40	40	45	449	1420	35	35	1435	25

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	3883	3858	1435	4040
Stage 1	1505	1505	-	2336
Stage 2	2378	2353	-	1704
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	~ 2	~ 4	~ 164	~ 1
Stage 1	151	184	-	49
Stage 2	46	69	-	116
Platoon blocked, %				
Mov Cap-1 Maneuver	0	0	~ 164	-
Mov Cap-2 Maneuver	0	0	-	-
Stage 1	~ 5	110	-	~ 1
Stage 2	-	~ 2	-	107

Approach	EB	WB	NB	SB
HCM Control Delay (s)	65.8		15.3	0.3
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	463	-	-	164	-	465	-	-
HCM Lane V/C Ratio	0.971	-	-	2.323	-	0.075	-	-
HCM Control Delay (s)	64.9	-	-	658.8	-	13.4	-	-
HCM Lane LOS	F	-	-	F	-	B	-	-
HCM 95th %tile Q(veh)	12.2	-	-	31.6	-	0.2	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	616	407	372	654	205	388	1157	184	216	991	78
Future Volume (veh/h)	149	616	407	372	654	205	388	1157	184	216	991	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	157	648	428	392	688	216	408	1218	194	227	1043	82
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	718	321	350	768	343	374	1341	600	237	1052	470
Arrive On Green	0.13	0.27	0.27	0.11	0.22	0.22	0.07	0.13	0.13	0.14	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	157	648	428	392	688	216	408	1218	194	227	1043	82
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	10.2	19.4	13.8	12.5	20.8	9.7	24.5	37.4	8.4	14.8	32.3	3.1
Cycle Q Clear(g_c), s	10.2	19.4	13.8	12.5	20.8	9.7	24.5	37.4	8.4	14.8	32.3	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	718	321	350	768	343	374	1341	600	237	1052	470
V/C Ratio(X)	0.94	0.90	1.33	1.12	0.90	0.63	1.09	0.91	0.32	0.96	0.99	0.17
Avail Cap(c_a), veh/h	167	740	331	350	804	360	374	1341	600	237	1052	470
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.59	0.59	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.4	39.1	15.3	48.8	41.9	20.0	51.0	46.2	16.6	46.9	38.5	15.8
Incr Delay (d2), s/veh	51.6	14.1	169.5	74.6	7.9	1.9	72.8	10.6	1.4	46.8	25.8	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	7.1	10.8	21.1	8.9	11.0	4.4	19.0	20.3	3.9	10.0	19.6	1.5
LnGrp Delay(d),s/veh	99.0	53.3	184.8	123.3	49.8	21.9	123.8	56.8	18.0	93.7	64.4	16.6
LnGrp LOS	F	D	F	F	D	C	F	E	B	F	E	B
Approach Vol, veh/h		1233			1296			1820			1352	
Approach Delay, s/veh		104.8			67.4			67.7			66.4	
Approach LOS		F			E			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	46.2	17.0	26.8	29.0	37.2	15.5	28.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	55	41.0	12.5	23.0	24.5	32.0	10.5	25.0				
Max Q Clear Time (g_c+I1), s	6.8	39.4	14.5	21.4	26.5	34.3	12.2	22.8				
Green Ext Time (p_c), s	0.0	1.2	0.0	0.9	0.0	0.0	0.0	1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				75.3								
HCM 2010 LOS				E								



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	103	144	213	1620	1721	33		
Future Volume (veh/h)	103	144	213	1620	1721	33		
Number	7	14	5	2	6	16		
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		
Adj Sat Flow, veh/h	1765	1863	1765	1863	1863	1863		
Adj Flow Rate, veh/h	108	152	224	1705	1812	35		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	194	183	256	2840	2156	964		
Arrive On Green	0.12	0.12	0.31	1.00	0.61	0.61		
Sat Flow, veh/h	1681	1583	1681	3632	3632	1583		
Grp Volume(v), veh/h	108	152	224	1705	1812	35		
Grp Sat Flow(s), veh/h	1583	1583	1681	1770	1770	1583		
Q Serve(g_s), s	6.7	10.3	13.9	0.0	45.1	1.0		
Cycle Q Clear(g_c), s	6.7	10.3	13.9	0.0	45.1	1.0		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	194	183	256	2840	2156	964		
V/C Ratio(X)	0.56	0.83	0.87	0.60	0.84	0.04		
Avail Cap(c_a), veh/h	175	259	256	2840	2156	964		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	0.28	0.28	1.00	1.00		
Uniform Delay (d), s/veh	46.0	47.6	37.2	0.0	17.2	8.6		
Incr Delay (d2), s/veh	2.5	14.3	9.4	0.3	4.2	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	9.4	7.0	0.1	23.1	0.4			
LnGrp Delay(d),s/veh	48.4	61.9	46.6	0.3	21.4	8.7		
LnGrp LOS	D	E	D	A	C	A		
Approach Vol, veh/h	260		1929		1847			
Approach Delay, s/veh	5.3		5.6		21.1			
Approach LOS	E		A		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	2		4		5		6	
Phs Duration (G+Y+Rc), s	92.8		17.2		21.3		71.5	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	33.0		18.0		11.5		67.0	
Max Q Clear Time (g_c+I1), s	12.0		12.3		15.9		47.1	
Green Ext Time (p_c), s	19.8		0.4		0.0		12.6	
Intersection Summary								
HCM 2010 Ctrl Delay			16.0					
HCM 2010 LOS			B					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	115	53	74	17	47	138	59	1620	39	146	1519	251
Future Volume (veh/h)	115	53	74	17	47	138	59	1620	39	146	1519	251
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	226	56	78	18	49	145	62	1705	41	154	1599	264
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	563	479	230	58	171	187	1577	705	218	1415	228
Arrive On Green	0.12	0.30	0.30	0.14	0.14	0.14	0.07	0.30	0.30	0.26	0.93	0.93
Sat Flow, veh/h	1681	1863	1583	1185	416	1230	1681	3539	1583	1681	3053	493
Grp Volume(v), veh/h	226	56	78	18	0	194	62	1705	41	154	911	952
Grp Sat Flow(s), veh/h	1681	1863	1583	1185	0	1646	1681	1770	1583	1681	1770	1776
Q Serve(g_s), s	13.5	2.4	4.0	1.5	0.0	12.7	3.9	49.0	2.0	9.1	51.0	51.0
Cycle Q Clear(g_c), s	13.5	2.4	4.0	1.5	0.0	12.7	3.9	49.0	2.0	9.1	51.0	51.0
Prop In Lane	1.00	1.00	1.00	1.00	0.75	1.00	1.00	1.00	1.00	1.00	0.28	0.28
Lane Grp Cap(c), veh/h	206	563	479	230	0	228	187	1577	705	218	820	823
V/C Ratio(X)	1.10	0.10	0.16	0.08	0.00	0.85	0.33	1.08	0.06	0.71	1.11	1.16
Avail Cap(c_a), veh/h	206	677	576	302	0	329	187	1577	705	218	820	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.14	0.14	0.14	0.57	0.57	0.57
Uniform Delay (d), s/veh	27.6	27.6	28.2	41.4	0.0	46.3	47.0	38.6	22.1	38.9	4.0	4.0
Incr Delay (d2), s/veh	0.6	0.1	0.2	0.1	0.0	13.3	0.1	38.7	0.0	6.0	60.3	78.5
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	1.2	1.7	0.5	0.0	6.6	1.8	32.4	0.9	4.6	32.9	37.2	37.2
LnGrp Delay(d), s/veh	28.8	27.7	28.3	41.6	0.0	59.5	47.2	77.3	22.1	44.8	64.3	82.5
LnGrp LOS	F	C	C	D		E	D	F	C	D	F	F
Approach Vol, veh/h		360			212		1808			2017		
Approach Delay, s/veh		97.6			58.0		75.0			71.4		
Approach LOS		F			E		E			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+R), s	37.5	37.5		37.8	16.7	55.5	18.0	19.8				
Change Period (Y+R), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	49.0	49.0		40.0	5.5	51.0	13.5	22.0				
Max Q Clear Time (Q1+Q2), s	11.0	11.0		6.0	5.9	53.0	15.5	14.7				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	0.0	0.0	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				74.4								
HCM 2010 LOS				E								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	91	94	53	64	120	309	128	1322	103	345	1150	118
Future Volume (veh/h)	91	94	53	64	120	309	128	1322	103	345	1150	118
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	96	99	56	67	126	325	135	1392	108	363	1211	124
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	491	417	324	122	314	252	1480	662	328	1641	734
Arrive On Green	0.26	0.26	0.26	0.26	0.26	0.26	0.20	0.56	0.56	0.20	0.46	0.46
Sat Flow, veh/h	887	1863	1583	1162	462	1191	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	96	99	56	67	0	451	135	1392	108	363	1211	124
Grp Sat Flow(s), veh/h	887	1863	1583	1162	0	1653	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	0.0	4.5	3.0	5.2	0.0	29.0	7.9	40.3	3.7	21.5	30.7	5.0
Cycle Q Clear(g_c), s	29.0	4.5	3.0	9.8	0.0	29.0	7.9	40.3	3.7	21.5	30.7	5.0
Prop In Lane	1.00	1.00	1.00	1.00	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	65	491	417	324	0	436	252	1480	662	328	1641	734
V/C Ratio(X)	1.47	0.20	0.13	0.21	0.00	1.04	0.54	0.94	0.16	1.11	0.74	0.17
Avail Cap(c_a), veh/h	65	491	417	324	0	436	252	1480	662	328	1641	734
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.79	0.79	0.79	0.33	0.33	0.33
Uniform Delay (d), s/veh	55.0	31.5	30.9	35.3	0.0	40.5	40.6	23.1	15.0	44.3	24.1	17.2
Incr Delay (d2), s/veh	15.8	0.2	0.1	0.3	0.0	52.5	1.8	10.8	0.4	62.0	1.0	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	0.0	0.0	0.0
%ile BackOfQ(50%), veh	0.0	1.3	1.7	0.0	19.5	3.8	21.7	1.7	15.6	15.2	2.2	0.0
LnGrp Delay(d), s/veh	30.8	31.7	31.1	35.6	0.0	93.0	42.3	34.0	15.4	106.2	25.1	17.3
LnGrp LOS	F	C	C	D		F	D	C	B	F	C	B
Approach Vol, veh/h	251			518			1635			1698		
Approach Delay, s/veh	146.0			85.6			33.4			41.9		
Approach LOS	F			F			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+R), s	40.0	50.5	33.5		21.0	55.5	33.5					
Change Period (Y+R), s	4.5	4.5	4.5		4.5	4.5	4.5					
Max Green Setting (G_max), s	31.5	46.0	29.0		16.5	51.0	29.0					
Max Q Clear Time (Q_c), s	31.5	42.3	31.0		9.9	32.7	31.0					
Green Ext Time (p_c), s	0.0	2.7	0.0		0.2	7.8	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	50.4											
HCM 2010 LOS	D											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	4	65	11	11	43	18	5	1660	16	30	1309	8
Future Volume (veh/h)	4	65	11	11	43	18	5	1660	16	30	1309	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1900	1765	1863	1900	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	15	68	12	12	45	19	5	1747	17	32	1378	8
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	111	20	101	89	38	342	3040	30	245	3054	18
Arrive On Green	0.07	0.07	0.07	0.07	0.07	0.07	0.85	0.85	0.85	0.85	0.85	0.85
Sat Flow, veh/h	1262	1543	272	1244	1245	525	368	3591	35	256	3608	21
Grp Volume(v), veh/h	15	0	80	12	0	64	5	860	904	32	676	710
Grp Sat Flow(s), veh/h	1262	0	1815	1244	0	1770	368	1770	1857	256	1770	1859
Q Serve(g_s), s	1.3	0.0	4.7	1.0	0.0	3.8	0.4	16.0	16.0	4.7	10.4	10.4
Cycle Q Clear(g_c), s	5.1	0.0	4.7	5.7	0.0	3.8	10.8	16.0	16.0	20.7	10.4	10.4
Prop In Lane	1.00		0.15	1.00		0.30	1.00		0.02	1.00		0.01
Lane Grp Cap(c), veh/h	112	0	130	101	0	127	342	1498	1572	245	1498	1574
V/C Ratio(X)	0.13	0.00	0.62	0.12	0.00	0.50	0.01	0.57	0.58	0.13	0.45	0.45
Avail Cap(c_a), veh/h	112	0	322	233	0	314	342	1498	1572	245	1498	1574
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	0.29	0.29	0.29	0.67	0.67	0.67
Uniform Delay (d), s/veh	51.6	0.0	49.6	52.4	0.0	49.2	3.4	2.5	2.5	5.6	2.1	2.1
Incr Delay (d2), s/veh	0.5	0.0	4.7	0.5	0.0	3.1	0.0	0.5	0.5	0.7	0.7	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	0.0	0.0	2.5	0.4	0.0	2.0	0.0	7.6	8.0	0.4	5.2	5.4
LnGrp Delay(d), s/veh	52.2	0.0	54.2	52.9	0.0	52.3	3.5	3.0	3.0	6.4	2.8	2.7
LnGrp LOS	D		D	D		D	A	A	A	A	A	A
Approach Vol, veh/h		95			76			1769			1418	
Approach Delay, s/veh		53.9			52.4			3.0			2.8	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		97.6		12.4		97.6		12.4				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		91.5		19.5		81.5		19.5				
Max Q Clear Time (g_c+I), s		13.0		7.1		22.7		7.7				
Green Ext Time (p_c), s		18.8		0.2		12.7		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				5.5								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	58	490	143	137	426	231	292	1187	326	264	1025	36
Future Volume (veh/h)	58	490	143	137	426	231	292	1187	326	264	1025	36
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	61	516	151	144	448	243	307	1249	343	278	1079	38
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	644	288	145	583	261	435	1511	676	237	1078	38
Arrive On Green	0.10	0.18	0.18	0.09	0.16	0.16	0.26	0.43	0.43	0.14	0.31	0.31
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3488	123
Grp Volume(v), veh/h	61	516	151	144	448	243	307	1249	343	278	547	570
Grp Sat Flow(s), veh/h	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1841
Q Serve(g_s), s	3.7	15.4	5.5	9.4	13.3	12.2	18.2	34.4	17.4	15.5	34.0	34.0
Cycle Q Clear(g_c), s	3.7	15.4	5.5	9.4	13.3	12.2	18.2	34.4	17.4	15.5	34.0	34.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	174	644	288	145	583	261	435	1511	676	237	547	569
V/C Ratio(X)	0.35	0.80	0.52	0.99	0.77	0.93	0.71	0.83	0.51	1.17	1.00	1.00
Avail Cap(c_a), veh/h	174	933	417	145	933	417	435	1511	676	237	547	569
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	0.57	0.57	0.57	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	45.9	43.1	13.8	50.2	43.9	24.4	37.0	27.9	23.0	47.3	38.0	38.0
Incr Delay (d2), s/veh	1.2	3.2	1.5	53.9	1.2	12.9	5.1	5.3	2.7	110.6	36.5	35.8
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	7.8	2.5	6.5	6.6	6.3	9.1	17.8	8.1	14.4	22.1	22.9	
LnGrp Delay(d), s/veh	47.0	46.3	15.3	104.2	45.2	37.3	42.1	33.2	25.8	157.8	74.5	73.8
LnGrp LOS	D	D	B	F	D	D	D	C	C	F	F	F
Approach Vol, veh/h		728			835			1899			1395	
Approach Delay, s/veh		40.0			53.1			33.3			90.8	
Approach LOS		D			D			C			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	15.0	51.5	14.0	24.5	33.0	38.5	15.9	22.6				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	38.0	9.5	29.0	19.5	34.0	9.5	29.0					
Max Q Clear Time (Q_c), s	17.5	11.4	17.4	20.2	36.0	5.7	15.3					
Green Ext Time (p_c), s	0.0	1.3	0.0	2.7	0.0	0.0	2.8					
Intersection Summary												
HCM 2010 Ctrl Delay			54.2									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	0	996	27	27	1017	159	22	5	22	201	5	29
Future Volume (veh/h)	0	996	27	27	1017	159	22	5	22	201	5	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1863	1863	1863	1765	1863	1900	1667	1863	1900
Adj Flow Rate, veh/h	11	1048	28	28	1071	167	23	5	23	212	5	31
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	1198	536	46	1244	557	39	12	56	934	72	449
Arrive On Green	0.03	0.68	0.68	0.03	0.35	0.35	0.02	0.04	0.04	0.30	0.32	0.32
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	291	1336	3079	225	1392
Grp Volume(v), veh/h	11	1048	28	28	1071	167	23	0	28	212	0	36
Grp Sat Flow(s), veh/h	1681	3539	1583	1774	3539	1583	1681	0	1627	1540	0	1617
Q Serve(g_s), s	0.7	25.8	0.4	1.7	31.0	8.4	1.5	0.0	1.8	5.7	0.0	1.7
Cycle Q Clear(g_c), s	0.7	25.8	0.4	1.7	31.0	8.4	1.5	0.0	1.8	5.7	0.0	1.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.82	1.00	1.00	0.86	1.00
Lane Grp Cap(c), veh/h	22	1198	536	46	1244	557	39	0	69	934	0	522
V/C Ratio(X)	0.50	0.88	0.05	0.60	0.86	0.30	0.60	0.00	0.41	0.23	0.00	0.07
Avail Cap(c_a), veh/h	84	1464	655	89	1464	655	84	0	318	934	0	522
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.83	0.83	0.83	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.2	15.9	5.0	53.0	33.2	25.9	53.2	0.0	51.3	28.7	0.0	25.8
Incr Delay (d2), s/veh	8.8	2.8	0.0	10.0	4.0	0.2	13.8	0.0	3.8	0.6	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/h	112.7	0.2	1.0	15.7	3.7	0.8	0.0	0.9	2.5	0.0	0.8	0.8
LnGrp Delay(d), s/veh	62.0	18.7	5.0	63.0	37.2	26.1	67.1	0.0	55.2	29.2	0.0	26.1
LnGrp LOS	E	B	A	E	D	C	E		E	C		C
Approach Vol, veh/h	1087			1266			51			248		
Approach Delay, s/veh	18.8			36.3			60.5			28.8		
Approach LOS	B			D			E			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	9.1	7.4	41.7	7.0	40.0	5.9	43.2					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Orb), s	21.5	5.5	45.5	5.5	35.5	5.5	45.5					
Max Q Clear Time (g+I), s	7.8	3.7	27.8	3.5	3.7	2.7	33.0					
Green Ext Time (p_c), s	0.5	0.1	0.0	6.2	0.0	0.2	0.0	5.7				
Intersection Summary												
HCM 2010 Ctrl Delay			28.9									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 8.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	157	62	82	125	26	86	48	77	7	26	37
Future Vol, veh/h	36	157	62	82	125	26	86	48	77	7	26	37
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	165	65	86	132	27	91	51	81	7	27	39

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	159	0	0	230
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	1420	-	-	1338
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1420	-	-	1338
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.1	2.8	21.3	13.3
HCM LOS			C	B

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	439	1420	-	-	1338	-	-	509
HCM Lane V/C Ratio	0.506	0.027	-	-	0.065	-	-	0.145
HCM Control Delay (s)	21.3	7.6	0	-	7.9	0	-	13.3
HCM Lane LOS	C	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	2.8	0.1	-	-	0.2	-	-	0.5

Intersection

Intersection Delay, s/veh 14.4
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↶	↷	↶	↷
Traffic Vol, veh/h	53	194	88	49	135	34	117	155	68	29	92	30
Future Vol, veh/h	53	194	88	49	135	34	117	155	68	29	92	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	204	93	52	142	36	123	163	72	31	97	32
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay	17.3	13.6	12.7	12.8
HCM LOS	C	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	69%	0%	80%	0%	75%
Vol Right, %	0%	0%	100%	0%	31%	0%	20%	0%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	155	68	53	282	49	169	29	122
LT Vol	117	0	0	53	0	49	0	29	0
Through Vol	0	155	0	0	194	0	135	0	92
RT Vol	0	0	68	0	88	0	34	0	30
Lane Flow Rate	123	163	72	56	297	52	178	31	128
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.264	0.327	0.129	0.118	0.568	0.114	0.36	0.07	0.27
Departure Headway (Hd)	7.731	7.221	6.507	7.615	6.887	7.94	7.288	8.253	7.563
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	464	498	550	471	525	451	493	434	475
Service Time	5.476	4.966	4.252	5.358	4.63	5.689	5.037	6.005	5.315
HCM Lane V/C Ratio	0.265	0.327	0.131	0.119	0.566	0.115	0.361	0.071	0.269
HCM Control Delay	13.2	13.5	10.2	11.4	18.4	11.7	14.1	11.6	13.1
HCM Lane LOS	B	B	B	B	C	B	B	B	B
HCM 95th-tile Q	1.1	1.4	0.4	0.4	3.5	0.4	1.6	0.2	1.1

Intersection

Intersection Delay, s/mch
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↶↷		↶	↶↷		↶	↶↷		↶	↶↷	
Traffic Vol, veh/h	15	159	18	64	158	241	9	74	88	192	47	8
Future Vol, veh/h	15	159	18	64	158	241	9	74	88	192	47	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	167	19	67	166	254	9	78	93	202	49	8
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	11.4	13.5	11.2	14.5
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	22%	0%	100%	75%	0%	100%	18%	0%	100%	66%
Vol Right, %	0%	0%	78%	0%	0%	25%	0%	0%	82%	0%	0%	34%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	9	49	113	15	106	71	64	105	294	192	31	24
LT Vol	9	0	0	15	0	0	64	0	0	192	0	0
Through Vol	0	49	25	0	106	53	0	105	53	0	31	16
RT Vol	0	0	88	0	0	18	0	0	241	0	0	8
Lane Flow Rate	9	52	119	16	112	75	67	111	309	202	33	25
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.02	0.104	0.22	0.033	0.22	0.144	0.132	0.202	0.515	0.42	0.064	0.047
Departure Headway (Hd)	7.735	7.235	6.689	7.599	7.099	6.921	7.066	6.566	5.992	7.489	6.989	6.752
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	460	492	532	468	502	514	505	543	597	479	509	527
Service Time	5.532	5.032	4.485	5.392	4.892	4.714	4.844	4.344	3.769	5.276	4.776	4.539
HCM Lane V/C Ratio	0.02	0.106	0.224	0.034	0.223	0.146	0.133	0.204	0.518	0.422	0.065	0.047
HCM Control Delay	10.7	10.9	11.4	10.7	11.9	10.9	10.9	11	15	15.7	10.3	9.9
HCM Lane LOS	B	B	B	B	B	B	B	B	B	C	B	A
HCM 95th-tile Q	0.1	0.3	0.8	0.1	0.8	0.5	0.5	0.7	2.9	2.1	0.2	0.1

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗			↕	
Traffic Vol, veh/h	19	194	28	46	163	10	18	47	36	11	68	19
Future Vol, veh/h	19	194	28	46	163	10	18	47	36	11	68	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	204	29	48	172	11	19	49	38	12	72	20
Number of Lanes	1	1	0	1	1	0	1	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.5	10.6	9.3	9.6
HCM LOS	B	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	24%	0%
Vol Thru, %	0%	100%	30%	0%	87%	0%	94%	76%	64%
Vol Right, %	0%	0%	70%	0%	13%	0%	6%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	31	52	19	222	46	173	45	53
LT Vol	18	0	0	19	0	46	0	11	0
Through Vol	0	31	16	0	194	0	163	34	34
RT Vol	0	0	36	0	28	0	10	0	19
Lane Flow Rate	19	33	54	20	234	48	182	47	56
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.036	0.058	0.088	0.035	0.37	0.085	0.293	0.085	0.094
Departure Headway (Hd)	6.827	6.321	5.827	6.285	5.694	6.334	5.796	4.586	6.079
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	525	567	615	571	633	567	621	555	590
Service Time	4.563	4.057	3.563	4.011	3.419	4.063	3.519	4.194	3.815
HCM Lane V/C Ratio	0.036	0.058	0.088	0.035	0.37	0.085	0.293	0.085	0.095
HCM Control Delay	9.8	9.4	9.1	9.2	11.7	9.7	10.9	9.8	9.4
HCM Lane LOS	A	A	A	A	B	A	B	A	A
HCM 95th-tile Q	0.1	0.2	0.3	0.1	1.7	0.3	1.2	0.3	0.3

Intersection

Intersection Delay, s/veh
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑		↵	↑↑		↵	↑↑		↵	↑↑	
Traffic Vol, veh/h	17	329	71	135	408	5	89	63	100	35	88	20
Future Vol, veh/h	17	329	71	135	408	5	89	63	100	35	88	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	18	346	75	142	429	5	94	66	105	37	93	21
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	15.8	16.4	13	12.3
HCM LOS	C	C	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	17%	0%	100%	61%	0%	100%	96%	0%	100%	59%
Vol Right, %	0%	0%	83%	0%	0%	39%	0%	0%	4%	0%	0%	41%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	89	42	121	17	219	181	135	272	141	35	59	49
LT Vol	89	0	0	17	0	0	135	0	0	35	0	0
Through Vol	0	42	21	0	219	110	0	272	136	0	59	29
RT Vol	0	0	100	0	0	71	0	0	5	0	0	20
Lane Flow Rate	94	44	127	18	231	190	142	286	148	37	62	52
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.223	0.099	0.265	0.04	0.483	0.384	0.306	0.577	0.298	0.091	0.144	0.117
Departure Headway (Hd)	8.572	8.072	7.493	8.036	7.536	7.267	7.756	7.256	7.231	8.887	8.387	8.104
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	419	443	479	446	478	494	463	498	497	403	427	442
Service Time	6.327	5.827	5.249	5.785	5.285	5.015	5.505	5.005	4.986	6.647	6.147	5.863
HCM Lane V/C Ratio	0.224	0.099	0.265	0.04	0.483	0.385	0.307	0.574	0.298	0.092	0.145	0.118
HCM Control Delay	13.8	11.7	12.9	11.1	17.2	14.5	13.9	19.5	13	12.5	12.6	11.9
HCM Lane LOS	B	B	B	B	C	B	B	C	B	B	B	B
HCM 95th-tile Q	0.8	0.3	1.1	0.1	2.6	1.8	1.3	3.6	1.2	0.3	0.5	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	57	622	10	91	624	192	11	48	60	108	50	28
Future Volume (veh/h)	57	622	10	91	624	192	11	48	60	108	50	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	60	655	11	96	657	202	12	51	63	114	53	29
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	808	362	182	777	239	645	833	708	674	905	769
Arrive On Green	0.05	0.23	0.23	0.11	0.29	0.29	0.01	0.45	0.45	0.05	0.49	0.49
Sat Flow, veh/h	1681	3539	1583	1681	2668	820	1681	1863	1583	1681	1863	1583
Grp Volume(v), veh/h	655	11	96	436	423	12	51	63	114	53	29	
Grp Sat Flow(s), veh/h/ln	1770	1583	1681	1770	1718	1681	1863	1583	1681	1863	1583	
Q Serve(g_s), s	3.9	19.3	0.5	5.9	25.5	25.5	0.4	1.7	1.7	3.9	1.7	1.1
Cycle Q Clear(g_c), s	3.9	19.3	0.5	5.9	25.5	25.5	0.4	1.7	1.7	3.9	1.7	1.1
Prop In Lane	1.00	1.00	1.00	0.48	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	76	808	362	182	515	500	645	833	708	674	905	769
V/C Ratio(X)	0.79	0.81	0.03	0.53	0.85	0.85	0.02	0.06	0.09	0.17	0.06	0.04
Avail Cap(c_a), veh/h	206	1400	626	252	748	726	720	833	708	716	905	769
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)	0.69	0.69	0.69	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.0	40.2	25.3	46.4	36.6	36.7	16.1	17.3	7.5	13.9	15.0	14.8
Incr Delay (d2), s/veh	1.6	1.4	0.0	2.4	6.1	6.3	0.0	0.1	0.2	0.1	0.1	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	9.5	0.2	2.9	13.3	13.0	0.2	0.9	0.8	1.8	0.9	0.5	
LnGrp Delay(d),s/veh	68.6	41.6	25.3	48.7	42.7	42.9	16.1	17.4	7.8	14.0	15.1	14.9
LnGrp LOS	E	D	C	D	D	D	B	B	A	B	B	B
Approach Vol, veh/h		726			955			126			196	
Approach Delay, s/veh		43.1			43.4			12.5			14.5	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	10.0	53.7	16.4	29.6	6.0	57.9	9.5	36.5				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	23.5	16.5	43.5	6.5	25.5	13.5	46.5					
Max Q Clear Time (g_c+1), s	11.7	7.9	21.3	2.4	3.7	5.9	27.5					
Green Ext Time (p_c), s	0.3	0.1	3.8	0.0	0.2	0.0	4.5					
Intersection Summary												
HCM 2010 Ctrl Delay			38.5									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↕	↘
Traffic Volume (veh/h)	49	1076	75	155	912	11	68	53	138	26	55	32
Future Volume (veh/h)	49	1076	75	155	912	11	68	53	138	26	55	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	52	1133	79	163	960	12	72	56	145	27	58	34
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	66	1312	587	193	1597	20	512	181	467	150	315	170
Arrive On Green	0.04	0.37	0.37	0.11	0.45	0.45	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1681	3539	1583	1681	3580	45	1231	460	1192	281	802	433
Grp Volume(v), veh/h	52	1133	79	163	475	497	72	0	201	119	0	0
Grp Sat Flow(s), veh/h	1770	1770	1583	1681	1770	1855	1231	0	1652	1516	0	0
Q Serve(g_s), s	3.4	32.6	3.6	10.5	22.3	22.3	0.0	0.0	9.3	0.2	0.0	0.0
Cycle Q Clear(g_c), s	3.4	32.6	3.6	10.5	22.3	22.3	6.5	0.0	9.3	9.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.72	0.23		0.29
Lane Grp Cap(c), veh/h	66	1312	587	193	790	828	512	0	648	634	0	0
V/C Ratio(X)	0.79	0.86	0.13	0.85	0.60	0.60	0.14	0.00	0.31	0.19	0.00	0.00
Avail Cap(c_a), veh/h	15	1560	698	313	989	1037	512	0	648	634	0	0
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)	0.61	0.61	0.61	0.42	0.42	0.42	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.4	32.0	22.9	47.8	23.0	23.0	22.3	0.0	23.1	21.8	0.0	0.0
Incr Delay (d2), s/veh	2.3	2.9	0.1	5.0	0.3	0.3	0.6	0.0	1.2	0.7	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	16.4	1.6	5.1	10.9	11.4	1.5	0.0	4.5	2.5	0.0	0.0	0.0
LnGrp Delay(d), s/veh	64.7	34.9	23.0	52.7	23.4	23.3	22.9	0.0	24.4	22.5	0.0	0.0
LnGrp LOS	E	C	C	D	C	C	C		C	C		
Approach Vol, veh/h	1264			1135			273			119		
Approach Delay, s/veh	35.4			27.6			24.0			22.5		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	47.6	17.1	45.3			47.6	8.8	53.6				
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.5	20.5	48.5			27.5	7.5	61.5				
Max Q Clear Time (g_c+I), s	11.3	12.5	34.6			11.5	5.4	24.3				
Green Ext Time (p_c), s	1.2	0.2	6.2			0.5	0.0	6.0				
Intersection Summary												
HCM 2010 Ctrl Delay			30.6									
HCM 2010 LOS			C									

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	186	9	18	236	76	8	9	9	46	19	70
Future Vol, veh/h	42	186	9	18	236	76	8	9	9	46	19	70
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	196	9	19	248	80	8	9	9	48	20	74
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.2	11.1	8.7	9.4
HCM LOS	B	B	A	A

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	31%	18%	5%	34%
Vol Thru, %	35%	78%	72%	14%
Vol Right, %	35%	4%	23%	52%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	237	330	135
LT Vol	8	42	18	46
Through Vol	9	186	236	19
RT Vol	9	9	76	70
Lane Flow Rate	27	249	347	142
Geometry Grp	1	1	1	1
Degree of Util (X)	0.041	0.33	0.437	0.2
Departure Headway (Hd)	5.361	4.768	4.532	5.073
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	661	748	792	702
Service Time	3.451	2.827	2.585	3.146
HCM Lane V/C Ratio	0.041	0.333	0.438	0.202
HCM Control Delay	8.7	10.2	11.1	9.4
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.1	1.4	2.2	0.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	892	894	97	178	958	56	117	185	95	45	277	97
Future Volume (veh/h)	892	894	97	178	958	56	117	185	95	45	277	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	86	941	102	187	1008	59	123	195	100	47	292	102
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	134	1012	453	215	1134	66	229	722	613	59	378	132
Arrive On Green	0.11	0.38	0.38	0.13	0.33	0.33	0.14	0.39	0.39	0.04	0.29	0.29
Sat Flow, veh/h	1681	3539	1583	1681	3398	199	1681	1863	1583	1681	1320	461
Grp Volume(v), veh/h	86	941	102	187	525	542	123	195	100	47	0	394
Grp Sat Flow(s), veh/h	1765	1770	1583	1681	1770	1828	1681	1863	1583	1681	0	1781
Q Serve(g_s), s	5.4	28.0	3.3	12.0	30.9	30.9	7.5	7.9	4.5	3.1	0.0	22.3
Cycle Q Clear(g_c), s	5.4	28.0	3.3	12.0	30.9	30.9	7.5	7.9	4.5	3.1	0.0	22.3
Prop In Lane	1.00	1.00	1.00	1.00	0.11	1.00	1.00	1.00	1.00	1.00	0.26	0.26
Lane Grp Cap(c), veh/h	134	1012	453	215	591	610	229	722	613	59	0	510
V/C Ratio(X)	0.64	0.93	0.23	0.87	0.89	0.89	0.54	0.27	0.16	0.80	0.00	0.77
Avail Cap(c_a), veh/h	134	1046	468	252	668	690	229	722	613	115	0	510
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	0.35	0.35	0.35	0.98	0.98	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	12.5	47.1	34.7	34.7	44.3	23.1	22.0	52.7	0.0	36.0	36.0
Incr Delay (d2), s/veh	7.5	0.1	10.0	5.2	5.0	2.4	0.9	0.6	21.0	0.0	10.8	10.8
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	14.7	1.5	6.2	15.9	16.4	3.6	4.2	2.1	1.8	0.0	12.5	12.5
LnGrp Delay(d), s/veh	42.3	40.5	12.6	57.1	39.9	39.7	46.7	24.0	22.6	73.7	0.0	46.8
LnGrp LOS	D	D	B	E	D	D	D	C	C	E		D
Approach Vol, veh/h	1129			1254			418			441		
Approach Delay, s/veh	38.9			42.4			30.3			49.7		
Approach LOS	D			D			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	47.1	18.6	35.9	19.5	36.0	13.3	41.2					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	35.5	16.5	32.5	11.5	31.5	7.5	41.5					
Max Q Clear Time (g_c+I), s	19.9	14.0	30.0	9.5	24.3	7.4	32.9					
Green Ext Time (p_c), s	0.0	1.2	0.1	1.4	0.0	1.2	0.0	3.8				
Intersection Summary												
HCM 2010 Ctrl Delay	40.6											
HCM 2010 LOS	D											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	128	128	93	27	159	38	148	400	26	46	377	61
Future Volume (veh/h)	128	128	93	27	159	38	148	400	26	46	377	61
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	51	135	98	28	167	40	156	421	27	48	397	64
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	279	237	44	200	48	183	1367	612	461	1953	874
Arrive On Green	0.04	0.15	0.15	0.03	0.14	0.14	0.22	0.77	0.77	0.27	0.55	0.55
Sat Flow, veh/h	1681	1863	1583	1681	1453	348	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	135	98	28	0	207	156	421	27	48	397	64	
Grp Sat Flow(s), veh/h	1863	1583	1681	0	1801	1681	1770	1583	1681	1770	1583	
Q Serve(g_s), s	3.3	7.3	6.2	1.8	0.0	12.3	9.8	3.9	0.4	2.3	6.2	1.5
Cycle Q Clear(g_c), s	3.3	7.3	6.2	1.8	0.0	12.3	9.8	3.9	0.4	2.3	6.2	1.5
Prop In Lane	1.00	1.00	1.00	0.19	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	279	237	44	0	247	183	1367	612	461	1953	874	
V/C Ratio(X)	0.79	0.48	0.41	0.64	0.00	0.84	0.85	0.31	0.04	0.10	0.20	0.07
Avail Cap(c_a), veh/h	516	439	115	0	434	359	1367	612	461	1953	874	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.70	0.70	0.70
Uniform Delay (d), s/veh	42.9	42.4	53.0	0.0	46.2	42.2	8.1	5.2	29.8	12.4	6.2	
Incr Delay (d2), s/veh	1.3	1.2	14.3	0.0	7.3	10.6	0.6	0.1	0.1	0.2	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	
%ile BackOfQ(50%), veh	3.9	2.8	1.0	0.0	6.7	5.0	2.0	0.2	1.1	3.1	0.7	
LnGrp Delay(d), s/veh	44.2	43.6	67.4	0.0	53.6	52.7	8.7	5.4	29.9	12.6	6.3	
LnGrp LOS	E	D	D	E		D	D	A	A	C	B	A
Approach Vol, veh/h	284			235			604		509			
Approach Delay, s/veh	48.9			55.2			19.9		13.4			
Approach LOS	D			E			B		B			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	4.7	7.4	21.0	16.5	65.2	8.7	19.6					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	4.5	7.5	30.5	23.5	30.5	11.5	26.5					
Max Q Clear Time (g+1), s	11.9	3.8	9.3	11.8	8.2	5.3	14.3					
Green Ext Time (p_c), s	0.0	2.7	0.0	0.9	0.3	2.4	0.0	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			28.0									
HCM 2010 LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	771	771	102	156	1005	199	123	455	74	196	355	123
Future Volume (veh/h)	771	771	102	156	1005	199	123	455	74	196	355	123
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	812	107	164	1058	209	129	479	78	206	374	129	
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	176	920	412	265	1107	495	130	917	410	269	1209	706
Arrive On Green	0.10	0.26	0.26	0.16	0.31	0.31	0.08	0.26	0.26	0.16	0.34	0.34
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	812	107	164	1058	209	129	479	78	206	374	129	
Grp Sat Flow(s), veh/h	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1583	
Q Serve(g_s), s	11.3	24.2	4.6	10.0	32.2	7.5	8.4	12.8	4.2	12.9	8.6	5.4
Cycle Q Clear(g_c), s	11.3	24.2	4.6	10.0	32.2	7.5	8.4	12.8	4.2	12.9	8.6	5.4
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	176	920	412	265	1107	495	130	917	410	269	1209	706
V/C Ratio(X)	0.98	0.88	0.26	0.62	0.96	0.42	0.99	0.52	0.19	0.77	0.31	0.18
Avail Cap(c_a), veh/h	176	1014	453	265	1110	497	130	917	410	269	1209	706
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)	0.46	0.46	0.46	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	19.9	43.3	37.0	12.6	50.7	34.9	31.8	44.2	26.7	18.4	
Incr Delay (d2), s/veh	4.3	0.2	1.5	7.8	0.2	76.8	2.1	1.0	12.5	0.7	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	
%ile BackOfQ(50%), veh	12.4	2.0	4.8	16.9	3.3	6.7	6.5	2.0	6.9	4.3	2.5	
LnGrp Delay(d), s/veh	43.4	20.1	44.7	44.8	12.8	127.5	37.0	32.8	56.8	27.3	18.9	
LnGrp LOS	F	D	C	D	D	B	F	D	C	E	C	B
Approach Vol, veh/h	1092			1431			686			709		
Approach Delay, s/veh	48.7			40.1			53.6			34.3		
Approach LOS	D			D			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	33.0	21.8	33.1	13.0	42.1	16.0	38.9					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	28.5	14.5	31.5	8.5	37.5	11.5	34.5					
Max Q Clear Time (G+Y+R), s	14.8	12.0	26.2	10.4	10.6	13.3	34.2					
Green Ext Time (p_c), s	2.6	0.1	2.4	0.0	2.7	0.0	0.2					
Intersection Summary												
HCM 2010 Ctrl Delay		43.8										
HCM 2010 LOS		D										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	899	899	136	136	1078	113	184	401	91	184	398	213
Future Volume (veh/h)	899	899	136	136	1078	113	184	401	91	184	398	213
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	122	946	143	143	1135	119	194	422	96	194	419	224
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	1087	486	217	1233	552	298	770	174	222	499	264
Arrive On Green	0.09	0.31	0.31	0.13	0.35	0.35	0.18	0.27	0.27	0.13	0.22	0.22
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	2870	648	1681	2239	1185
Grp Volume(v), veh/h	22	946	143	143	1135	119	194	259	259	194	330	313
Grp Sat Flow(s), veh/h	1770	1770	1583	1681	1770	1583	1681	1770	1748	1681	1770	1654
Q Serve(g_s), s	7.9	27.8	7.6	8.9	33.8	3.9	11.8	13.8	14.0	12.5	19.6	19.9
Cycle Q Clear(g_c), s	7.9	27.8	7.6	8.9	33.8	3.9	11.8	13.8	14.0	12.5	19.6	19.9
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	0.37	1.00	0.72	1.00	0.72	1.00
Lane Grp Cap(c), veh/h	148	1087	486	217	1233	552	298	475	469	222	394	368
V/C Ratio(X)	0.83	0.87	0.29	0.66	0.92	0.22	0.65	0.55	0.55	0.87	0.84	0.85
Avail Cap(c_a), veh/h	176	1239	554	217	1271	569	298	475	469	252	394	368
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)	0.52	0.52	0.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	36.0	29.0	45.6	34.4	11.4	42.1	34.5	34.6	46.8	40.9	41.0
Incr Delay (d2), s/veh	3.4	3.4	0.2	7.2	10.8	0.2	4.9	4.5	4.6	25.0	18.8	21.0
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	14.0	3.3	4.6	18.4	1.7	5.9	7.3	7.4	7.3	11.6	11.3	11.3
LnGrp Delay(d), s/veh	39.5	39.5	29.2	52.8	45.2	11.6	47.0	38.9	39.2	71.9	59.6	62.0
LnGrp LOS	E	D	C	D	D	B	D	D	D	E	E	E
Approach Vol, veh/h	1211	1211	1397	1397	1397	712	712	837	837	837	837	837
Approach Delay, s/veh	40.6	40.6	43.1	43.1	43.1	41.2	41.2	63.3	63.3	63.3	63.3	63.3
Approach LOS	D	D	D	D	D	D	D	E	E	E	E	E
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	34.0	34.0	18.7	38.3	24.0	29.0	14.2	42.8				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	24.5	24.5	12.5	38.5	16.5	24.5	11.5	39.5				
Max Q Clear Time (G+Y+R), s	44.5	44.5	10.9	29.8	13.8	21.9	9.9	35.8				
Green Ext Time (p_c), s	1.8	1.8	0.1	4.0	0.1	0.9	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			46.1									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑		↑↑		↑
Traffic Vol, veh/h	1272	6	0	880	0	46
Future Vol, veh/h	1272	6	0	880	0	46
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	-	-	-	0
Veh in Median Storage#	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1339	6	0	926	0	48

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 670
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 399
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 399
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.3
HCM LOS			C

Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	399	-	-	-
HCM Lane V/C Ratio	0.121	-	-	-
HCM Control Delay (s)	15.3	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection

Int Delay, s/veh 0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↕↕	↕↕	↗
Traffic Vol, veh/h	0	60	0	1723	1703	68
Future Vol, veh/h	0	60	0	1723	1703	68
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	-	-	-	0
Veh in Median Storage#	-	-	0	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	63	0	1814	1793	72

Major/Minor

	Minor2	Major1	Major2
Conflicting Flow All	- 897	-	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	- 6.94	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	- 3.32	-	-
Pot Cap-1 Maneuver	0 283	0	-
Stage 1	0	0	-
Stage 2	0	0	-
Platoon blocked, %			-
Mov Cap-1 Maneuver	- 283	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach



















	EB	NB	SB
HCM Control Delay	24.3	0	0
HCM LOS	C		

























Minor Lane/Major Mvmt

	NB	EBLn1	SBT	SBR
Capacity (veh/h)	- 283	-	-	-
HCM Lane V/C Ratio	- 0.223	-	-	-
HCM Control Delay (s)	- 21.3	-	-	-
HCM Lane LOS	- C	-	-	-
HCM 95th %tile Q(veh)	- 0.8	-	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	143	58	133	75	57	113	141	1471	106	163	1329	174
Future Volume (veh/h)	143	58	133	75	57	113	141	1471	106	163	1329	174
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	155	63	145	82	62	123	153	1599	115	177	1445	189
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	96	222	138	72	143	180	2248	700	206	1615	723
Arrive On Green	0.11	0.20	0.20	0.04	0.14	0.14	0.11	0.47	0.47	0.12	0.48	0.48
Sat Flow, veh/h	1681	476	1095	3261	529	1050	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	155	0	208	82	0	185	153	1599	115	177	1445	189
Grp Sat Flow(s),veh/h/ln	1681	0	1571	1630	0	1579	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	9.8	0.0	13.2	2.7	0.0	12.4	9.7	28.7	4.8	11.2	42.5	8.1
Cycle Q Clear(g_c), s	9.8	0.0	13.2	2.7	0.0	12.4	9.7	28.7	4.8	11.2	42.5	8.1
Prop In Lane	1.00		0.70	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	0	318	138	0	215	180	2248	700	206	1615	723
V/C Ratio(X)	0.85	0.00	0.65	0.59	0.00	0.86	0.85	0.71	0.16	0.86	0.89	0.26
Avail Cap(c_a), veh/h	210	0	363	196	0	263	210	2404	748	256	1766	790
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	47.4	0.0	39.7	50.9	0.0	45.8	47.4	23.0	16.7	46.6	25.5	16.6
Incr Delay (d2), s/veh	24.2	0.0	3.5	4.1	0.0	20.9	23.8	0.9	0.1	20.9	6.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.0	6.0	1.3	0.0	6.6	5.7	12.9	2.0	6.4	20.8	3.4
LnGrp Delay(d),s/veh	71.6	0.0	43.1	55.0	0.0	66.7	71.2	24.0	16.8	67.4	31.5	16.8
LnGrp LOS	E		D	D		E	E	C	B	E	C	B
Approach Vol, veh/h		363			267			1867			1811	
Approach Delay, s/veh		55.3			63.1			27.4			33.5	
Approach LOS		E			E			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.7	55.0	9.1	26.4	16.1	56.6	16.3	19.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	65	54.0	6.5	25.0	13.5	57.0	13.5	18.0				
Max Q Clear Time (g_c+l1), s	13.2	30.7	4.7	15.2	11.7	44.5	11.8	14.4				
Green Ext Time (p_c), s	0.1	11.8	0.0	0.8	0.1	7.7	0.1	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			34.5									
HCM 2010 LOS			C									

Interim Year With Project Phase 1 & 2
With Recommended Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	27	292	22	16	22	160	1305	33	33	1011	54
Future Volume (veh/h)	31	27	292	22	16	22	160	1305	33	33	1011	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1765	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	28	307	23	17	23	168	1374	35	35	1064	57
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	79	50	363	165	124	126	210	1762	45	63	1401	75
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	0.12	0.50	0.50	0.04	0.41	0.41
Sat Flow, veh/h	83	182	1332	347	457	462	1681	3527	90	1774	3417	183
Grp Volume(v), veh/h	368	0	0	63	0	0	168	689	720	35	551	570
Grp Sat Flow(s),veh/h/ln	1597	0	0	1267	0	0	1681	1770	1847	1774	1770	1830
Q Serve(g_s), s	7.2	0.0	0.0	0.0	0.0	0.0	6.8	22.3	22.4	1.4	18.7	18.7
Cycle Q Clear(g_c), s	15.2	0.0	0.0	1.9	0.0	0.0	6.8	22.3	22.4	1.4	18.7	18.7
Prop In Lane	0.09		0.83	0.37		0.37	1.00		0.05	1.00		0.10
Lane Grp Cap(c), veh/h	491	0	0	415	0	0	210	884	923	63	725	750
V/C Ratio(X)	0.75	0.00	0.00	0.15	0.00	0.00	0.80	0.78	0.78	0.56	0.76	0.76
Avail Cap(c_a), veh/h	731	0	0	625	0	0	468	1525	1592	165	1196	1238
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.0	0.0	0.0	19.2	0.0	0.0	29.8	14.3	14.4	33.2	17.7	17.7
Incr Delay (d2), s/veh	2.4	0.0	0.0	0.2	0.0	0.0	6.9	1.5	1.5	7.6	1.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	0.0	0.9	0.0	0.0	3.5	11.1	11.6	0.8	9.4	9.7
LnGrp Delay(d),s/veh	26.4	0.0	0.0	19.4	0.0	0.0	36.7	15.9	15.8	40.8	19.4	19.3
LnGrp LOS	C			B			D	B	B	D	B	B
Approach Vol, veh/h		368			63			1577			1156	
Approach Delay, s/veh		26.4			19.4			18.1			20.0	
Approach LOS		C			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.0	39.4		23.5	13.2	33.2		23.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax),s	65	60.3		29.7	19.5	47.3		29.7				
Max Q Clear Time (g_c+l1),s	34	24.4		17.2	8.8	20.7		3.9				
Green Ext Time (p_c), s	0.0	10.6		1.9	0.3	6.9		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			19.8									
HCM 2010 LOS			B									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	605	540	186	408	134	398	1054	219	181	768	62
Future Volume (veh/h)	144	605	540	186	408	134	398	1054	219	181	768	62
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	152	637	568	196	429	141	419	1109	231	191	808	65
Adj No. of Lanes	1	2	1	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	901	635	249	544	243	478	1313	588	218	1254	561
Arrive On Green	0.24	0.34	0.34	0.08	0.15	0.15	0.29	0.74	0.74	0.13	0.35	0.35
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	3261	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	152	637	568	196	429	141	419	1109	231	191	808	65
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1630	1770	1583	1681	1770	1583
Q Serve(g_s), s	8.6	17.2	26.5	6.9	12.8	6.8	13.4	23.8	4.3	12.3	21.0	1.8
Cycle Q Clear(g_c), s	8.6	17.2	26.5	6.9	12.8	6.8	13.4	23.8	4.3	12.3	21.0	1.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	305	901	635	249	544	243	478	1313	588	218	1254	561
V/C Ratio(X)	0.50	0.71	0.89	0.79	0.79	0.58	0.88	0.84	0.39	0.87	0.64	0.12
Avail Cap(c_a), veh/h	305	901	635	266	804	360	608	1313	588	237	1254	561
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	0.58	0.58	0.58
Uniform Delay (d), s/veh	37.4	32.8	13.3	49.6	44.8	24.3	37.9	12.0	5.3	47.0	29.7	8.4
Incr Delay (d2), s/veh	1.3	2.6	15.2	11.2	2.6	1.7	11.4	6.8	2.0	17.7	1.5	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	4.1	8.6	14.0	3.3	6.5	3.1	6.8	12.3	2.1	6.8	10.5	0.8
LnGrp Delay(d),s/veh	38.6	35.4	28.5	60.9	47.4	26.1	49.3	18.8	7.3	64.7	31.2	8.6
LnGrp LOS	D	D	C	E	D	C	D	B	A	E	C	A
Approach Vol, veh/h		1357			766			1759			1064	
Approach Delay, s/veh		32.9			46.9			24.5			35.8	
Approach LOS		C			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.8	45.3	13.4	32.5	20.6	43.5	24.5	21.4				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	55	39.0	9.5	28.0	20.5	34.0	12.5	25.0				
Max Q Clear Time (g_c+I1), s	14.8	25.8	8.9	28.5	15.4	23.0	10.6	14.8				
Green Ext Time (p_c), s	0.1	6.3	0.0	0.0	0.7	3.8	0.1	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			32.7									
HCM 2010 LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	239	50	78	49	45	296	29	1280	26	184	1356	153
Future Volume (veh/h)	239	50	78	49	45	296	29	1280	26	184	1356	153
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	252	53	82	52	47	312	31	1347	27	194	1427	161
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	715	608	292	356	484	85	1334	597	193	1562	699
Arrive On Green	0.15	0.38	0.38	0.19	0.19	0.19	0.05	0.38	0.38	0.11	0.44	0.44
Sat Flow, veh/h	1681	1863	1583	1184	1863	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	252	53	82	52	47	312	31	1347	27	194	1427	161
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1184	1863	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	16.3	2.0	3.7	4.0	2.3	18.5	1.9	41.0	1.2	12.5	41.1	4.0
Cycle Q Clear(g_c), s	16.3	2.0	3.7	4.0	2.3	18.5	1.9	41.0	1.2	12.5	41.1	4.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	255	715	608	292	356	484	85	1334	597	193	1562	699
V/C Ratio(X)	0.99	0.07	0.13	0.18	0.13	0.64	0.36	1.01	0.05	1.00	0.91	0.23
Avail Cap(c_a), veh/h	255	736	626	306	377	502	85	1334	597	193	1562	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(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	46.0	21.2	21.8	37.2	36.5	32.6	50.0	33.9	21.5	48.1	28.5	6.4
Incr Delay (d2), s/veh	53.0	0.0	0.1	0.3	0.2	2.7	2.6	27.1	0.1	65.9	9.8	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	11.2	1.0	1.6	1.3	1.2	8.5	1.0	24.8	0.5	9.3	22.1	2.8
LnGrp Delay(d),s/veh	99.1	21.3	21.9	37.5	36.7	35.3	52.6	61.0	21.6	114.1	38.2	7.1
LnGrp LOS	F	C	C	D	D	D	D	F	C	F	D	A
Approach Vol, veh/h		387			411			1405			1782	
Approach Delay, s/veh		72.1			35.8			60.0			43.7	
Approach LOS		E			D			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	45.5		46.3	10.0	52.5	21.0	25.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.0	41.0		43.0	5.5	48.0	16.5	22.0				
Max Q Clear Time (g_c+I1), s	14.5	43.0		5.7	3.9	43.1	18.3	20.5				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	3.6	0.0	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			51.4									
HCM 2010 LOS			D									

Intersection

Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	170	45	123	211	14	118	28	160	24	31	19
Future Vol, veh/h	16	170	45	123	211	14	118	28	160	24	31	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	179	47	129	222	15	124	29	168	25	33	20
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

























Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.1	15.6	13.9	10.2
HCM LOS	B	C	B	B

























Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	39%	7%	35%	32%
Vol Thru, %	9%	74%	61%	42%
Vol Right, %	52%	19%	4%	26%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	306	231	348	74
LT Vol	118	16	123	24
Through Vol	28	170	211	31
RT Vol	160	45	14	19
Lane Flow Rate	322	243	366	78
Geometry Grp	1	1	1	1
Degree of Util (X)	0.494	0.379	0.565	0.134
Departure Headway (Hd)	5.526	5.61	5.551	6.174
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	647	637	648	576
Service Time	3.591	3.676	3.611	4.262
HCM Lane V/C Ratio	0.498	0.381	0.565	0.135
HCM Control Delay	13.9	12.1	15.6	10.2
HCM Lane LOS	B	B	C	B
HCM 95th-tile Q	2.7	1.8	3.5	0.5

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

Improved Interim Year With Phase 1 & 2 Project PM Peak Hour
 3: US-395 & Seneca Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	27	327	38	38	43	427	1349	33	33	1363	24
Future Volume (veh/h)	8	27	327	38	38	43	427	1349	33	33	1363	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1765	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	8	28	344	40	40	45	449	1420	35	35	1435	25
Adj No. of Lanes	0	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	23	246	85	83	70	470	2389	59	53	1520	26
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.28	0.68	0.68	0.03	0.43	0.43
Sat Flow, veh/h	14	138	1449	241	492	412	1681	3530	87	1774	3559	62
Grp Volume(v), veh/h	380	0	0	125	0	0	449	711	744	35	713	747
Grp Sat Flow(s),veh/h/ln	1601	0	0	1146	0	0	1681	1770	1847	1774	1770	1852
Q Serve(g_s), s	7.5	0.0	0.0	0.0	0.0	0.0	28.6	23.7	23.8	2.1	42.2	42.3
Cycle Q Clear(g_c), s	18.5	0.0	0.0	9.6	0.0	0.0	28.6	23.7	23.8	2.1	42.2	42.3
Prop In Lane	0.02		0.91	0.32		0.36	1.00		0.05	1.00		0.03
Lane Grp Cap(c), veh/h	305	0	0	238	0	0	470	1197	1250	53	756	791
V/C Ratio(X)	1.24	0.00	0.00	0.53	0.00	0.00	0.96	0.59	0.60	0.66	0.94	0.94
Avail Cap(c_a), veh/h	305	0	0	238	0	0	470	1197	1250	89	771	806
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	0.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	0.0	0.0	40.9	0.0	0.0	38.6	9.5	9.5	52.4	30.0	30.0
Incr Delay (d2), s/veh	134.7	0.0	0.0	2.1	0.0	0.0	30.4	0.8	0.8	13.0	19.7	19.4
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	20.6	0.0	0.0	3.6	0.0	0.0	17.2	11.7	12.3	1.2	24.5	25.8
LnGrp Delay(d),s/veh	181.0	0.0	0.0	43.1	0.0	0.0	69.0	10.3	10.3	65.4	49.7	49.4
LnGrp LOS	F			D			E	B	B	E	D	D
Approach Vol, veh/h		380			125			1904			1495	
Approach Delay, s/veh		181.0			43.1			24.2			49.9	
Approach LOS		F			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.8	78.3		23.0	35.0	51.1		23.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax),s	55	72.5		18.5	30.5	47.5		18.5				
Max Q Clear Time (g_c+I1),s	4.5	25.8		20.5	30.6	44.3		11.6				
Green Ext Time (p_c), s	0.0	11.8		0.0	0.0	2.3		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				49.9								
HCM 2010 LOS				D								

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	149	616	407	372	654	205	388	1157	184	216	991	78
Future Volume (veh/h)	149	616	407	372	654	205	388	1157	184	216	991	78
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	157	648	428	392	688	216	408	1218	194	227	1043	82
Adj No. of Lanes	1	2	1	2	2	1	2	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	692	533	406	774	346	459	1303	583	237	1303	583
Arrive On Green	0.04	0.06	0.06	0.13	0.22	0.22	0.14	0.37	0.37	0.14	0.37	0.37
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	3261	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	157	648	428	392	688	216	408	1218	194	227	1043	82
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1630	1770	1583	1681	1770	1583
Q Serve(g_s), s	10.2	20.1	15.5	13.9	20.7	9.7	13.5	36.5	6.4	14.8	29.0	2.7
Cycle Q Clear(g_c), s	10.2	20.1	15.5	13.9	20.7	9.7	13.5	36.5	6.4	14.8	29.0	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	692	533	406	774	346	459	1303	583	237	1303	583
V/C Ratio(X)	0.86	0.94	0.80	0.97	0.89	0.62	0.89	0.93	0.33	0.96	0.80	0.14
Avail Cap(c_a), veh/h	183	692	533	406	820	367	459	1303	583	237	1303	583
HCM Platoon Ratio	0.33	0.33	0.33	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	0.59	0.59	0.59	1.00	1.00	1.00	0.20	0.20	0.20
Uniform Delay (d), s/veh	52.2	50.8	17.2	47.5	41.7	19.9	46.4	33.5	11.0	46.9	31.1	11.3
Incr Delay (d2), s/veh	31.4	20.3	8.7	26.0	7.2	1.8	18.7	13.5	1.5	17.1	1.1	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	6.4	11.8	8.1	7.4	10.9	4.4	7.3	20.2	3.1	8.0	14.4	1.2
LnGrp Delay(d),s/veh	83.6	71.0	25.9	73.5	48.9	21.7	65.1	47.0	12.5	64.0	32.2	11.4
LnGrp LOS	F	E	C	E	D	C	E	D	B	E	C	B
Approach Vol, veh/h		1233			1296			1820			1352	
Approach Delay, s/veh		57.0			51.8			47.4			36.3	
Approach LOS		E			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	45.0	19.0	26.0	20.0	45.0	16.5	28.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	40.5	14.5	21.5	15.5	40.5	10.5	25.5				
Max Q Clear Time (g_c+I1), s	16.8	38.5	15.9	22.1	15.5	31.0	12.2	22.7				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.0	0.0	4.5	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				47.8								
HCM 2010 LOS				D								

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	215	53	74	17	47	138	59	1620	39	146	1519	251
Future Volume (veh/h)	215	53	74	17	47	138	59	1620	39	146	1519	251
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	226	56	78	18	49	145	62	1705	41	154	1599	264
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	381	323	124	93	439	337	1577	705	382	1673	748
Arrive On Green	0.11	0.20	0.20	0.05	0.05	0.05	0.13	0.30	0.30	0.46	0.95	0.95
Sat Flow, veh/h	1681	1863	1583	1185	1863	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	226	56	78	18	49	145	62	1705	41	154	1599	264
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1185	1863	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	12.5	2.7	4.5	1.6	2.8	1.7	3.6	49.0	2.0	6.7	28.1	0.9
Cycle Q Clear(g_c), s	12.5	2.7	4.5	1.6	2.8	1.7	3.6	49.0	2.0	6.7	28.1	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	381	323	124	93	439	337	1577	705	382	1673	748
V/C Ratio(X)	1.18	0.15	0.24	0.14	0.53	0.33	0.18	1.08	0.06	0.40	0.96	0.35
Avail Cap(c_a), veh/h	191	660	561	302	373	677	337	1577	705	382	1673	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.14	0.14	0.14	0.57	0.57	0.57
Uniform Delay (d), s/veh	48.8	35.9	36.6	50.4	51.0	15.8	39.6	38.6	22.1	25.0	2.3	0.6
Incr Delay (d2), s/veh	123.2	0.2	0.4	0.5	4.6	0.4	0.0	38.7	0.0	0.4	9.1	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	12.3	1.4	2.0	0.5	1.6	2.4	1.7	32.4	0.9	3.1	11.5	0.4
LnGrp Delay(d),s/veh	172.0	36.1	37.0	51.0	55.6	16.2	39.7	77.3	22.1	25.4	11.5	1.4
LnGrp LOS	F	D	D	D	E	B	D	F	C	C	B	A
Approach Vol, veh/h		360			212			1808			2017	
Approach Delay, s/veh		121.6			28.3			74.8			11.2	
Approach LOS		F			C			E			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.5	53.5		27.0	26.5	56.5	17.0	10.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	85	49.0		39.0	5.5	52.0	12.5	22.0				
Max Q Clear Time (g_c+l1), s	87	51.0		6.5	5.6	30.1	14.5	4.8				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	12.5	0.0	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				47.2								
HCM 2010 LOS				D								

Intersection

Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	157	62	82	125	26	86	48	77	7	26	37
Future Vol, veh/h	36	157	62	82	125	26	86	48	77	7	26	37
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	165	65	86	132	27	91	51	81	7	27	39
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	11	10.9	10.7	9
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	41%	14%	35%	10%
Vol Thru, %	23%	62%	54%	37%
Vol Right, %	36%	24%	11%	53%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	211	255	233	70
LT Vol	86	36	82	7
Through Vol	48	157	125	26
RT Vol	77	62	26	37
Lane Flow Rate	222	268	245	74
Geometry Grp	1	1	1	1
Degree of Util (X)	0.322	0.373	0.35	0.109
Departure Headway (Hd)	5.227	4.997	5.142	5.329
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	689	722	701	671
Service Time	3.261	3.005	3.152	3.37
HCM Lane V/C Ratio	0.322	0.371	0.35	0.11
HCM Control Delay	10.7	11	10.9	9
HCM Lane LOS	B	B	B	A
HCM 95th-tile Q	1.4	1.7	1.6	0.4

General Plan Without Project Conditions





















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 1: Palmdale Road (SR-18) & Pearmain St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1060	115	190	840	90	10	115	10	145	325	20
Future Volume (veh/h)	10	1060	115	190	840	90	10	115	10	145	325	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	11	1116	121	200	884	95	11	121	11	153	342	21
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	21	1230	550	259	1703	762	21	188	17	502	1163	71
Arrive On Green	0.01	0.35	0.35	0.10	0.32	0.32	0.01	0.06	0.06	0.30	0.34	0.34
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	3285	295	1681	3389	207
Grp Volume(v), veh/h	11	1116	121	200	884	95	11	65	67	153	178	185
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	1770	1811	1681	1770	1826
Q Serve(g_s), s	0.8	36.1	5.6	13.2	24.4	1.4	0.8	4.3	4.4	8.4	8.8	8.9
Cycle Q Clear(g_c), s	0.8	36.1	5.6	13.2	24.4	1.4	0.8	4.3	4.4	8.4	8.8	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.11
Lane Grp Cap(c), veh/h	21	1230	550	259	1703	762	21	101	103	502	608	627
V/C Ratio(X)	0.51	0.91	0.22	0.77	0.52	0.12	0.51	0.64	0.65	0.30	0.29	0.30
Avail Cap(c_a), veh/h	77	1312	587	288	1725	772	77	288	294	502	608	627
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	37.3	20.7	52.2	29.4	1.8	58.9	55.4	55.4	32.4	28.8	28.8
Incr Delay (d2), s/veh	17.6	9.0	0.2	8.4	0.2	0.1	17.6	26.9	27.7	0.3	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	0.5	19.1	2.5	7.1	12.0	0.6	0.5	2.9	3.0	4.0	4.3	4.5
LnGrp Delay(d),s/veh	76.4	46.3	20.9	60.6	29.6	1.8	76.4	82.3	83.1	32.8	29.0	29.1
LnGrp LOS	E	D	C	E	C	A	E	F	F	C	C	C
Approach Vol, veh/h		1248			1179			143			516	
Approach Delay, s/veh		44.1			32.6			82.2			30.2	
Approach LOS		D			C			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	40.4	11.4	22.0	46.2	6.0	45.7	6.0	62.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	19.5	19.5	44.5	5.5	32.5	5.5	58.5				
Max Q Clear Time (g_c+I1), s	10.4	6.4	15.2	38.1	2.8	10.9	2.8	26.4				
Green Ext Time (p_c), s	1.6	0.5	2.4	3.7	0.0	2.5	0.0	7.0				
Intersection Summary												
HCM 2010 Ctrl Delay			39.1									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	70	1100	0	0	750	10	0	0	0	70	0	140
Future Volume (veh/h)	70	1100	0	0	750	10	0	0	0	70	0	140
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1765	1863	0	0	1863	1863				1900	1863	1863
Adj Flow Rate, veh/h	74	1158	0	0	789	11				74	0	147
Adj No. of Lanes	1	2	0	0	2	1				0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	2	2				2	2	2
Cap, veh/h	94	1596	0	0	1266	566				841	0	751
Arrive On Green	0.06	0.45	0.00	0.00	0.12	0.12				0.47	0.00	0.47
Sat Flow, veh/h	1681	3632	0	0	3632	1583				1774	0	1583
Grp Volume(v), veh/h	74	1158	0	0	789	11				74	0	147
Grp Sat Flow(s),veh/h/ln	1681	1770	0	0	1770	1583				1774	0	1583
Q Serve(g_s), s	5.2	32.0	0.0	0.0	25.5	0.7				2.7	0.0	6.5
Cycle Q Clear(g_c), s	5.2	32.0	0.0	0.0	25.5	0.7				2.7	0.0	6.5
Prop In Lane	1.00		0.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	94	1596	0	0	1266	566				841	0	751
V/C Ratio(X)	0.79	0.73	0.00	0.00	0.62	0.02				0.09	0.00	0.20
Avail Cap(c_a), veh/h	259	2374	0	0	1696	759				841	0	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33				1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	56.0	26.9	0.0	0.0	45.2	34.3				17.3	0.0	18.3
Incr Delay (d2), s/veh	6.3	0.3	0.0	0.0	0.5	0.0				0.0	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
%ile BackOfQ(50%),veh/ln	2.6	15.7	0.0	0.0	12.6	0.7				1.3	0.0	7.5
LnGrp Delay(d),s/veh	62.3	27.2	0.0	0.0	45.7	34.3				17.4	0.0	18.4
LnGrp LOS	E	C			D	C				B		B
Approach Vol, veh/h		1232			800						221	
Approach Delay, s/veh		29.3			45.6						18.1	
Approach LOS		C			D						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				58.6		61.4	11.2	47.4				
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s				80.5		30.5	18.5	57.5				
Max Q Clear Time (g_c+I1), s				34.0		8.5	7.2	27.5				
Green Ext Time (p_c), s				18.6		0.8	0.1	15.5				
Intersection Summary												
HCM 2010 Ctrl Delay			34.0									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	40	50	350	40	30	40	190	1740	60	60	1370	70
Future Vol, veh/h	40	50	350	40	30	40	190	1740	60	60	1370	70
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	-	-	-	-	-	-	300	-	-	0	-	250
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	53	368	42	32	42	200	1832	63	63	1442	74

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	3868	3863	1442	4042	3831	1863	1442	0	0	1895	0	0
Stage 1	1568	1568	-	2263	2263	-	-	-	-	-	-	-
Stage 2	2300	2295	-	1779	1568	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	~ 2	~ 4	~ 162	~ 1	~ 4	91	470	-	-	314	-	-
Stage 1	139	171	-	54	77	-	-	-	-	-	-	-
Stage 2	52	74	-	105	171	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	-	~ 2	~ 162	-	~ 2	91	470	-	-	314	-	-
Mov Cap-2 Maneuver	-	~ 2	-	-	~ 2	-	-	-	-	-	-	-
Stage 1	80	137	-	~ 31	44	-	-	-	-	-	-	-
Stage 2	~ 5	~ 43	-	-	137	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			1.7	0.8
HCM LOS	-	-		

























Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	470	-	-	-	314	-	-
HCM Lane V/C Ratio	0.426	-	-	-	0.201	-	-
HCM Control Delay (s)	18.2	-	-	-	19.3	-	-
HCM Lane LOS	C	-	-	-	C	-	-
HCM 95th %tile Q(veh)	2.1	-	-	-	0.7	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 4: US-395 & Palmdale Road (SR-18)
























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	610	620	190	440	170	450	1330	230	230	1000	70
Future Volume (veh/h)	170	610	620	190	440	170	450	1330	230	230	1000	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	179	642	653	200	463	179	474	1400	242	242	1053	74
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	758	339	218	669	299	427	1513	677	231	1100	492
Arrive On Green	0.10	0.21	0.21	0.07	0.19	0.19	0.51	0.86	0.86	0.14	0.31	0.31
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	179	642	653	200	463	179	474	1400	242	242	1053	74
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	11.5	20.9	14.9	7.7	14.6	12.4	30.5	32.9	2.9	16.5	35.0	4.1
Cycle Q Clear(g_c), s	11.5	20.9	14.9	7.7	14.6	12.4	30.5	32.9	2.9	16.5	35.0	4.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	758	339	218	669	299	427	1513	677	231	1100	492
V/C Ratio(X)	1.11	0.85	1.93	0.92	0.69	0.60	1.11	0.93	0.36	1.05	0.96	0.15
Avail Cap(c_a), veh/h	161	826	369	218	737	330	427	1513	677	231	1100	492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.81	0.81	0.81	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	45.3	15.9	55.4	45.4	44.5	29.5	7.4	2.9	51.8	40.6	29.9
Incr Delay (d2), s/veh	103.9	7.7	427.5	33.8	2.0	2.0	76.7	11.1	1.5	72.1	18.6	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	10.0	11.1	46.7	4.3	7.3	5.6	22.9	16.7	1.4	12.3	20.0	1.9
LnGrp Delay(d),s/veh	158.2	53.0	443.4	89.2	47.4	46.5	106.2	18.4	4.4	123.9	59.1	30.5
LnGrp LOS	F	D	F	F	D	D	F	B	A	F	E	C
Approach Vol, veh/h		1474			842			2116			1369	
Approach Delay, s/veh		238.7			57.1			36.5			69.0	
Approach LOS		F			E			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	55.8	13.0	30.2	35.0	41.8	16.0	27.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	49.0	8.5	28.0	30.5	35.0	11.5	25.0				
Max Q Clear Time (g_c+I1), s	18.5	34.9	9.7	22.9	32.5	37.0	13.5	16.6				
Green Ext Time (p_c), s	0.0	11.8	0.0	2.8	0.0	0.0	0.0	2.6				
Intersection Summary												
HCM 2010 Ctrl Delay			98.6									
HCM 2010 LOS			F									



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations				↑↑	↑↑			
Traffic Volume (veh/h)	0	0	0	2001	1914	0		
Future Volume (veh/h)	0	0	0	2001	1914	0		
Number			5	2	6	16		
Initial Q (Qb), veh			0	0	0	0		
Ped-Bike Adj(A_pbT)			1.00			1.00		
Parking Bus, Adj			1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln			0	1863	1863	0		
Adj Flow Rate, veh/h			0	2106	2015	0		
Adj No. of Lanes			0	2	2	0		
Peak Hour Factor			0.95	0.95	0.95	0.95		
Percent Heavy Veh, %			0	2	2	0		
Cap, veh/h			0	3406	3406	0		
Arrive On Green			0.00	0.96	1.00	0.00		
Sat Flow, veh/h			0	3725	3725	0		
Grp Volume(v), veh/h			0	2106	2015	0		
Grp Sat Flow(s),veh/h/ln			0	1770	1770	0		
Q Serve(g_s), s			0.0	6.6	0.0	0.0		
Cycle Q Clear(g_c), s			0.0	6.6	0.0	0.0		
Prop In Lane			0.00			0.00		
Lane Grp Cap(c), veh/h			0	3406	3406	0		
V/C Ratio(X)			0.00	0.62	0.59	0.00		
Avail Cap(c_a), veh/h			0	3406	3406	0		
HCM Platoon Ratio			1.00	1.00	1.33	1.00		
Upstream Filter(I)			0.00	1.00	1.00	0.00		
Uniform Delay (d), s/veh			0.0	0.2	0.0	0.0		
Incr Delay (d2), s/veh			0.0	0.9	0.8	0.0		
Initial Q Delay(d3),s/veh			0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln			0.0	3.0	0.4	0.0		
LnGrp Delay(d),s/veh			0.0	1.1	0.8	0.0		
LnGrp LOS				A	A			
Approach Vol, veh/h				2106	2015			
Approach Delay, s/veh				1.1	0.8			
Approach LOS				A	A			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		
Phs Duration (G+Y+Rc), s		120.0				120.0		
Change Period (Y+Rc), s		4.5				4.5		
Max Green Setting (Gmax), s		115.5				115.5		
Max Q Clear Time (g_c+I1), s		8.6				2.0		
Green Ext Time (p_c), s		93.9				99.0		
Intersection Summary								
HCM 2010 Ctrl Delay			0.9					
HCM 2010 LOS			A					
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 6: US-395 & Dos Palmas Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	60	100	60	60	320	40	1490	30	190	1620	200
Future Volume (veh/h)	290	60	100	60	60	320	40	1490	30	190	1620	200
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	305	63	105	63	63	337	42	1568	32	200	1705	211
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	259	699	594	245	47	250	53	1475	660	161	1529	186
Arrive On Green	0.15	0.38	0.38	0.18	0.18	0.18	0.04	0.55	0.55	0.03	0.16	0.16
Sat Flow, veh/h	1681	1863	1583	1149	255	1366	1681	3539	1583	1681	3178	386
Grp Volume(v), veh/h	305	63	105	63	0	400	42	1568	32	200	935	981
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1149	0	1622	1681	1770	1583	1681	1770	1795
Q Serve(g_s), s	18.5	2.6	5.3	5.8	0.0	22.0	3.0	50.0	1.1	11.5	57.7	57.7
Cycle Q Clear(g_c), s	18.5	2.6	5.3	8.5	0.0	22.0	3.0	50.0	1.1	11.5	57.7	57.7
Prop In Lane	1.00		1.00	1.00		0.84	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	259	699	594	245	0	297	53	1475	660	161	851	863
V/C Ratio(X)	1.18	0.09	0.18	0.26	0.00	1.35	0.80	1.06	0.05	1.24	1.10	1.14
Avail Cap(c_a), veh/h	259	699	594	245	0	297	77	1475	660	161	851	863
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.80	0.80	0.80
Uniform Delay (d), s/veh	50.8	24.3	25.1	44.6	0.0	49.0	57.1	26.8	15.9	58.1	50.5	50.5
Incr Delay (d2), s/veh	112.4	0.1	0.1	0.5	0.0	176.2	3.3	30.2	0.0	143.5	58.3	73.2
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	16.7	1.4	2.4	1.9	0.0	24.4	1.4	30.2	0.5	11.8	42.1	46.3
LnGrp Delay(d),s/veh	163.2	24.3	25.2	45.2	0.0	225.2	60.4	57.0	15.9	201.6	108.7	123.6
LnGrp LOS	F	C	C	D		F	E	F	B	F	F	F
Approach Vol, veh/h		473			463			1642			2116	
Approach Delay, s/veh		114.1			200.7			56.3			124.4	
Approach LOS		F			F			E			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	54.5		49.5	8.3	62.2	23.0	26.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	50.0		45.0	5.5	56.0	18.5	22.0				
Max Q Clear Time (g_c+I1), s	13.5	52.0		7.3	5.0	59.7	20.5	24.0				
Green Ext Time (p_c), s	0.0	0.0		1.6	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				107.1								
HCM 2010 LOS				F								






















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 7: US-395 & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	100	110	150	140	90	420	90	1110	60	340	1270	130
Future Volume (veh/h)	100	110	150	140	90	420	90	1110	60	340	1270	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	105	116	158	147	95	442	95	1168	63	358	1337	137
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	675	574	394	104	485	117	1165	521	329	1612	721
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.05	0.22	0.22	0.06	0.15	0.15
Sat Flow, veh/h	819	1863	1583	1043	288	1339	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	105	116	158	147	0	537	95	1168	63	358	1337	137
Grp Sat Flow(s),veh/h/ln	819	1863	1583	1043	0	1626	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	5.8	5.1	8.5	13.4	0.0	37.7	6.7	39.5	3.8	23.5	44.0	9.1
Cycle Q Clear(g_c), s	43.5	5.1	8.5	18.5	0.0	37.7	6.7	39.5	3.8	23.5	44.0	9.1
Prop In Lane	1.00		1.00	1.00		0.82	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	100	675	574	394	0	590	117	1165	521	329	1612	721
V/C Ratio(X)	1.05	0.17	0.28	0.37	0.00	0.91	0.81	1.00	0.12	1.09	0.83	0.19
Avail Cap(c_a), veh/h	100	675	574	394	0	590	119	1165	521	329	1612	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.86	0.86	0.86	0.09	0.09	0.09
Uniform Delay (d), s/veh	58.8	26.0	27.1	32.3	0.0	36.4	56.4	46.8	32.9	56.1	46.5	31.6
Incr Delay (d2), s/veh	105.8	0.1	0.3	0.6	0.0	18.4	29.1	25.1	0.4	44.8	0.5	0.1
Initial Q Delay(d3),s/veh	0.7	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	6.2	2.6	3.7	3.9	0.0	19.9	4.1	23.4	1.7	15.0	21.7	4.0
LnGrp Delay(d),s/veh	165.4	26.1	27.3	32.9	0.0	54.8	85.5	71.9	33.3	101.0	46.9	31.7
LnGrp LOS	F	C	C	C		D	F	F	C	F	D	C
Approach Vol, veh/h		379			684			1326			1832	
Approach Delay, s/veh		65.2			50.1			71.0			56.4	
Approach LOS		E			D			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	28.0	44.0		48.0	12.9	59.1		48.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	23.5	39.5		43.5	8.5	54.5		43.5				
Max Q Clear Time (g_c+I1), s	25.5	41.5		45.5	8.7	46.0		39.7				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	7.5		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			60.7									
HCM 2010 LOS			E									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 8: US-395 & La Mesa Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	60	10	20	90	20	10	1360	10	10	1860	10
Future Volume (veh/h)	10	60	10	20	90	20	10	1360	10	10	1860	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1900	1765	1863	1900	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	11	63	11	21	95	21	11	1432	11	11	1958	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	97	144	25	128	138	30	234	2995	23	311	3002	17
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.83	0.83	0.83	1.00	1.00	1.00
Sat Flow, veh/h	1204	1545	270	1251	1478	327	209	3600	28	349	3609	20
Grp Volume(v), veh/h	11	0	74	21	0	116	11	704	739	11	959	1010
Grp Sat Flow(s),veh/h/ln	1204	0	1815	1251	0	1805	209	1770	1858	349	1770	1859
Q Serve(g_s), s	1.1	0.0	4.6	1.9	0.0	7.5	1.1	13.3	13.3	0.5	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	4.6	6.6	0.0	7.5	1.1	13.3	13.3	13.9	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.18	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	97	0	169	128	0	168	234	1472	1546	311	1472	1547
V/C Ratio(X)	0.11	0.00	0.44	0.16	0.00	0.69	0.05	0.48	0.48	0.04	0.65	0.65
Avail Cap(c_a), veh/h	181	0	295	215	0	293	234	1472	1546	311	1472	1547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	0.47	0.47	0.47	0.61	0.61	0.61
Uniform Delay (d), s/veh	56.9	0.0	51.4	54.6	0.0	52.7	1.8	2.8	2.8	0.9	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	1.8	0.6	0.0	5.0	0.2	0.5	0.5	0.1	1.4	1.3
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	0.0	2.4	0.7	0.0	4.0	0.1	6.5	6.8	0.1	0.6	0.6
LnGrp Delay(d),s/veh	57.4	0.0	53.2	55.1	0.0	57.7	2.0	3.3	3.3	1.1	1.4	1.3
LnGrp LOS	E		D	E		E	A	A	A	A	A	A
Approach Vol, veh/h		85			137			1454			1980	
Approach Delay, s/veh		53.8			57.3			3.3			1.3	
Approach LOS		D			E			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		104.3		15.7		104.3		15.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		91.5		19.5		91.5		19.5				
Max Q Clear Time (g_c+I1), s		15.3		10.5		15.9		9.5				
Green Ext Time (p_c), s		57.0		0.6		56.7		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			5.4									
HCM 2010 LOS			A									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 9: US-395 & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	480	300	350	480	210	190	1040	120	210	1450	50
Future Volume (veh/h)	90	480	300	350	480	210	190	1040	120	210	1450	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	95	505	316	368	505	221	200	1095	126	221	1526	53
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	117	695	311	259	993	444	133	1180	528	279	1467	51
Arrive On Green	0.07	0.20	0.20	0.15	0.28	0.28	0.08	0.33	0.33	0.17	0.42	0.42
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3490	121
Grp Volume(v), veh/h	95	505	316	368	505	221	200	1095	126	221	772	807
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1841
Q Serve(g_s), s	6.7	16.1	19.0	18.5	14.4	9.3	9.5	35.8	6.9	15.1	50.4	50.4
Cycle Q Clear(g_c), s	6.7	16.1	19.0	18.5	14.4	9.3	9.5	35.8	6.9	15.1	50.4	50.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	117	695	311	259	993	444	133	1180	528	279	744	774
V/C Ratio(X)	0.81	0.73	1.02	1.42	0.51	0.50	1.50	0.93	0.24	0.79	1.04	1.04
Avail Cap(c_a), veh/h	189	855	383	259	1003	449	133	1180	528	279	744	774
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	0.73	0.73	0.73	1.00	1.00	1.00	0.69	0.69	0.69
Uniform Delay (d), s/veh	55.0	45.2	31.5	50.8	36.2	15.9	55.3	38.6	29.0	48.0	34.8	34.8
Incr Delay (d2), s/veh	12.4	2.4	47.8	205.0	0.3	0.6	261.4	13.8	1.1	10.2	37.6	38.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.1	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	8.1	12.4	23.3	7.1	4.2	14.1	19.8	3.2	7.8	32.4	33.9
LnGrp Delay(d),s/veh	67.5	47.6	79.3	255.7	36.5	16.6	316.7	52.4	30.0	58.2	72.4	73.3
LnGrp LOS	E	D	F	F	D	B	F	D	C	E	F	F
Approach Vol, veh/h		916			1094			1421			1800	
Approach Delay, s/veh		60.6			106.2			87.6			71.1	
Approach LOS		E			F			F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.4	44.5	23.0	28.1	14.0	54.9	12.9	38.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	14.5	40.0	18.5	29.0	9.5	45.0	13.5	34.0				
Max Q Clear Time (g_c+I1), s	17.1	37.8	20.5	21.0	11.5	52.4	8.7	16.4				
Green Ext Time (p_c), s	0.0	1.4	0.0	2.5	0.0	0.0	0.1	4.5				
Intersection Summary												
HCM 2010 Ctrl Delay			81.1									
HCM 2010 LOS			F									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 10: Palmdale Road (SR-18) & Cantina Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1200	30	30	850	80	40	10	40	100	10	10
Future Volume (veh/h)	10	1200	30	30	850	80	40	10	40	100	10	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1667	1863	1900
Adj Flow Rate, veh/h	11	1263	32	32	895	84	42	11	42	105	11	11
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	1413	632	48	1075	481	53	17	63	780	232	232
Arrive On Green	0.16	0.53	0.53	0.03	0.30	0.30	0.03	0.05	0.05	0.25	0.27	0.27
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	339	1295	3079	856	856
Grp Volume(v), veh/h	11	1263	32	32	895	84	42	0	53	105	0	22
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	0	1634	1540	0	1712
Q Serve(g_s), s	0.7	38.2	1.2	2.1	28.3	4.7	3.0	0.0	3.8	3.2	0.0	1.1
Cycle Q Clear(g_c), s	0.7	38.2	1.2	2.1	28.3	4.7	3.0	0.0	3.8	3.2	0.0	1.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.50
Lane Grp Cap(c), veh/h	206	1413	632	48	1075	481	53	0	80	780	0	464
V/C Ratio(X)	0.05	0.89	0.05	0.66	0.83	0.17	0.80	0.00	0.66	0.13	0.00	0.05
Avail Cap(c_a), veh/h	206	1696	759	81	1696	759	91	0	279	780	0	464
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	0.90	0.90	0.90	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.3	25.9	17.2	57.8	38.9	30.7	57.7	0.0	56.1	34.6	0.0	32.3
Incr Delay (d2), s/veh	0.1	3.5	0.0	12.9	1.9	0.2	23.4	0.0	9.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	19.2	0.5	1.2	14.1	2.1	1.7	0.0	1.9	1.4	0.0	0.6
LnGrp Delay(d),s/veh	44.4	29.3	17.2	70.7	40.8	30.9	81.1	0.0	65.2	35.0	0.0	32.5
LnGrp LOS	D	C	B	E	D	C	F		E	C		C
Approach Vol, veh/h		1306			1011			95				127
Approach Delay, s/veh		29.2			40.9			72.2				34.6
Approach LOS		C			D			E				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.9	10.4	7.8	52.4	8.3	37.0	19.2	40.9				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	20.5	5.5	57.5	6.5	32.5	5.5	57.5				
Max Q Clear Time (g_c+I1), s	5.2	5.8	4.1	40.2	5.0	3.1	2.7	30.3				
Green Ext Time (p_c), s	0.3	0.2	0.0	7.7	0.0	0.1	0.0	6.2				
Intersection Summary												
HCM 2010 Ctrl Delay			35.7									
HCM 2010 LOS			D									

Intersection												
Int Delay, s/veh	29.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	160	50	150	210	20	130	40	180	30	40	20
Future Vol, veh/h	20	160	50	150	210	20	130	40	180	30	40	20
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	168	53	158	221	21	137	42	189	32	42	21

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	242	0	0	221	0	0	816	795	195	900	810	232
Stage 1	-	-	-	-	-	-	237	237	-	547	547	-
Stage 2	-	-	-	-	-	-	579	558	-	353	263	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1324	-	-	1348	-	-	296	320	846	259	314	807
Stage 1	-	-	-	-	-	-	766	709	-	521	517	-
Stage 2	-	-	-	-	-	-	501	512	-	664	691	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1324	-	-	1348	-	-	225	272	846	157	266	807
Mov Cap-2 Maneuver	-	-	-	-	-	-	225	272	-	157	266	-
Stage 1	-	-	-	-	-	-	752	696	-	512	447	-
Stage 2	-	-	-	-	-	-	382	442	-	475	679	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	3.2	77.4	28.5
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	373	1324	-	-	1348	-	-	246
HCM Lane V/C Ratio	0.988	0.016	-	-	0.117	-	-	0.385
HCM Control Delay (s)	77.4	7.8	0	-	8	0	-	28.5
HCM Lane LOS	F	A	A	-	A	A	-	D
HCM 95th %tile Q(veh)	11.5	0	-	-	0.4	-	-	1.7

Intersection	
Intersection Delay, s/veh	16.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	40	120	80	0	100	110	20	0	110	210	210
Future Vol, veh/h	0	40	120	80	0	100	110	20	0	110	210	210
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	42	126	84	0	105	116	21	0	116	221	221
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	17.8	15.4	16.2
HCM LOS	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	60%	0%	85%	0%	80%
Vol Right, %	0%	0%	100%	0%	40%	0%	15%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	210	210	40	200	100	130	120	200
LT Vol	110	0	0	40	0	100	0	120	0
Through Vol	0	210	0	0	120	0	110	0	160
RT Vol	0	0	210	0	80	0	20	0	40
Lane Flow Rate	116	221	221	42	211	105	137	126	211
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.271	0.486	0.442	0.107	0.487	0.268	0.325	0.311	0.48
Departure Headway (Hd)	8.424	7.911	7.193	9.146	8.335	9.174	8.551	8.874	8.215
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	428	458	502	392	432	392	420	407	440
Service Time	6.14	5.627	4.909	6.885	6.084	6.924	6.3	6.596	5.936
HCM Lane V/C Ratio	0.271	0.483	0.44	0.107	0.488	0.268	0.326	0.31	0.48
HCM Control Delay	14.2	17.9	15.5	13	18.8	15.3	15.4	15.6	18.3
HCM Lane LOS	B	C	C	B	C	C	C	C	C
HCM 95th-tile Q	1.1	2.6	2.2	0.4	2.6	1.1	1.4	1.3	2.5

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↶	↷	
Traffic Vol, veh/h	0	120	160	40
Future Vol, veh/h	0	120	160	40
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	126	168	42
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	17.3
HCM LOS	C

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	50	150	20	0	40	190	240	0	10	140	90
Future Vol, veh/h	0	50	150	20	0	40	190	240	0	10	140	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	53	158	21	0	42	200	253	0	11	147	95
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	13	18.2	13.6
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	34%	0%	100%	71%	0%	100%	21%	0%	100%
Vol Right, %	0%	0%	66%	0%	0%	29%	0%	0%	79%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	93	137	50	100	70	40	127	303	230	87
LT Vol	10	0	0	50	0	0	40	0	0	230	0
Through Vol	0	93	47	0	100	50	0	127	63	0	87
RT Vol	0	0	90	0	0	20	0	0	240	0	0
Lane Flow Rate	11	98	144	53	105	74	42	133	319	242	91
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.025	0.223	0.308	0.127	0.24	0.164	0.095	0.282	0.626	0.55	0.195
Departure Headway (Hd)	8.66	8.16	7.699	8.696	8.196	7.996	8.117	7.617	7.063	8.177	7.677
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	413	439	466	412	437	447	441	471	511	441	467
Service Time	6.429	5.929	5.468	6.463	5.963	5.763	5.875	5.375	4.821	5.937	5.437
HCM Lane V/C Ratio	0.027	0.223	0.309	0.129	0.24	0.166	0.095	0.282	0.624	0.549	0.195
HCM Control Delay	11.7	13.3	13.9	12.7	13.6	12.3	11.7	13.4	21	20.5	12.3
HCM Lane LOS	B	B	B	B	B	B	B	B	C	C	B
HCM 95th-tile Q	0.1	0.8	1.3	0.4	0.9	0.6	0.3	1.1	4.3	3.2	0.7

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↑↑	
Traffic Vol, veh/h	0	230	130	60
Future Vol, veh/h	0	230	130	60
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	242	137	63
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	16.7
HCM LOS	C

Intersection	
Intersection Delay, s/veh	24.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↶	↷			↶	↷			↶	↷	
Traffic Vol, veh/h	0	70	270	40	0	110	200	80	0	10	240	90
Future Vol, veh/h	0	70	270	40	0	110	200	80	0	10	240	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	74	284	42	0	116	211	84	0	11	253	95
Number of Lanes	0	1	1	0	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	32.8	25.6	18.1
HCM LOS	D	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	50%	0%
Vol Thru, %	0%	100%	47%	0%	87%	0%	71%	50%	73%
Vol Right, %	0%	0%	53%	0%	13%	0%	29%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	160	170	70	310	110	280	160	110
LT Vol	10	0	0	70	0	110	0	80	0
Through Vol	0	160	80	0	270	0	200	80	80
RT Vol	0	0	90	0	40	0	80	0	30
Lane Flow Rate	11	168	179	74	326	116	295	168	116
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.028	0.426	0.433	0.19	0.787	0.299	0.703	0.448	0.293
Departure Headway (Hd)	9.621	9.103	8.718	9.288	8.681	9.304	8.584	9.569	9.109
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	371	394	412	386	418	386	421	376	394
Service Time	7.395	6.876	6.491	7.054	6.446	7.073	6.352	7.344	6.883
HCM Lane V/C Ratio	0.03	0.426	0.434	0.192	0.78	0.301	0.701	0.447	0.294
HCM Control Delay	12.7	18.5	18	14.2	37	16	29.4	19.9	15.6
HCM Lane LOS	B	C	C	B	E	C	D	C	C
HCM 95th-tile Q	0.1	2.1	2.1	0.7	6.8	1.2	5.3	2.2	1.2

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			←T	
Traffic Vol, veh/h	0	80	160	30
Future Vol, veh/h	0	80	160	30
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	84	168	32
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	18.1
HCM LOS	C

Intersection	
Intersection Delay, s/veh	29.8
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕↗			↵	↕↗			↵	↕↗	
Traffic Vol, veh/h	0	80	410	90	0	110	350	120	0	120	200	150
Future Vol, veh/h	0	80	410	90	0	110	350	120	0	120	200	150
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	84	432	95	0	116	368	126	0	126	211	158
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	37.4	31.2	25.3
HCM LOS	E	D	D

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	31%	0%	100%	60%	0%	100%	49%	0%	100%
Vol Right, %	0%	0%	69%	0%	0%	40%	0%	0%	51%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	120	133	217	80	273	227	110	233	237	120	93
LT Vol	120	0	0	80	0	0	110	0	0	120	0
Through Vol	0	133	67	0	273	137	0	233	117	0	93
RT Vol	0	0	150	0	0	90	0	0	120	0	0
Lane Flow Rate	126	140	228	84	288	239	116	246	249	126	98
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.394	0.418	0.649	0.255	0.831	0.67	0.351	0.709	0.695	0.404	0.301
Departure Headway (Hd)	11.231	10.731	10.246	10.893	10.393	10.115	10.899	10.399	10.044	11.526	11.026
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	321	335	354	330	348	358	330	349	361	313	326
Service Time	8.987	8.487	8.003	8.646	8.146	7.868	8.654	8.154	7.799	9.283	8.783
HCM Lane V/C Ratio	0.393	0.418	0.644	0.255	0.828	0.668	0.352	0.705	0.69	0.403	0.301
HCM Control Delay	21.1	21	30.2	17.4	48.3	31.2	19.5	35	32.9	21.9	18.5
HCM Lane LOS	C	C	D	C	E	D	C	D	D	C	C
HCM 95th-tile Q	1.8	2	4.3	1	7.3	4.6	1.5	5.2	5	1.9	1.2

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕↵	
Traffic Vol, veh/h	0	120	140	110
Future Vol, veh/h	0	120	140	110
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	126	147	116
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	21.4
HCM LOS	C





















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 16: Topaz Road & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	500	10	70	510	90	10	60	130	180	50	90
Future Volume (veh/h)	30	500	10	70	510	90	10	60	130	180	50	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	32	526	11	74	537	95	11	63	137	189	53	95
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	649	291	123	689	121	695	978	831	743	1082	920
Arrive On Green	0.03	0.18	0.18	0.07	0.23	0.23	0.01	0.52	0.52	0.07	0.58	0.58
Sat Flow, veh/h	1681	3539	1583	1681	3008	530	1681	1863	1583	1681	1863	1583
Grp Volume(v), veh/h	32	526	11	74	315	317	11	63	137	189	53	95
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1769	1681	1863	1583	1681	1863	1583
Q Serve(g_s), s	2.3	17.1	0.6	5.1	20.0	20.2	0.4	2.0	3.7	5.9	1.5	3.2
Cycle Q Clear(g_c), s	2.3	17.1	0.6	5.1	20.0	20.2	0.4	2.0	3.7	5.9	1.5	3.2
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	46	649	291	123	405	405	695	978	831	743	1082	920
V/C Ratio(X)	0.70	0.81	0.04	0.60	0.78	0.78	0.02	0.06	0.16	0.25	0.05	0.10
Avail Cap(c_a), veh/h	147	1165	521	231	671	671	779	978	831	886	1082	920
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)	0.58	0.58	0.58	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.9	47.0	32.1	53.9	43.4	43.4	12.9	14.0	7.0	10.3	10.9	11.2
Incr Delay (d2), s/veh	10.5	1.5	0.0	4.7	3.2	3.3	0.0	0.1	0.4	0.2	0.1	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	1.2	8.5	0.3	2.5	10.2	10.2	0.2	1.1	1.7	2.7	0.8	1.5
LnGrp Delay(d),s/veh	68.4	48.4	32.1	58.7	46.6	46.8	12.9	14.1	7.5	10.5	10.9	11.4
LnGrp LOS	E	D	C	E	D	D	B	B	A	B	B	B
Approach Vol, veh/h		569			706			211			337	
Approach Delay, s/veh		49.3			48.0			9.7			10.9	
Approach LOS		D			D			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.7	67.5	13.3	26.5	6.0	74.2	7.8	32.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	27.5	16.5	39.5	7.5	38.5	10.5	45.5				
Max Q Clear Time (g_c+I1), s	7.9	5.7	7.1	19.1	2.4	5.2	4.3	22.2				
Green Ext Time (p_c), s	0.3	1.2	2.4	2.9	0.0	1.3	0.0	3.5				
Intersection Summary												
HCM 2010 Ctrl Delay			37.1									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 17: Cobalt Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	700	240	250	610	10	190	210	280	10	280	10
Future Volume (veh/h)	20	700	240	250	610	10	190	210	280	10	280	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	21	737	253	263	642	11	200	221	295	11	295	11
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	841	376	317	1442	25	470	334	446	43	801	29
Arrive On Green	0.02	0.24	0.24	0.19	0.41	0.41	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1681	3539	1583	1681	3561	61	1013	725	967	25	1736	63
Grp Volume(v), veh/h	21	737	253	263	319	334	200	0	516	317	0	0
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1852	1013	0	1692	1824	0	0
Q Serve(g_s), s	1.5	24.1	17.4	18.1	15.7	15.7	11.0	0.0	28.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	24.1	17.4	18.1	15.7	15.7	24.3	0.0	28.4	13.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.57	0.03		0.03
Lane Grp Cap(c), veh/h	35	841	376	317	717	750	470	0	781	873	0	0
V/C Ratio(X)	0.60	0.88	0.67	0.83	0.44	0.45	0.43	0.00	0.66	0.36	0.00	0.00
Avail Cap(c_a), veh/h	77	929	416	385	789	826	470	0	781	873	0	0
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)	0.54	0.54	0.54	0.68	0.68	0.68	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	58.2	44.0	41.5	46.9	25.9	25.9	25.5	0.0	25.0	21.0	0.0	0.0
Incr Delay (d2), s/veh	8.3	5.0	2.0	8.6	0.3	0.3	2.8	0.0	4.4	1.2	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	0.8	12.4	7.8	9.2	7.7	8.0	5.3	0.0	14.1	7.1	0.0	0.0
LnGrp Delay(d),s/veh	66.6	49.1	43.5	55.4	26.2	26.2	28.3	0.0	29.4	22.2	0.0	0.0
LnGrp LOS	E	D	D	E	C	C	C		C	C		
Approach Vol, veh/h		1011			916			716			317	
Approach Delay, s/veh		48.0			34.6			29.1			22.2	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		59.9	27.1	33.0		59.9	7.0	53.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		47.5	27.5	31.5		47.5	5.5	53.5				
Max Q Clear Time (g_c+I1), s		30.4	20.1	26.1		15.4	3.5	17.7				
Green Ext Time (p_c), s		5.8	2.5	2.5		7.1	0.0	4.4				
Intersection Summary												
HCM 2010 Ctrl Delay			36.5									
HCM 2010 LOS			D									

Intersection	
Intersection Delay, s/veh	21.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	130	300	10	0	10	180	110	0	10	40	20
Future Vol, veh/h	0	130	300	10	0	10	180	110	0	10	40	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	137	316	11	0	11	189	116	0	11	42	21
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	27.5	16.1	11.5
HCM LOS	D	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	30%	3%	59%
Vol Thru, %	57%	68%	60%	9%
Vol Right, %	29%	2%	37%	32%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	440	300	340
LT Vol	10	130	10	200
Through Vol	40	300	180	30
RT Vol	20	10	110	110
Lane Flow Rate	74	463	316	358
Geometry Grp	1	1	1	1
Degree of Util (X)	0.146	0.781	0.536	0.632
Departure Headway (Hd)	7.143	6.069	6.107	6.361
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	500	597	591	565
Service Time	5.223	4.118	4.162	4.413
HCM Lane V/C Ratio	0.148	0.776	0.535	0.634
HCM Control Delay	11.5	27.5	16.1	19.8
HCM Lane LOS	B	D	C	C
HCM 95th-tile Q	0.5	7.3	3.2	4.4

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	200	30	110
Future Vol, veh/h	0	200	30	110
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	211	32	116
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	19.8
HCM LOS	C
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 19: Amethyst Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	880	70	110	610	20	110	280	220	70	260	100
Future Volume (veh/h)	80	880	70	110	610	20	110	280	220	70	260	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	84	926	74	116	642	21	116	295	232	74	274	105
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	1002	448	140	763	25	301	798	678	93	391	150
Arrive On Green	0.30	0.57	0.57	0.08	0.22	0.22	0.18	0.43	0.43	0.06	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	1681	3498	114	1681	1863	1583	1681	1284	492
Grp Volume(v), veh/h	84	926	74	116	325	338	116	295	232	74	0	379
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1843	1681	1863	1583	1681	0	1776
Q Serve(g_s), s	4.7	28.6	1.7	8.2	21.1	21.1	7.3	12.9	11.8	5.2	0.0	22.7
Cycle Q Clear(g_c), s	4.7	28.6	1.7	8.2	21.1	21.1	7.3	12.9	11.8	5.2	0.0	22.7
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	249	1002	448	140	386	402	301	798	678	93	0	540
V/C Ratio(X)	0.34	0.92	0.17	0.83	0.84	0.84	0.38	0.37	0.34	0.80	0.00	0.70
Avail Cap(c_a), veh/h	249	1135	508	189	582	607	301	798	678	147	0	540
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	0.86	0.86	0.86	0.91	0.91	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.6	24.9	8.0	54.1	44.9	44.9	43.4	23.3	23.0	56.0	0.0	36.9
Incr Delay (d2), s/veh	0.3	5.6	0.1	17.1	6.0	5.8	0.7	1.2	1.3	14.4	0.0	7.4
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	2.2	14.4	0.7	4.5	10.9	11.4	3.4	6.9	5.4	2.8	0.0	12.2
LnGrp Delay(d),s/veh	37.9	30.5	8.1	71.3	50.9	50.7	44.1	24.5	24.2	70.4	0.0	44.4
LnGrp LOS	D	C	A	E	D	D	D	C	C	E		D
Approach Vol, veh/h		1084			779			643			453	
Approach Delay, s/veh		29.5			53.9			28.0			48.6	
Approach LOS		C			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.1	55.9	14.5	38.5	26.0	41.0	22.3	30.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	39.5	13.5	38.5	13.5	36.5	12.5	39.5				
Max Q Clear Time (g_c+I1), s	7.2	14.9	10.2	30.6	9.3	24.7	6.7	23.1				
Green Ext Time (p_c), s	0.0	2.6	0.1	3.4	0.7	1.6	2.9	3.1				
Intersection Summary												
HCM 2010 Ctrl Delay			38.5									
HCM 2010 LOS			D									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 20: Amethyst Road & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	240	170	60	110	60	130	470	90	170	400	60
Future Volume (veh/h)	120	240	170	60	110	60	130	470	90	170	400	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	126	253	179	63	116	63	137	495	95	179	421	63
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	328	279	80	151	82	162	988	442	584	1877	840
Arrive On Green	0.09	0.18	0.18	0.05	0.13	0.13	0.19	0.56	0.56	0.35	0.53	0.53
Sat Flow, veh/h	1681	1863	1583	1681	1137	617	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	126	253	179	63	0	179	137	495	95	179	421	63
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1681	0	1754	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	8.8	15.5	12.6	4.5	0.0	11.8	9.4	10.3	3.0	9.3	7.6	2.3
Cycle Q Clear(g_c), s	8.8	15.5	12.6	4.5	0.0	11.8	9.4	10.3	3.0	9.3	7.6	2.3
Prop In Lane	1.00		1.00	1.00		0.35	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	152	328	279	80	0	233	162	988	442	584	1877	840
V/C Ratio(X)	0.83	0.77	0.64	0.79	0.00	0.77	0.85	0.50	0.21	0.31	0.22	0.08
Avail Cap(c_a), veh/h	273	489	416	161	0	343	301	988	442	584	1877	840
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	53.7	47.1	45.9	56.6	0.0	50.2	47.6	21.4	13.7	28.6	15.0	13.8
Incr Delay (d2), s/veh	10.8	4.3	2.5	15.7	0.0	6.0	11.5	1.8	1.1	0.2	0.2	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	4.6	8.4	5.7	2.4	0.0	6.1	4.9	5.2	1.4	4.4	3.7	1.1
LnGrp Delay(d),s/veh	64.5	51.5	48.4	72.3	0.0	56.2	59.1	23.2	14.8	28.8	15.2	13.9
LnGrp LOS	E	D	D	E		E	E	C	B	C	B	B
Approach Vol, veh/h		558			242			727			663	
Approach Delay, s/veh		53.4			60.4			28.9			18.8	
Approach LOS		D			E			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	46.2	38.0	10.2	25.6	16.0	68.1	15.4	20.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	25.5	33.5	11.5	31.5	21.5	37.5	19.5	23.5				
Max Q Clear Time (g_c+I1), s	11.3	12.3	6.5	17.5	11.4	9.6	10.8	13.8				
Green Ext Time (p_c), s	2.7	3.1	0.0	2.6	0.2	3.2	0.2	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			35.6									
HCM 2010 LOS			D									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 21: El Evado Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	970	70	60	440	100	100	340	170	250	370	120
Future Volume (veh/h)	170	970	70	60	440	100	100	340	170	250	370	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	179	1021	74	63	463	105	105	358	179	263	389	126
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	1172	524	79	904	405	128	1054	472	292	1399	820
Arrive On Green	0.12	0.33	0.33	0.05	0.26	0.26	0.08	0.30	0.30	0.17	0.40	0.40
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	179	1021	74	63	463	105	105	358	179	263	389	126
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	12.5	32.5	3.9	4.5	13.4	6.3	7.4	9.5	10.7	18.4	9.0	5.0
Cycle Q Clear(g_c), s	12.5	32.5	3.9	4.5	13.4	6.3	7.4	9.5	10.7	18.4	9.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	207	1172	524	79	904	405	128	1054	472	292	1399	820
V/C Ratio(X)	0.87	0.87	0.14	0.79	0.51	0.26	0.82	0.34	0.38	0.90	0.28	0.15
Avail Cap(c_a), veh/h	301	1283	574	105	904	405	189	1054	472	399	1399	820
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)	0.59	0.59	0.59	0.59	0.59	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.7	37.7	28.2	56.6	38.3	35.6	54.6	32.9	33.4	48.6	24.7	15.1
Incr Delay (d2), s/veh	10.3	3.9	0.1	16.2	0.3	0.2	15.9	0.9	2.3	18.4	0.5	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	6.4	16.5	1.7	2.4	6.6	2.8	4.0	4.8	5.0	10.0	4.5	2.3
LnGrp Delay(d),s/veh	62.0	41.6	28.2	72.8	38.5	35.8	70.5	33.8	35.7	67.0	25.2	15.5
LnGrp LOS	E	D	C	E	D	D	E	C	D	E	C	B
Approach Vol, veh/h		1274			631			642			778	
Approach Delay, s/veh		43.7			41.5			40.3			37.7	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.3	40.2	10.2	44.2	13.7	51.9	19.2	35.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	28.5	22.5	7.5	43.5	13.5	37.5	21.5	29.5				
Max Q Clear Time (g_c+I1), s	20.4	12.7	6.5	34.5	9.4	11.0	14.5	15.4				
Green Ext Time (p_c), s	0.5	3.9	0.0	5.2	0.1	5.9	0.2	7.9				
Intersection Summary												
HCM 2010 Ctrl Delay			41.2									
HCM 2010 LOS			D									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 22: Amargosa Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	230	1160	130	70	580	110	130	340	80	200	290	90
Future Volume (veh/h)	230	1160	130	70	580	110	130	340	80	200	290	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	242	1221	137	74	611	116	137	358	84	211	305	95
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	390	1354	606	93	730	326	321	772	179	238	590	180
Arrive On Green	0.23	0.38	0.38	0.06	0.21	0.21	0.19	0.27	0.27	0.14	0.22	0.22
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	2854	662	1681	2671	817
Grp Volume(v), veh/h	242	1221	137	74	611	116	137	220	222	211	200	200
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1746	1681	1770	1719
Q Serve(g_s), s	15.5	39.0	7.0	5.2	19.9	5.5	8.6	12.5	12.7	14.8	11.9	12.3
Cycle Q Clear(g_c), s	15.5	39.0	7.0	5.2	19.9	5.5	8.6	12.5	12.7	14.8	11.9	12.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.48
Lane Grp Cap(c), veh/h	390	1354	606	93	730	326	321	479	472	238	391	380
V/C Ratio(X)	0.62	0.90	0.23	0.80	0.84	0.36	0.43	0.46	0.47	0.89	0.51	0.53
Avail Cap(c_a), veh/h	390	1460	653	119	900	402	321	479	472	301	391	380
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)	0.53	0.53	0.53	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	34.9	25.0	56.0	45.7	21.6	42.7	36.5	36.6	50.5	41.1	41.2
Incr Delay (d2), s/veh	1.6	4.3	0.1	24.5	5.9	0.7	0.9	3.2	3.3	21.9	4.7	5.1
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	7.4	19.8	3.1	3.1	10.3	2.5	4.1	6.5	6.6	8.3	6.4	6.4
LnGrp Delay(d),s/veh	43.0	39.2	25.1	80.5	51.6	22.2	43.6	39.7	39.9	72.4	45.8	46.4
LnGrp LOS	D	D	C	F	D	C	D	D	D	E	D	D
Approach Vol, veh/h		1600			801			579			611	
Approach Delay, s/veh		38.6			50.0			40.7			55.2	
Approach LOS		D			D			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.5	36.9	11.1	50.4	27.5	31.0	32.3	29.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	21.5	22.5	8.5	49.5	17.5	26.5	27.5	30.5				
Max Q Clear Time (g_c+I1), s	16.8	14.7	7.2	41.0	10.6	14.3	17.5	21.9				
Green Ext Time (p_c), s	0.2	1.7	0.0	4.9	1.6	1.7	0.6	2.9				
Intersection Summary												
HCM 2010 Ctrl Delay			44.3									
HCM 2010 LOS			D									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project AM Peak Hour
 26: US-395 & Crossroads

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	50	70	40	40	60	70	1810	70	90	1580	90
Future Volume (veh/h)	90	50	70	40	40	60	70	1810	70	90	1580	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	98	54	76	43	43	65	76	1967	76	98	1717	98
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	122	85	119	116	57	87	96	2777	865	123	1988	889
Arrive On Green	0.07	0.13	0.13	0.04	0.09	0.09	0.06	0.58	0.58	0.07	0.59	0.59
Sat Flow, veh/h	1681	664	935	3261	635	960	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	98	0	130	43	0	108	76	1967	76	98	1717	98
Grp Sat Flow(s),veh/h/ln	1681	0	1600	1630	0	1595	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	5.5	0.0	7.4	1.2	0.0	6.3	4.3	28.1	2.2	5.5	41.1	2.7
Cycle Q Clear(g_c), s	5.5	0.0	7.4	1.2	0.0	6.3	4.3	28.1	2.2	5.5	41.1	2.7
Prop In Lane	1.00		0.58	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	122	0	204	116	0	144	96	2777	865	123	1988	889
V/C Ratio(X)	0.80	0.00	0.64	0.37	0.00	0.75	0.79	0.71	0.09	0.80	0.86	0.11
Avail Cap(c_a), veh/h	149	0	350	187	0	299	131	3108	968	236	2373	1061
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	43.9	0.0	39.8	45.3	0.0	42.7	44.8	14.6	9.1	43.8	16.3	8.5
Incr Delay (d2), s/veh	22.3	0.0	3.3	2.0	0.0	7.6	20.2	0.7	0.0	11.0	3.1	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	3.3	0.0	3.5	0.6	0.0	3.1	2.5	12.6	0.9	2.9	19.7	1.1
LnGrp Delay(d),s/veh	66.1	0.0	43.1	47.3	0.0	50.3	65.0	15.2	9.1	54.8	19.4	8.6
LnGrp LOS	E		D	D		D	E	B	A	D	B	A
Approach Vol, veh/h		228			151			2119			1913	
Approach Delay, s/veh		53.0			49.4			16.8			20.7	
Approach LOS		D			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.5	59.9	7.9	16.7	10.0	61.5	11.5	13.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	62.0	5.5	21.0	7.5	68.0	8.5	18.0				
Max Q Clear Time (g_c+I1), s	7.5	30.1	3.2	9.4	6.3	43.1	7.5	8.3				
Green Ext Time (p_c), s	0.1	17.8	0.0	0.5	0.0	13.9	0.0	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			21.5									
HCM 2010 LOS			C									



















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 1: Palmdale Road (SR-18) & Pearmain St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1170	70	120	1020	430	50	210	50	100	190	20
Future Volume (veh/h)	20	1170	70	120	1020	430	50	210	50	100	190	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	21	1232	74	126	1074	453	53	221	53	105	200	21
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	1378	616	183	1668	746	67	289	68	431	1029	107
Arrive On Green	0.02	0.39	0.39	0.14	0.63	0.63	0.04	0.10	0.10	0.26	0.32	0.32
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	2846	669	1681	3237	336
Grp Volume(v), veh/h	21	1232	74	126	1074	453	53	136	138	105	108	113
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	1770	1745	1681	1770	1803
Q Serve(g_s), s	1.5	39.1	2.9	8.1	22.8	7.7	3.8	9.0	9.3	5.9	5.3	5.5
Cycle Q Clear(g_c), s	1.5	39.1	2.9	8.1	22.8	7.7	3.8	9.0	9.3	5.9	5.3	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.19
Lane Grp Cap(c), veh/h	35	1378	616	183	1668	746	67	179	177	431	562	573
V/C Ratio(X)	0.60	0.89	0.12	0.69	0.64	0.61	0.79	0.76	0.78	0.24	0.19	0.20
Avail Cap(c_a), veh/h	77	1519	680	200	1755	785	133	280	276	431	562	573
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	34.3	15.5	49.9	16.1	2.2	57.1	52.5	52.6	35.4	29.7	29.8
Incr Delay (d2), s/veh	15.0	6.8	0.1	5.6	0.5	0.8	18.3	25.3	28.3	0.3	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	0.8	20.3	1.3	4.3	11.1	3.4	2.1	5.6	5.9	2.8	2.6	2.7
LnGrp Delay(d),s/veh	73.3	41.1	15.6	55.6	16.6	3.0	75.4	77.7	80.9	35.7	29.9	29.9
LnGrp LOS	E	D	B	E	B	A	E	E	F	D	C	C
Approach Vol, veh/h		1327			1653			327			326	
Approach Delay, s/veh		40.2			15.8			78.7			31.8	
Approach LOS		D			B			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.3	16.7	16.9	51.2	9.3	42.6	7.0	61.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.0	19.0	13.5	51.5	9.5	27.5	5.5	59.5				
Max Q Clear Time (g_c+I1), s	7.9	11.3	10.1	41.1	5.8	7.5	3.5	24.8				
Green Ext Time (p_c), s	1.1	0.9	2.4	5.6	0.0	1.5	0.0	10.9				
Intersection Summary												
HCM 2010 Ctrl Delay				31.8								
HCM 2010 LOS				C								

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 2: Proj Drwy/Stater Bros Drwy & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	1050	0	0	960	20	0	0	0	130	0	280
Future Volume (veh/h)	170	1050	0	0	960	20	0	0	0	130	0	280
Number	7	4	14	3	8	18				1	6	16
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
Adj Sat Flow, veh/h/ln	1765	1863	0	0	1863	1863				1900	1863	1863
Adj Flow Rate, veh/h	179	1105	0	0	1011	21				137	0	295
Adj No. of Lanes	1	2	0	0	2	1				0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	2	2	0	0	2	2				2	2	2
Cap, veh/h	273	1929	0	0	1221	546				674	0	602
Arrive On Green	0.16	0.54	0.00	0.00	0.11	0.11				0.38	0.00	0.38
Sat Flow, veh/h	1681	3632	0	0	3632	1583				1774	0	1583
Grp Volume(v), veh/h	179	1105	0	0	1011	21				137	0	295
Grp Sat Flow(s),veh/h/ln	1681	1770	0	0	1770	1583				1774	0	1583
Q Serve(g_s), s	12.0	24.8	0.0	0.0	33.5	0.4				6.2	0.0	17.0
Cycle Q Clear(g_c), s	12.0	24.8	0.0	0.0	33.5	0.4				6.2	0.0	17.0
Prop In Lane	1.00		0.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	273	1929	0	0	1221	546				674	0	602
V/C Ratio(X)	0.66	0.57	0.00	0.00	0.83	0.04				0.20	0.00	0.49
Avail Cap(c_a), veh/h	357	2433	0	0	1548	693				674	0	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	0.33	0.33				1.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.00	0.00	1.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	47.1	18.1	0.0	0.0	49.7	3.3				25.0	0.0	28.3
Incr Delay (d2), s/veh	1.2	0.1	0.0	0.0	3.1	0.0				0.1	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	5.7	12.2	0.0	0.0	17.0	0.9				3.1	0.0	16.0
LnGrp Delay(d),s/veh	48.3	18.2	0.0	0.0	52.8	3.3				25.1	0.0	29.0
LnGrp LOS	D	B			D	A				C		C
Approach Vol, veh/h		1284			1032						432	
Approach Delay, s/veh		22.4			51.8						27.7	
Approach LOS		C			D						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6	7	8				
Phs Duration (G+Y+Rc), s				69.9		50.1	24.0	45.9				
Change Period (Y+Rc), s				4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s				82.5		28.5	25.5	52.5				
Max Q Clear Time (g_c+I1), s				26.8		19.0	14.0	35.5				
Green Ext Time (p_c), s				9.4		1.3	5.6	5.9				
Intersection Summary												
HCM 2010 Ctrl Delay				34.3								
HCM 2010 LOS				C								

Intersection

Int Delay, s/veh 42.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	10	50	390	70	70	80	520	1870	60	60	1850	30
Future Vol, veh/h	10	50	390	70	70	80	520	1870	60	60	1850	30
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	-	-	-	-	-	-	300	-	-	0	-	250
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	53	411	74	74	84	547	1968	63	63	1947	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	5248	5200	1947	5400	5169	2000	1947	0	0	2032	0	0
Stage 1	2074	2074	-	3095	3095	-	-	-	-	-	-	-
Stage 2	3174	3126	-	2305	2074	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	0	0	~ 81	0	0	~ 75	~ 300	-	-	278	-	-
Stage 1	70	96	-	~ 17	~ 28	-	-	-	-	-	-	-
Stage 2	15	~ 27	-	~ 51	96	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	-	0	~ 81	-	0	~ 75	~ 300	-	-	278	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	70	74	-	~ 17	0	-	-	-	-	-	-	-
Stage 2	-	0	-	-	74	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s			87.6	0.7
HCM LOS	-	-		

























Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 300	-	-	-	278	-	-
HCM Lane V/C Ratio	1.825	-	-	-	0.227	-	-
HCM Control Delay (s)	\$ 412.9	-	-	-	21.7	-	-
HCM Lane LOS	F	-	-	-	C	-	-
HCM 95th %tile Q(veh)	36.5	-	-	-	0.9	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 4: US-395 & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	180	640	460	390	680	260	460	1530	190	280	1280	90
Future Volume (veh/h)	180	640	460	390	680	260	460	1530	190	280	1280	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	189	674	484	411	716	274	484	1611	200	295	1347	95
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	678	303	321	737	330	357	1504	673	217	1209	541
Arrive On Green	0.09	0.19	0.19	0.10	0.21	0.21	0.43	0.85	0.85	0.13	0.34	0.34
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	189	674	484	411	716	274	484	1611	200	295	1347	95
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	10.5	22.8	14.8	12.5	24.1	19.9	25.5	51.0	2.1	15.5	41.0	5.0
Cycle Q Clear(g_c), s	10.5	22.8	14.8	12.5	24.1	19.9	25.5	51.0	2.1	15.5	41.0	5.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	678	303	321	737	330	357	1504	673	217	1209	541
V/C Ratio(X)	1.29	0.99	1.59	1.28	0.97	0.83	1.36	1.07	0.30	1.36	1.11	0.18
Avail Cap(c_a), veh/h	147	678	303	321	737	330	357	1504	673	217	1209	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.68	0.68	0.68	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.8	48.4	20.1	53.8	47.1	45.5	34.5	9.0	2.6	52.3	39.5	27.7
Incr Delay (d2), s/veh	170.0	32.9	282.7	142.2	20.7	11.7	177.2	44.8	1.1	188.4	63.1	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	11.8	14.2	30.3	11.6	13.9	9.7	29.3	31.9	1.0	18.5	30.6	2.3
LnGrp Delay(d),s/veh	224.7	81.3	302.9	195.9	67.8	57.1	211.7	53.8	3.7	240.7	102.6	28.4
LnGrp LOS	F	F	F	F	E	E	F	F	A	F	F	C
Approach Vol, veh/h		1347			1401			2295			1737	
Approach Delay, s/veh		181.0			103.3			82.7			122.0	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	55.5	17.0	27.5	30.0	45.5	15.0	29.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	15.5	51.0	12.5	23.0	25.5	41.0	10.5	25.0				
Max Q Clear Time (g_c+I1), s	17.5	53.0	14.5	24.8	27.5	43.0	12.5	26.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			116.6									
HCM 2010 LOS			F									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 6: US-395 & Dos Palmas Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	70	100	20	60	130	80	1990	50	140	1770	320
Future Volume (veh/h)	280	70	100	20	60	130	80	1990	50	140	1770	320
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	295	74	105	21	63	137	84	2095	53	147	1863	337
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	575	489	222	74	162	77	1652	739	188	1604	282
Arrive On Green	0.13	0.31	0.31	0.14	0.14	0.14	0.05	0.47	0.47	0.15	0.71	0.71
Sat Flow, veh/h	1681	1863	1583	1137	523	1138	1681	3539	1583	1681	3011	529
Grp Volume(v), veh/h	295	74	105	21	0	200	84	2095	53	147	1072	1128
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1137	0	1662	1681	1770	1583	1681	1770	1769
Q Serve(g_s), s	15.5	3.4	5.9	1.9	0.0	14.1	5.5	56.0	2.2	10.1	63.9	63.9
Cycle Q Clear(g_c), s	15.5	3.4	5.9	1.9	0.0	14.1	5.5	56.0	2.2	10.1	63.9	63.9
Prop In Lane	1.00		1.00	1.00		0.69	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	217	575	489	222	0	236	77	1652	739	188	943	943
V/C Ratio(X)	1.36	0.13	0.21	0.09	0.00	0.85	1.09	1.27	0.07	0.78	1.14	1.20
Avail Cap(c_a), veh/h	217	652	554	268	0	305	77	1652	739	188	943	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.70	0.70	0.70
Uniform Delay (d), s/veh	52.3	29.8	30.7	45.0	0.0	50.2	57.3	32.0	17.7	49.7	17.5	17.5
Incr Delay (d2), s/veh	188.4	0.1	0.2	0.2	0.0	15.7	58.4	121.3	0.0	13.8	71.2	96.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.5	1.8	2.6	0.6	0.0	7.5	3.8	55.1	1.0	5.4	49.0	55.5
LnGrp Delay(d),s/veh	240.7	29.9	30.9	45.2	0.0	65.9	116.3	153.3	17.7	63.4	88.7	113.5
LnGrp LOS	F	C	C	D		E	F	F	B	E	F	F
Approach Vol, veh/h		474			221			2232			2347	
Approach Delay, s/veh		161.3			63.9			148.6			99.0	
Approach LOS		F			E			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.9	60.5		41.6	10.0	68.4	20.0	21.6				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.5	56.0		42.0	5.5	59.0	15.5	22.0				
Max Q Clear Time (g_c+I1), s	12.1	58.0		7.9	7.5	65.9	17.5	16.1				
Green Ext Time (p_c), s	0.0	0.0		2.0	0.0	0.0	0.0	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay	124.2											
HCM 2010 LOS	F											






















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 7: US-395 & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	110	70	80	140	270	170	1740	130	330	1440	140
Future Volume (veh/h)	110	110	70	80	140	270	170	1740	130	330	1440	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	116	116	74	84	147	284	179	1832	137	347	1516	147
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	551	468	340	168	325	203	1489	666	287	1666	745
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.12	0.42	0.42	0.17	0.47	0.47
Sat Flow, veh/h	903	1863	1583	1126	569	1100	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	116	116	74	84	0	431	179	1832	137	347	1516	147
Grp Sat Flow(s),veh/h/ln	903	1863	1583	1126	0	1669	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	6.1	5.6	4.1	7.3	0.0	29.4	12.6	50.5	6.6	20.5	47.6	6.5
Cycle Q Clear(g_c), s	35.5	5.6	4.1	12.9	0.0	29.4	12.6	50.5	6.6	20.5	47.6	6.5
Prop In Lane	1.00		1.00	1.00		0.66	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	551	468	340	0	494	203	1489	666	287	1666	745
V/C Ratio(X)	1.10	0.21	0.16	0.25	0.00	0.87	0.88	1.23	0.21	1.21	0.91	0.20
Avail Cap(c_a), veh/h	106	551	468	340	0	494	203	1489	666	287	1666	745
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	0.00	1.00	0.44	0.44	0.44	0.09	0.09	0.09
Uniform Delay (d), s/veh	58.7	31.7	31.2	36.6	0.0	40.1	51.9	34.8	22.0	49.8	29.4	18.5
Incr Delay (d2), s/veh	116.2	0.2	0.2	0.4	0.0	15.7	17.8	106.3	0.3	97.0	1.0	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	6.9	2.9	1.8	2.3	0.0	15.7	6.8	46.6	2.9	17.2	23.4	2.8
LnGrp Delay(d),s/veh	174.9	31.9	31.4	36.9	0.0	55.9	69.7	141.0	22.3	146.8	30.3	18.6
LnGrp LOS	F	C	C	D		E	E	F	C	F	C	B
Approach Vol, veh/h		306			515			2148			2010	
Approach Delay, s/veh		86.0			52.8			127.5			49.6	
Approach LOS		F			D			F			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	25.0	55.0		40.0	19.0	61.0		40.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	20.5	50.5		35.5	14.5	56.5		35.5				
Max Q Clear Time (g_c+I1), s	22.5	52.5		37.5	14.6	49.6		31.4				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	5.0		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay			85.8									
HCM 2010 LOS			F									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 8: US-395 & La Mesa Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	120	20	20	80	20	10	2230	30	30	1690	10
Future Volume (veh/h)	20	120	20	20	80	20	10	2230	30	30	1690	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1900	1765	1863	1900	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	21	126	21	21	84	21	11	2347	32	32	1779	11
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	184	31	108	170	43	261	2884	39	121	2909	18
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.81	0.81	0.81	1.00	1.00	1.00
Sat Flow, veh/h	1216	1557	260	1171	1439	360	249	3575	49	140	3606	22
Grp Volume(v), veh/h	21	0	147	21	0	105	11	1159	1220	32	872	918
Grp Sat Flow(s),veh/h/ln	1216	0	1817	1171	0	1799	249	1770	1854	140	1770	1859
Q Serve(g_s), s	2.0	0.0	9.3	2.1	0.0	6.6	1.1	44.0	44.6	17.7	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	9.3	11.4	0.0	6.6	1.1	44.0	44.6	62.3	0.0	0.0
Prop In Lane	1.00		0.14	1.00		0.20	1.00		0.03	1.00		0.01
Lane Grp Cap(c), veh/h	138	0	215	108	0	213	261	1427	1496	121	1427	1499
V/C Ratio(X)	0.15	0.00	0.68	0.19	0.00	0.49	0.04	0.81	0.82	0.27	0.61	0.61
Avail Cap(c_a), veh/h	203	0	313	171	0	310	261	1427	1496	121	1427	1499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.43	0.43	0.43
Uniform Delay (d), s/veh	53.5	0.0	50.7	56.2	0.0	49.5	2.3	6.5	6.6	14.4	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	3.8	0.9	0.0	1.8	0.0	0.5	0.5	2.3	0.8	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	0.7	0.0	4.9	0.7	0.0	3.4	0.1	21.1	22.6	0.8	0.3	0.3
LnGrp Delay(d),s/veh	54.0	0.0	54.5	57.1	0.0	51.3	2.4	7.0	7.0	16.6	0.8	0.8
LnGrp LOS	D		D	E		D	A	A	A	B	A	A
Approach Vol, veh/h		168			126			2390			1822	
Approach Delay, s/veh		54.5			52.3			7.0			1.1	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		101.3		18.7		101.3		18.7				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		90.3		20.7		90.3		20.7				
Max Q Clear Time (g_c+I1), s		46.6		11.3		64.3		13.4				
Green Ext Time (p_c), s		42.0		0.9		25.3		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				7.6								
HCM 2010 LOS				A								
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 9: US-395 & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	670	200	180	580	280	410	1560	430	310	1340	50
Future Volume (veh/h)	80	670	200	180	580	280	410	1560	430	310	1340	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	84	705	211	189	611	295	432	1642	453	326	1411	53
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	794	355	133	854	382	330	1386	620	260	1218	46
Arrive On Green	0.06	0.22	0.22	0.08	0.24	0.24	0.20	0.39	0.39	0.15	0.35	0.35
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3479	130
Grp Volume(v), veh/h	84	705	211	189	611	295	432	1642	453	326	717	747
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1840
Q Serve(g_s), s	5.9	23.2	14.3	9.5	19.0	14.5	23.6	47.0	29.3	18.6	42.0	42.0
Cycle Q Clear(g_c), s	5.9	23.2	14.3	9.5	19.0	14.5	23.6	47.0	29.3	18.6	42.0	42.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	104	794	355	133	854	382	330	1386	620	260	619	644
V/C Ratio(X)	0.81	0.89	0.59	1.42	0.72	0.77	1.31	1.18	0.73	1.25	1.16	1.16
Avail Cap(c_a), veh/h	119	855	383	133	885	396	330	1386	620	260	619	644
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	0.59	0.59	0.59	1.00	1.00	1.00	0.74	0.74	0.74
Uniform Delay (d), s/veh	55.6	45.1	41.7	55.3	41.7	20.6	48.2	36.5	31.1	50.7	39.0	39.0
Incr Delay (d2), s/veh	28.9	10.8	2.2	213.2	1.6	5.4	158.6	90.7	7.4	134.9	84.0	85.0
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	3.6	12.5	6.5	12.3	9.4	6.9	25.5	40.4	14.0	18.4	34.9	36.5
LnGrp Delay(d),s/veh	84.5	55.9	43.8	268.4	43.3	26.0	206.8	127.2	38.5	185.6	123.0	124.0
LnGrp LOS	F	E	D	F	D	C	F	F	D	F	F	F
Approach Vol, veh/h		1000			1095			2527			1790	
Approach Delay, s/veh		55.7			77.5			124.9			134.8	
Approach LOS		E			E			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.1	51.5	14.0	31.4	28.1	46.5	11.9	33.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	47.0	9.5	29.0	21.5	42.0	8.5	30.0				
Max Q Clear Time (g_c+I1), s	20.6	49.0	11.5	25.2	25.6	44.0	7.9	21.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.8	0.0	0.0	0.0	3.5				
Intersection Summary												
HCM 2010 Ctrl Delay			108.8									
HCM 2010 LOS			F									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 10: Palmdale Road (SR-18) & Cantina Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1060	50	50	1040	170	40	10	40	220	10	30
Future Volume (veh/h)	10	1060	50	50	1040	170	40	10	40	220	10	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1667	1863	1900
Adj Flow Rate, veh/h	11	1116	53	53	1095	179	42	11	42	232	11	32
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	1289	577	68	1289	577	53	47	181	500	114	332
Arrive On Green	0.04	0.36	0.36	0.04	0.36	0.36	0.03	0.14	0.14	0.16	0.27	0.27
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	339	1295	3079	421	1225
Grp Volume(v), veh/h	11	1116	53	53	1095	179	42	0	53	232	0	43
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	0	1634	1540	0	1647
Q Serve(g_s), s	0.8	35.1	2.6	3.6	34.2	3.9	3.0	0.0	3.5	8.2	0.0	2.3
Cycle Q Clear(g_c), s	0.8	35.1	2.6	3.6	34.2	3.9	3.0	0.0	3.5	8.2	0.0	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.74
Lane Grp Cap(c), veh/h	65	1289	577	68	1289	577	53	0	228	500	0	446
V/C Ratio(X)	0.17	0.87	0.09	0.78	0.85	0.31	0.80	0.00	0.23	0.46	0.00	0.10
Avail Cap(c_a), veh/h	77	1578	706	126	1666	745	105	0	279	500	0	446
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)	0.18	0.18	0.18	0.86	0.86	0.86	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	55.8	35.4	25.1	57.2	35.1	4.3	57.7	0.0	45.9	45.5	0.0	32.8
Incr Delay (d2), s/veh	0.2	0.8	0.0	14.8	3.0	0.3	23.0	0.0	0.5	3.1	0.0	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	0.4	17.2	1.2	2.0	17.3	1.7	1.7	0.0	1.6	3.7	0.0	1.1
LnGrp Delay(d),s/veh	56.1	36.3	25.1	72.0	38.1	4.6	80.7	0.0	46.4	48.6	0.0	33.2
LnGrp LOS	E	D	C	E	D	A	F		D	D		C
Approach Vol, veh/h		1180			1327			95			275	
Approach Delay, s/veh		36.0			34.9			61.6			46.2	
Approach LOS		D			C			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.0	21.3	9.1	48.2	8.3	37.0	9.1	48.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.5	20.5	8.5	53.5	7.5	32.5	5.5	56.5				
Max Q Clear Time (g_c+I1), s	10.2	5.5	5.6	37.1	5.0	4.3	2.8	36.2				
Green Ext Time (p_c), s	0.5	0.4	0.0	6.6	0.0	0.5	1.7	7.5				
Intersection Summary												
HCM 2010 Ctrl Delay				37.3								
HCM 2010 LOS				D								

Intersection

Int Delay, s/veh 28.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	50	160	80	110	120	40	130	80	120	10	40	50
Future Vol, veh/h	50	160	80	110	120	40	130	80	120	10	40	50
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	168	84	116	126	42	137	84	126	11	42	53

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	168	0	0	253	0	0	742	716	211	800	737	147
Stage 1	-	-	-	-	-	-	316	316	-	379	379	-
Stage 2	-	-	-	-	-	-	426	400	-	421	358	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1410	-	-	1312	-	-	332	356	829	303	346	900
Stage 1	-	-	-	-	-	-	695	655	-	643	615	-
Stage 2	-	-	-	-	-	-	606	602	-	610	628	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1410	-	-	1312	-	-	250	307	829	182	298	900
Mov Cap-2 Maneuver	-	-	-	-	-	-	250	307	-	182	298	-
Stage 1	-	-	-	-	-	-	664	626	-	615	555	-
Stage 2	-	-	-	-	-	-	476	543	-	428	600	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.3	3.3	75.7	16.8
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	357	1410	-	-	1312	-	-	409
HCM Lane V/C Ratio	0.973	0.037	-	-	0.088	-	-	0.257
HCM Control Delay (s)	75.7	7.7	0	-	8	0	-	16.8
HCM Lane LOS	F	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	10.8	0.1	-	-	0.3	-	-	1

Intersection	
Intersection Delay, s/veh	16.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↶	↷			↶	↷			↶	↷	↶
Traffic Vol, veh/h	0	80	180	80	0	60	100	50	0	90	240	90
Future Vol, veh/h	0	80	180	80	0	60	100	50	0	90	240	90
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	84	189	84	0	63	105	53	0	95	253	95
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	18.1	14.3	15.8
HCM LOS	C	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	69%	0%	67%	0%	76%
Vol Right, %	0%	0%	100%	0%	31%	0%	33%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	90	240	90	80	260	60	150	40	170
LT Vol	90	0	0	80	0	60	0	40	0
Through Vol	0	240	0	0	180	0	100	0	130
RT Vol	0	0	90	0	80	0	50	0	40
Lane Flow Rate	95	253	95	84	274	63	158	42	179
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.213	0.531	0.18	0.192	0.568	0.151	0.345	0.101	0.395
Departure Headway (Hd)	8.08	7.568	6.852	8.203	7.475	8.606	7.856	8.632	7.948
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	443	475	522	436	482	416	456	414	451
Service Time	5.849	5.337	4.621	5.973	5.245	6.384	5.634	6.412	5.727
HCM Lane V/C Ratio	0.214	0.533	0.182	0.193	0.568	0.151	0.346	0.101	0.397
HCM Control Delay	13	18.7	11.1	12.9	19.7	12.9	14.8	12.4	15.9
HCM Lane LOS	B	C	B	B	C	B	B	B	C
HCM 95th-tile Q	0.8	3.1	0.7	0.7	3.5	0.5	1.5	0.3	1.9

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↵	
Traffic Vol, veh/h	0	40	130	40
Future Vol, veh/h	0	40	130	40
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	42	137	42
Number of Lanes	0	1	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	15.2
HCM LOS	C

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕↔			↵	↕↔			↵	↕↔	
Traffic Vol, veh/h	0	20	200	10	0	80	170	260	0	10	100	130
Future Vol, veh/h	0	20	200	10	0	80	170	260	0	10	100	130
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	211	11	0	84	179	274	0	11	105	137
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	13.1	16.8	13.3
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	20%	0%	100%	87%	0%	100%	18%	0%	100%
Vol Right, %	0%	0%	80%	0%	0%	13%	0%	0%	82%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	67	163	20	133	77	80	113	317	210	40
LT Vol	10	0	0	20	0	0	80	0	0	210	0
Through Vol	0	67	33	0	133	67	0	113	57	0	40
RT Vol	0	0	130	0	0	10	0	0	260	0	0
Lane Flow Rate	11	70	172	21	140	81	84	119	333	221	42
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.024	0.153	0.349	0.049	0.305	0.173	0.181	0.24	0.616	0.503	0.09
Departure Headway (Hd)	8.366	7.866	7.308	8.32	7.82	7.729	7.729	7.229	6.655	8.185	7.685
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	428	455	492	430	459	464	464	496	543	440	466
Service Time	6.12	5.62	5.063	6.076	5.576	5.485	5.475	4.975	4.4	5.937	5.437
HCM Lane V/C Ratio	0.026	0.154	0.35	0.049	0.305	0.175	0.181	0.24	0.613	0.502	0.09
HCM Control Delay	11.3	12	14	11.5	14	12.1	12.2	12.3	19.6	19	11.2
HCM Lane LOS	B	B	B	B	B	B	B	B	C	C	B
HCM 95th-tile Q	0.1	0.5	1.5	0.2	1.3	0.6	0.7	0.9	4.1	2.8	0.3

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕	
Traffic Vol, veh/h	0	210	60	10
Future Vol, veh/h	0	210	60	10
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	221	63	11
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	17
HCM LOS	C

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↶	↷			↶	↷			↶	↷	
Traffic Vol, veh/h	0	20	160	30	0	50	130	10	0	20	50	40
Future Vol, veh/h	0	20	160	30	0	50	130	10	0	20	50	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	168	32	0	53	137	11	0	21	53	42
Number of Lanes	0	1	1	0	0	1	1	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	2
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	2	3	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	2	2
HCM Control Delay	10.7	10	9.1
HCM LOS	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	22%	0%
Vol Thru, %	0%	100%	29%	0%	84%	0%	93%	78%	64%
Vol Right, %	0%	0%	71%	0%	16%	0%	7%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	33	57	20	190	50	140	45	55
LT Vol	20	0	0	20	0	50	0	10	0
Through Vol	0	33	17	0	160	0	130	35	35
RT Vol	0	0	40	0	30	0	10	0	20
Lane Flow Rate	21	35	60	21	200	53	147	47	58
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.039	0.06	0.093	0.036	0.313	0.092	0.234	0.082	0.095
Departure Headway (Hd)	6.622	6.117	5.618	6.224	5.634	6.266	5.713	6.257	5.886
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	541	586	638	576	642	573	629	573	609
Service Time	4.352	3.846	3.347	3.948	3.334	3.992	3.439	3.989	3.618
HCM Lane V/C Ratio	0.039	0.06	0.094	0.036	0.312	0.092	0.234	0.082	0.095
HCM Control Delay	9.6	9.2	8.9	9.2	10.9	9.6	10.2	9.6	9.2
HCM Lane LOS	A	A	A	A	B	A	B	A	A
HCM 95th-tile Q	0.1	0.2	0.3	0.1	1.3	0.3	0.9	0.3	0.3

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			←T	
Traffic Vol, veh/h	0	10	70	20
Future Vol, veh/h	0	10	70	20
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	11	74	21
Number of Lanes	0	0	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9.4
HCM LOS	A

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations		↵	↕			↵	↕			↵	↕	
Traffic Vol, veh/h	0	20	380	80	0	160	430	10	0	80	70	120
Future Vol, veh/h	0	20	380	80	0	160	430	10	0	80	70	120
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	21	400	84	0	168	453	11	0	84	74	126
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	3	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	3	3	3
HCM Control Delay	19.1	19	14.3
HCM LOS	C	C	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	16%	0%	100%	61%	0%	100%	93%	0%	100%
Vol Right, %	0%	0%	84%	0%	0%	39%	0%	0%	7%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	80	47	143	20	253	207	160	287	153	40	67
LT Vol	80	0	0	20	0	0	160	0	0	40	0
Through Vol	0	47	23	0	253	127	0	287	143	0	67
RT Vol	0	0	120	0	0	80	0	0	10	0	0
Lane Flow Rate	84	49	151	21	267	218	168	302	161	42	70
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.212	0.117	0.335	0.049	0.586	0.462	0.382	0.642	0.341	0.11	0.174
Departure Headway (Hd)	9.071	8.571	7.985	8.416	7.916	7.645	8.158	7.658	7.613	9.401	8.901
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	395	417	448	424	453	470	440	471	471	380	401
Service Time	6.849	6.349	5.763	6.189	5.689	5.418	5.927	5.427	5.382	7.186	6.686
HCM Lane V/C Ratio	0.213	0.118	0.337	0.05	0.589	0.464	0.382	0.641	0.342	0.111	0.175
HCM Control Delay	14.3	12.5	14.8	11.6	21.4	16.9	15.9	23.3	14.3	13.4	13.6
HCM Lane LOS	B	B	B	B	C	C	C	C	B	B	B
HCM 95th-tile Q	0.8	0.4	1.5	0.2	3.7	2.4	1.8	4.4	1.5	0.4	0.6

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations		↵	↕↵	
Traffic Vol, veh/h	0	40	100	20
Future Vol, veh/h	0	40	100	20
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	42	105	21
Number of Lanes	0	1	2	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	3
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	13.3
HCM LOS	B





















SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 16: Topaz Road & Bear Valley Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	700	10	100	640	210	10	50	70	120	50	30
Future Volume (veh/h)	70	700	10	100	640	210	10	50	70	120	50	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	74	737	11	105	674	221	11	53	74	126	53	32
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	96	886	396	180	788	258	622	813	691	655	894	760
Arrive On Green	0.06	0.25	0.25	0.11	0.30	0.30	0.01	0.44	0.44	0.06	0.48	0.48
Sat Flow, veh/h	1681	3539	1583	1681	2621	859	1681	1863	1583	1681	1863	1583
Grp Volume(v), veh/h	74	737	11	105	455	440	11	53	74	126	53	32
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1711	1681	1863	1583	1681	1863	1583
Q Serve(g_s), s	5.2	23.7	0.6	7.1	29.0	29.1	0.4	2.0	2.2	4.8	1.8	1.0
Cycle Q Clear(g_c), s	5.2	23.7	0.6	7.1	29.0	29.1	0.4	2.0	2.2	4.8	1.8	1.0
Prop In Lane	1.00		1.00	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	886	396	180	532	514	622	813	691	655	894	760
V/C Ratio(X)	0.77	0.83	0.03	0.58	0.86	0.86	0.02	0.07	0.11	0.19	0.06	0.04
Avail Cap(c_a), veh/h	203	1401	627	273	774	749	677	813	691	722	894	760
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)	0.31	0.31	0.31	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.8	42.6	26.5	51.1	39.5	39.5	18.3	19.6	9.2	15.7	16.7	9.2
Incr Delay (d2), s/veh	4.1	0.8	0.0	3.0	6.5	6.7	0.0	0.2	0.3	0.1	0.1	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	2.5	11.7	0.2	3.5	15.1	14.6	0.2	1.1	1.0	2.2	1.0	0.4
LnGrp Delay(d),s/veh	59.9	43.4	26.5	54.1	46.0	46.2	18.3	19.8	9.5	15.8	16.8	9.3
LnGrp LOS	E	D	C	D	D	D	B	B	A	B	B	A
Approach Vol, veh/h		822			1000			138			211	
Approach Delay, s/veh		44.6			46.9			14.1			15.1	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.3	56.9	17.3	34.6	6.0	62.1	11.3	40.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	11.5	23.5	19.5	47.5	5.5	29.5	14.5	52.5				
Max Q Clear Time (g_c+I1), s	6.8	4.2	9.1	25.7	2.4	3.8	7.2	31.1				
Green Ext Time (p_c), s	0.1	0.7	0.3	4.4	0.0	0.8	0.2	5.0				
Intersection Summary												
HCM 2010 Ctrl Delay			40.9									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 17: Cobalt Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	1160	80	170	890	10	70	60	160	30	60	30
Future Volume (veh/h)	50	1160	80	170	890	10	70	60	160	30	60	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	53	1221	84	179	937	11	74	63	168	32	63	32
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	1401	627	249	1806	21	419	155	413	130	248	115
Arrive On Green	0.04	0.40	0.40	0.15	0.50	0.50	0.34	0.34	0.34	0.34	0.34	0.34
Sat Flow, veh/h	1681	3539	1583	1681	3583	42	1227	450	1201	269	721	334
Grp Volume(v), veh/h	53	1221	84	179	463	485	74	0	231	127	0	0
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1855	1227	0	1651	1324	0	0
Q Serve(g_s), s	3.8	38.2	4.1	12.2	21.1	21.1	0.0	0.0	12.8	0.8	0.0	0.0
Cycle Q Clear(g_c), s	3.8	38.2	4.1	12.2	21.1	21.1	9.8	0.0	12.8	13.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.73	0.25		0.25
Lane Grp Cap(c), veh/h	67	1401	627	249	892	935	419	0	567	493	0	0
V/C Ratio(X)	0.79	0.87	0.13	0.72	0.52	0.52	0.18	0.00	0.41	0.26	0.00	0.00
Avail Cap(c_a), veh/h	133	1666	745	315	1025	1075	419	0	567	493	0	0
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)	0.61	0.61	0.61	0.50	0.50	0.50	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	57.1	33.4	23.1	48.8	20.0	20.0	29.1	0.0	30.1	28.1	0.0	0.0
Incr Delay (d2), s/veh	11.9	2.9	0.1	3.0	0.2	0.2	0.9	0.0	2.2	1.3	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	2.0	19.2	1.8	5.9	10.3	10.8	1.9	0.0	6.2	3.4	0.0	0.0
LnGrp Delay(d),s/veh	69.0	36.4	23.2	51.7	20.2	20.2	30.0	0.0	32.2	29.4	0.0	0.0
LnGrp LOS	E	D	C	D	C	C	C		C	C		
Approach Vol, veh/h		1358			1127			305			127	
Approach Delay, s/veh		36.8			25.2			31.7			29.4	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		45.7	22.3	52.0		45.7	9.3	65.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		27.5	22.5	56.5		27.5	9.5	69.5				
Max Q Clear Time (g_c+I1), s		14.8	14.2	40.2		15.6	5.8	23.1				
Green Ext Time (p_c), s		1.9	3.6	7.3		1.8	0.0	6.5				
Intersection Summary												
HCM 2010 Ctrl Delay			31.5									
HCM 2010 LOS			C									

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations			↕				↕				↕	
Traffic Vol, veh/h	0	40	160	10	0	20	210	80	0	10	10	10
Future Vol, veh/h	0	40	160	10	0	20	210	80	0	10	10	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	42	168	11	0	21	221	84	0	11	11	11
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	9.8	10.7	8.6
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	19%	6%	36%
Vol Thru, %	33%	76%	68%	14%
Vol Right, %	33%	5%	26%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	210	310	140
LT Vol	10	40	20	50
Through Vol	10	160	210	20
RT Vol	10	10	80	70
Lane Flow Rate	32	221	326	147
Geometry Grp	1	1	1	1
Degree of Util (X)	0.046	0.292	0.408	0.204
Departure Headway (Hd)	5.261	4.76	4.503	4.985
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	674	752	796	715
Service Time	3.344	2.815	2.552	3.05
HCM Lane V/C Ratio	0.047	0.294	0.41	0.206
HCM Control Delay	8.6	9.8	10.7	9.3
HCM Lane LOS	A	A	B	A
HCM 95th-tile Q	0.1	1.2	2	0.8

Intersection
























Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	50	20	70
Future Vol, veh/h	0	50	20	70
Peak Hour Factor	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	53	21	74
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	9.3
HCM LOS	A
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 19: Amethyst Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	950	110	200	940	60	130	210	110	50	310	90
Future Volume (veh/h)	80	950	110	200	940	60	130	210	110	50	310	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	84	1000	116	211	989	63	137	221	116	53	326	95
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	105	1085	485	241	1309	83	161	582	495	147	422	123
Arrive On Green	0.02	0.10	0.10	0.14	0.39	0.39	0.10	0.31	0.31	0.09	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	1681	3379	215	1681	1863	1583	1681	1387	404
Grp Volume(v), veh/h	84	1000	116	211	518	534	137	221	116	53	0	421
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1825	1681	1863	1583	1681	0	1791
Q Serve(g_s), s	6.0	33.6	6.1	14.8	30.4	30.4	9.6	11.1	6.5	3.6	0.0	25.7
Cycle Q Clear(g_c), s	6.0	33.6	6.1	14.8	30.4	30.4	9.6	11.1	6.5	3.6	0.0	25.7
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	105	1085	485	241	686	707	161	582	495	147	0	545
V/C Ratio(X)	0.80	0.92	0.24	0.87	0.76	0.76	0.85	0.38	0.23	0.36	0.00	0.77
Avail Cap(c_a), veh/h	119	1106	495	245	686	707	161	582	495	147	0	545
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	0.46	0.43	0.43	0.43	0.98	0.98	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	58.0	52.5	23.3	50.3	31.8	31.8	53.4	32.2	30.6	51.6	0.0	38.0
Incr Delay (d2), s/veh	14.7	6.5	0.1	14.0	2.1	2.0	32.2	1.8	1.1	1.5	0.0	10.2
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	3.2	17.5	2.7	7.8	15.2	15.7	5.9	6.0	3.0	1.7	0.0	14.2
LnGrp Delay(d),s/veh	72.7	59.0	23.4	64.3	33.9	33.9	85.6	34.0	31.7	53.1	0.0	48.2
LnGrp LOS	E	E	C	E	C	C	F	C	C	D		D
Approach Vol, veh/h		1200			1263			474			474	
Approach Delay, s/veh		56.5			39.0			48.3			48.7	
Approach LOS		E			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	42.0	21.7	41.3	16.0	41.0	12.0	51.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	9.5	37.5	17.5	37.5	11.5	35.5	8.5	46.5				
Max Q Clear Time (g_c+I1), s	5.6	13.1	16.8	35.6	11.6	27.7	8.0	32.4				
Green Ext Time (p_c), s	0.9	1.4	0.5	1.2	0.0	1.5	0.0	5.6				
Intersection Summary												
HCM 2010 Ctrl Delay			47.8									
HCM 2010 LOS			D									

























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 20: Amethyst Road & Luna Road

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	120	90	30	150	40	150	450	30	50	410	60
Future Volume (veh/h)	50	120	90	30	150	40	150	450	30	50	410	60
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	53	126	95	32	158	42	158	474	32	53	432	63
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	283	240	46	197	52	188	1342	600	490	1978	885
Arrive On Green	0.04	0.15	0.15	0.03	0.14	0.14	0.04	0.13	0.13	0.29	0.56	0.56
Sat Flow, veh/h	1681	1863	1583	1681	1419	377	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	53	126	95	32	0	200	158	474	32	53	432	63
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1681	0	1796	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	3.8	7.4	6.5	2.3	0.0	12.9	11.2	14.7	1.8	2.8	7.4	2.2
Cycle Q Clear(g_c), s	3.8	7.4	6.5	2.3	0.0	12.9	11.2	14.7	1.8	2.8	7.4	2.2
Prop In Lane	1.00		1.00	1.00		0.21	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	283	240	46	0	250	188	1342	600	490	1978	885
V/C Ratio(X)	0.79	0.45	0.40	0.70	0.00	0.80	0.84	0.35	0.05	0.11	0.22	0.07
Avail Cap(c_a), veh/h	189	536	455	119	0	442	371	1342	600	490	1978	885
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	57.1	46.3	45.9	57.9	0.0	50.0	56.7	39.0	23.4	31.1	13.3	12.2
Incr Delay (d2), s/veh	18.0	1.1	1.1	17.3	0.0	5.9	9.5	0.7	0.2	0.1	0.2	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	2.1	3.9	2.9	1.3	0.0	6.9	5.7	7.4	0.8	1.3	3.6	1.0
LnGrp Delay(d),s/veh	75.1	47.4	47.0	75.1	0.0	55.9	66.2	39.8	23.6	31.1	13.5	12.3
LnGrp LOS	E	D	D	E		E	E	D	C	C	B	B
Approach Vol, veh/h		274			232			664			548	
Approach Delay, s/veh		52.6			58.5			45.3			15.0	
Approach LOS		D			E			D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	39.5	50.0	7.8	22.7	17.9	71.6	9.3	21.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	13.5	45.5	8.5	34.5	26.5	32.5	13.5	29.5				
Max Q Clear Time (g_c+I1), s	4.8	16.7	4.3	9.4	13.2	9.4	5.8	14.9				
Green Ext Time (p_c), s	0.2	3.0	0.0	2.1	0.3	2.8	0.0	1.8				
Intersection Summary												
HCM 2010 Ctrl Delay			38.6									
HCM 2010 LOS			D									
























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 21: El Evado Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	800	100	170	1020	220	120	520	80	220	410	120
Future Volume (veh/h)	170	800	100	170	1020	220	120	520	80	220	410	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	179	842	105	179	1074	232	126	547	84	232	432	126
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	203	969	433	294	1159	519	164	782	350	304	1077	673
Arrive On Green	0.12	0.27	0.27	0.17	0.33	0.33	0.10	0.22	0.22	0.18	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	179	842	105	179	1074	232	126	547	84	232	432	126
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	12.6	27.2	6.2	11.8	35.2	13.9	8.8	17.1	5.2	15.7	11.6	0.0
Cycle Q Clear(g_c), s	12.6	27.2	6.2	11.8	35.2	13.9	8.8	17.1	5.2	15.7	11.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	969	433	294	1159	519	164	782	350	304	1077	673
V/C Ratio(X)	0.88	0.87	0.24	0.61	0.93	0.45	0.77	0.70	0.24	0.76	0.40	0.19
Avail Cap(c_a), veh/h	203	1135	508	294	1194	534	164	782	350	304	1077	673
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)	0.46	0.46	0.46	0.27	0.27	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.9	41.5	33.9	45.7	38.9	31.8	52.8	43.1	38.5	46.7	33.1	21.6
Incr Delay (d2), s/veh	18.2	3.2	0.1	1.0	4.0	0.2	19.7	5.2	1.6	10.9	1.1	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	6.8	13.8	2.7	5.6	17.8	6.1	5.0	8.9	2.5	8.2	5.8	2.7
LnGrp Delay(d),s/veh	70.1	44.7	34.0	46.8	43.0	32.0	72.6	48.3	40.1	57.7	34.2	22.2
LnGrp LOS	E	D	C	D	D	C	E	D	D	E	C	C
Approach Vol, veh/h		1126			1485			757			790	
Approach Delay, s/veh		47.7			41.7			51.4			39.2	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.2	31.0	25.5	37.4	16.2	41.0	19.0	43.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	20.5	26.5	16.5	38.5	10.5	36.5	14.5	40.5				
Max Q Clear Time (g_c+I1), s	17.7	19.1	13.8	29.2	10.8	13.6	14.6	37.2				
Green Ext Time (p_c), s	0.3	2.1	0.3	3.6	0.0	3.0	0.0	2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			44.6									
HCM 2010 LOS			D									























SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan Without Project PM Peak Hour
 22: Amargosa Road & Palmdale Road (SR-18)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	930	140	140	1120	130	200	470	100	200	430	230
Future Volume (veh/h)	130	930	140	140	1120	130	200	470	100	200	430	230
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	137	979	147	147	1179	137	211	495	105	211	453	242
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	1096	490	239	1259	563	257	750	158	236	550	292
Arrive On Green	0.10	0.31	0.31	0.14	0.36	0.36	0.15	0.26	0.26	0.14	0.25	0.25
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	2910	614	1681	2237	1186
Grp Volume(v), veh/h	137	979	147	147	1179	137	211	300	300	211	358	337
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1681	1770	1583	1681	1770	1754	1681	1770	1653
Q Serve(g_s), s	9.6	31.7	8.5	9.9	38.6	4.9	14.6	18.2	18.4	14.8	22.9	23.2
Cycle Q Clear(g_c), s	9.6	31.7	8.5	9.9	38.6	4.9	14.6	18.2	18.4	14.8	22.9	23.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.35	1.00		0.72
Lane Grp Cap(c), veh/h	161	1096	490	239	1259	563	257	456	452	236	435	406
V/C Ratio(X)	0.85	0.89	0.30	0.62	0.94	0.24	0.82	0.66	0.66	0.89	0.82	0.83
Avail Cap(c_a), veh/h	161	1194	534	239	1283	574	257	456	452	259	435	406
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)	0.54	0.54	0.54	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	39.5	31.5	48.4	37.4	12.1	49.3	39.8	39.9	50.7	42.8	42.9
Incr Delay (d2), s/veh	20.1	4.8	0.2	4.7	12.7	0.2	18.9	7.2	7.5	28.2	16.0	17.6
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	5.4	16.2	3.7	4.9	21.1	2.1	8.1	9.8	9.9	8.7	13.2	12.6
LnGrp Delay(d),s/veh	73.5	44.4	31.7	53.1	50.1	12.3	68.2	47.0	47.3	78.9	58.7	60.4
LnGrp LOS	E	D	C	D	D	B	E	D	D	E	E	E
Approach Vol, veh/h		1263			1463			811			906	
Approach Delay, s/veh		46.1			46.9			52.7			64.1	
Approach LOS		D			D			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.4	35.4	21.5	41.6	22.8	34.0	16.0	47.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	28.5	14.5	40.5	17.5	29.5	11.5	43.5				
Max Q Clear Time (g_c+I1), s	16.8	20.4	11.9	33.7	16.6	25.2	11.6	40.6				
Green Ext Time (p_c), s	0.1	2.5	0.2	3.5	0.1	1.6	0.0	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay			51.2									
HCM 2010 LOS			D									

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

























General Plan Without Project PM Peak Hour
 26: US-395 & Crossroads

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	60	140	80	60	120	150	2180	110	170	1960	180
Future Volume (veh/h)	150	60	140	80	60	120	150	2180	110	170	1960	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	163	65	152	87	65	130	163	2370	120	185	2130	196
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	81	189	128	68	135	138	2615	814	198	1940	868
Arrive On Green	0.08	0.17	0.17	0.04	0.13	0.13	0.08	0.54	0.54	0.12	0.58	0.58
Sat Flow, veh/h	1681	470	1100	3261	526	1053	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	163	0	217	87	0	195	163	2370	120	185	2130	196
Grp Sat Flow(s),veh/h/ln	1681	0	1571	1630	0	1579	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	11.5	0.0	18.6	3.7	0.0	17.2	11.5	62.0	5.6	15.3	81.0	8.9
Cycle Q Clear(g_c), s	11.5	0.0	18.6	3.7	0.0	17.2	11.5	62.0	5.6	15.3	81.0	8.9
Prop In Lane	1.00		0.70	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	0	269	128	0	203	138	2615	814	198	1940	868
V/C Ratio(X)	1.18	0.00	0.81	0.68	0.00	0.96	1.18	0.91	0.15	0.93	1.10	0.23
Avail Cap(c_a), veh/h	138	0	269	128	0	203	138	2615	814	198	1940	868
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	64.3	0.0	55.8	66.4	0.0	60.6	64.3	28.8	15.9	61.2	29.5	14.3
Incr Delay (d2), s/veh	133.3	0.0	16.3	13.6	0.0	51.7	133.3	5.1	0.1	45.5	52.8	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	10.4	0.0	9.3	1.9	0.0	10.4	10.4	28.7	2.3	9.6	51.4	3.7
LnGrp Delay(d),s/veh	197.5	0.0	72.0	80.0	0.0	112.4	197.5	33.9	16.0	106.7	82.3	14.4
LnGrp LOS	F		E	E		F	F	C	B	F	F	B
Approach Vol, veh/h		380			282			2653			2511	
Approach Delay, s/veh		125.9			102.4			43.1			78.8	
Approach LOS		F			F			D			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	80.5	10.0	28.5	16.0	85.5	16.0	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	76.0	5.5	24.0	11.5	81.0	11.5	18.0				
Max Q Clear Time (g_c+I1), s	17.3	64.0	5.7	20.6	13.5	83.0	13.5	19.2				
Green Ext Time (p_c), s	0.0	10.2	0.0	0.4	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			66.7									
HCM 2010 LOS			E									

GENERAL PLAN WITH PROJECT CONDITIONS

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan With Phase 1 & 2 Project AM Peak Hour
 1: Palmdale Road (SR-18) & Pearmain St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1078	115	190	856	97	10	115	10	153	325	20
Future Volume (veh/h)	10	1078	115	190	856	97	10	115	10	153	325	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	11	1135	121	200	901	102	11	121	11	161	342	21
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	21	1254	561	225	1656	741	21	188	17	524	1208	74
Arrive On Green	0.01	0.35	0.35	0.25	0.94	0.94	0.01	0.06	0.06	0.31	0.36	0.36
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	3285	295	1681	3389	207
Grp Volume(v), veh/h	11	1135	121	200	901	102	11	65	67	161	178	185
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	1770	1811	1681	1770	1826
Q Serve(g_s), s	0.8	36.6	5.5	13.0	4.0	0.2	0.8	4.3	4.4	8.7	8.6	8.7
Cycle Q Clear(g_c), s	0.8	36.6	5.5	13.0	4.0	0.2	0.8	4.3	4.4	8.7	8.6	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.16	1.00		0.11
Lane Grp Cap(c), veh/h	21	1254	561	225	1656	741	21	101	103	524	631	651
V/C Ratio(X)	0.51	0.91	0.22	0.89	0.54	0.14	0.51	0.64	0.65	0.31	0.28	0.28
Avail Cap(c_a), veh/h	77	1342	600	273	1725	772	77	288	294	524	631	651
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.9	36.8	20.2	44.0	2.2	0.2	58.9	55.4	55.4	31.4	27.6	27.7
Incr Delay (d2), s/veh	17.6	8.6	0.2	19.9	0.2	0.1	17.6	26.9	27.7	0.3	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	0.5	19.3	2.4	7.6	1.5	0.1	0.5	2.9	3.0	4.1	4.2	4.4
LnGrp Delay(d),s/veh	76.4	45.5	20.4	63.9	2.4	0.2	76.4	82.3	83.1	31.7	27.9	27.9
LnGrp LOS	E	D	C	E	A	A	E	F	F	C	C	C
Approach Vol, veh/h		1267			1203			143			524	
Approach Delay, s/veh		43.4			12.4			82.2			29.1	
Approach LOS		D			B			F			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	41.9	11.4	19.7	47.0	6.0	47.3	6.0	60.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	19.5	18.5	45.5	5.5	32.5	5.5	58.5				
Max Q Clear Time (g_c+I1), s	10.7	6.4	15.0	38.6	2.8	10.7	2.8	6.0				
Green Ext Time (p_c), s	0.2	0.5	0.2	3.9	0.0	2.1	0.0	6.8				
Intersection Summary												
HCM 2010 Ctrl Delay			30.9									
HCM 2010 LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↖	↗
Traffic Volume (veh/h)	70	1068	58	69	732	10	41	3	45	70	3	140
Future Volume (veh/h)	70	1068	58	69	732	10	41	3	45	70	3	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	74	1124	61	73	771	11	43	3	47	74	3	147
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	1315	588	91	889	398	159	24	142	0	860	731
Arrive On Green	0.17	0.37	0.37	0.11	0.50	0.50	0.20	0.20	0.20	0.23	0.46	0.46
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	585	125	725	0	1863	1583
Grp Volume(v), veh/h	74	1124	61	73	771	11	93	0	0	0	3	147
Grp Sat Flow(s), veh/h	1681	1770	1583	1681	1770	1583	1435	0	0	0	1863	1583
Q Serve(g_s), s	4.6	35.1	3.0	5.1	23.0	0.4	4.0	0.0	0.0	0.0	0.1	6.6
Cycle Q Clear(g_c), s	4.6	35.1	3.0	5.1	23.0	0.4	6.3	0.0	0.0	0.0	0.1	6.6
Prop In Lane	1.00		1.00	1.00		1.00	0.46		0.51	0.00		1.00
Lane Grp Cap(c), veh/h	293	1315	588	91	889	398	325	0	0	0	860	731
V/C Ratio(X)	0.25	0.85	0.10	0.80	0.87	0.03	0.29	0.00	0.00	0.00	0.00	0.20
Avail Cap(c_a), veh/h	293	1725	772	203	1784	798	325	0	0	0	860	731
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	42.8	34.7	24.7	52.8	28.1	22.5	41.2	0.0	0.0	0.0	17.4	19.2
Incr Delay (d2), s/veh	0.2	1.5	0.0	14.6	2.7	0.0	2.2	0.0	0.0	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%), veh/h	17.5	1.3	2.7	11.5	0.2	2.8	0.0	0.0	0.0	0.0	0.1	3.0
LnGrp Delay(d), s/veh	48.0	36.3	24.7	67.4	30.8	22.5	43.4	0.0	0.0	0.0	17.4	19.8
LnGrp LOS	D	D	C	E	C	C	D				B	B
Approach Vol, veh/h		1259			855			93			150	
Approach Delay, s/veh		36.1			33.8			43.4			19.7	
Approach LOS		D			C			D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+R), s	42.0	28.0	11.0	49.1		59.9	25.5	34.6				
Change Period (Y+R), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (G_max), s	23.5	14.5	58.5	33.5		12.5	60.5					
Max Q Clear Time (g_c+1), s	7.1	37.1	8.6	6.6		25.0						
Green Ext Time (p_c), s	0.4	0.1	7.5	0.5		0.1	5.1					
Intersection Summary												
HCM 2010 Ctrl Delay			34.5									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	↕
Traffic Vol, veh/h	40	50	355	40	30	40	195	1756	60	60	1388	70
Future Vol, veh/h	40	50	355	40	30	40	195	1756	60	60	1388	70
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	-	-	-	-	-	-	300	-	-	0	-	250
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	53	374	42	32	42	205	1848	63	63	1461	74

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow	Al3914 3908	1461 4128	3951 1880	1535 0
Stage 1	1587 1587	- 2290	2290 -	- -
Stage 2	2327 2321	- 1838	1661 -	- -
Critical Hdwy	7.12 6.52	6.22 7.12	6.52 6.22	4.12 -
Critical Hdwy Stg 1	6.12 5.52	- 6.12	5.52 -	- -
Critical Hdwy Stg 2	6.12 5.52	- 6.12	5.52 -	- -
Follow-up Hdwy	3.518 4.018	3.318 3.518	4.018 3.318	2.218 -
Pot Cap-1 Maneuver	~ 2 ~ 3	~ 158 ~ 1	~ 3 89	433 -
Stage 1	136 168	- 52	74 -	- -
Stage 2	50 71	- 97	154 -	- -
Platoon blocked, %				- -
Mov Cap-1 Maneuver	- ~ 1	~ 158 -	~ 1 89	433 -
Mov Cap-2 Maneuver	- ~ 1	- -	~ 1 -	- -
Stage 1	72 134	- ~ 27	39 -	- -
Stage 2	~ 3 ~ 37	- -	123 -	- -

Approach	EB	WB	NB	SB
HCM Control Delay, s			2	0.8
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	433	-	-	-	-	310	-	-
HCM Lane V/C Ratio	0.474	-	-	-	-	0.204	-	-
HCM Control Delay (s)	20.6	-	-	-	-	19.6	-	-
HCM Lane LOS	C	-	-	-	-	C	-	-
HCM 95th %tile Q(veh)	2.5	-	-	-	-	0.7	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	646	635	224	471	170	464	1347	251	230	1017	76
Future Volume (veh/h)	174	646	635	224	471	170	464	1347	251	230	1017	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	183	680	668	236	496	179	488	1418	264	242	1071	80
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	228	796	356	244	596	266	413	1445	647	231	1062	475
Arrive On Green	0.14	0.22	0.22	0.08	0.17	0.17	0.08	0.13	0.13	0.14	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	183	680	668	236	496	179	488	1418	264	242	1071	80
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	12.7	22.1	27.0	9.2	16.3	9.5	29.5	47.9	13.5	16.5	36.0	4.5
Cycle Q Clear(g_c), s	12.7	22.1	27.0	9.2	16.3	9.5	29.5	47.9	13.5	16.5	36.0	4.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	228	796	356	244	596	266	413	1445	647	231	1062	475
V/C Ratio(X)	0.80	0.85	1.88	0.97	0.83	0.67	1.18	0.98	0.41	1.05	1.01	0.17
Avail Cap(c_a), veh/h	228	796	356	244	737	330	413	1445	647	231	1062	475
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	44.6	46.5	55.1	48.3	25.9	55.1	51.5	21.1	51.8	42.0	31.0
Incr Delay (d2), s/veh	18.2	9.0	404.3	42.4	5.4	3.0	103.8	19.6	1.9	72.1	29.8	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	7.0	11.8	51.8	5.3	8.4	4.4	25.6	27.4	6.3	12.3	21.9	2.1
LnGrp Delay(d),s/veh	68.4	53.6	450.8	97.5	53.7	29.0	158.9	71.1	23.0	123.9	71.8	31.7
LnGrp LOS	E	D	F	F	D	C	F	E	C	F	F	C
Approach Vol, veh/h		1531			911			2170			1393	
Approach Delay, s/veh		228.7			60.2			85.0			78.5	
Approach LOS		F			E			F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	53.5	14.0	31.5	34.0	40.5	20.8	24.7				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	49.0	9.5	27.0	29.5	36.0	11.5	25.0				
Max Q Clear Time (g_c+I1), s	11.5	49.9	11.2	29.0	31.5	38.0	14.7	18.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9				
Intersection Summary												
HCM 2010 Ctrl Delay			116.4									
HCM 2010 LOS			F									



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	79	87	179	1982	1850	24		
Future Volume (veh/h)	79	87	179	1982	1850	24		
Number	7	14	5	2	6	16		
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		
Adj Sat Flow, veh/h	1765	1863	1765	1863	1863	1863		
Adj Flow Rate, veh/h	83	92	188	2086	1947	25		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	128	120	341	3005	2153	963		
Arrive On Green	0.08	0.08	0.41	1.00	0.41	0.41		
Sat Flow, veh/h	1681	1583	1681	3632	3632	1583		
Grp Volume(v), veh/h	83	92	188	2086	1947	25		
Grp Sat Flow(s), veh/h	1681	1583	1681	3632	3632	1583		
Q Serve(g_s), s	5.8	6.8	10.3	0.0	61.9	1.1		
Cycle Q Clear(g_c), s	5.8	6.8	10.3	0.0	61.9	1.1		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	128	120	341	3005	2153	963		
V/C Ratio(X)	0.65	0.76	0.55	0.69	0.90	0.03		
Avail Cap(c_a), veh/h	252	237	341	3005	2153	963		
HCM Platoon Ratio	1.00	1.00	2.00	2.00	0.67	0.67		
Upstream Filter(l)	1.00	1.00	0.09	0.09	1.00	1.00		
Uniform Delay (d), s/veh	50.9	54.4	31.4	0.0	32.3	14.3		
Incr Delay (d2), s/veh	5.4	9.6	0.2	0.1	6.8	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	2.9	6.2	4.7	0.1	32.3	0.5		
LnGrp Delay(d),s/veh	59.3	64.0	31.6	0.1	39.1	14.3		
LnGrp LOS	E	E	C	A	D	B		
Approach Vol, veh/h	175			2274	1972			
Approach Delay, s/veh	61.8			2.7	38.8			
Approach LOS	E			A	D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc),s		10.6		13.6	28.9	77.5		
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5		
Max Green Setting (Gmax),s		93.0		18.0	15.5	73.0		
Max Q Clear Time (g_c+I1),s		12.0		8.8	12.3	63.9		
Green Ext Time (p_c), s		32.7		0.3	0.1	7.3		
Intersection Summary								
HCM 2010 Ctrl Delay			21.1					
HCM 2010 LOS			C					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	295	60	100	60	60	346	40	1601	30	213	1719	205
Future Volume (veh/h)	295	60	100	60	60	346	40	1601	30	213	1719	205
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	1811	63	105	63	63	364	42	1685	32	224	1809	216
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	667	567	245	44	253	53	1475	660	189	1589	186
Arrive On Green	0.14	0.36	0.36	0.18	0.18	0.18	0.06	0.83	0.83	0.23	1.00	1.00
Sat Flow, veh/h	1681	1863	1583	1149	239	1380	1681	3539	1583	1681	3193	374
Grp Volume(v), veh/h	1811	63	105	63	0	427	42	1685	32	224	987	1038
Grp Sat Flow(s), veh/h	1681	1863	1583	1149	0	1619	1681	1770	1583	1681	1770	1797
Q Serve(g_s), s	16.5	2.7	5.5	5.8	0.0	22.0	3.0	50.0	0.4	13.5	59.7	59.7
Cycle Q Clear(g_c), s	16.5	2.7	5.5	8.5	0.0	22.0	3.0	50.0	0.4	13.5	59.7	59.7
Prop In Lane	1.00	1.00	1.00	1.00	0.85	1.00	1.00	1.00	1.00	1.00	0.21	0.21
Lane Grp Cap(c), veh/h	231	667	567	245	0	297	53	1475	660	189	881	894
V/C Ratio(X)	1.35	0.09	0.19	0.26	0.00	1.44	0.80	1.14	0.05	1.18	1.12	1.16
Avail Cap(c_a), veh/h	231	667	567	245	0	297	77	1475	660	189	881	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.48	0.48	0.48
Uniform Delay (d), s/veh	51.6	25.6	26.5	44.7	0.0	49.0	55.9	10.0	5.9	46.5	0.3	0.3
Incr Delay (d2), s/veh	1.6	0.1	0.2	0.5	0.0	15.5	3.3	65.1	0.0	106.3	62.0	78.9
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	1.4	2.4	1.9	0.0	27.6	1.4	35.4	0.2	11.8	15.3	19.7	19.7
LnGrp Delay(d), s/veh	28.3	25.6	26.6	45.2	0.0	24.5	59.2	75.1	5.9	152.8	62.3	79.2
LnGrp LOS	F	C	C	D		F	E	F	A	F	F	F
Approach Vol, veh/h	479			490			1759		2249			
Approach Delay, s/veh	160.7			236.3			73.4		79.1			
Approach LOS	F			F			E		E			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+R), s	47.5	47.5		47.5	8.3	64.2	21.0	26.5				
Change Period (Y+R), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	43.0	43.0		43.0	5.5	58.0	16.5	22.0				
Max Q Clear Time (G+Y+R), s	7.5	7.5		7.5	5.0	61.7	18.5	24.0				
Green Ext Time (p_c), s	0.0	0.0		0.6	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay		100.4										
HCM 2010 LOS			F									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	105	110	150	140	90	490	90	1146	60	387	1318	135
Future Volume (veh/h)	105	110	150	140	90	490	90	1146	60	387	1318	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	111	116	158	147	95	516	95	1206	63	407	1387	142
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	73	722	614	422	98	531	105	1106	495	315	1548	693
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.04	0.21	0.21	0.06	0.14	0.14
Sat Flow, veh/h	765	1863	1583	1043	252	1369	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	111	116	158	147	0	611	95	1206	63	407	1387	142
Grp Sat Flow(s), veh/h	765	1863	1583	1043	0	1621	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	2.0	4.9	8.1	12.9	0.0	44.5	6.8	37.5	3.9	22.5	46.2	9.5
Cycle Q Clear(g_c), s	46.5	4.9	8.1	17.7	0.0	44.5	6.8	37.5	3.9	22.5	46.2	9.5
Prop In Lane	1.00	1.00	1.00	1.00	0.84	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	73	722	614	422	0	628	105	1106	495	315	1548	693
V/C Ratio(X)	1.52	0.16	0.26	0.35	0.00	0.97	0.90	1.09	0.13	1.29	0.90	0.20
Avail Cap(c_a), veh/h	73	722	614	422	0	628	105	1106	495	315	1548	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	0.33	0.33	0.33
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.85	0.85	0.85	0.09	0.09	0.09
Uniform Delay (d), s/veh	59.8	24.0	25.0	29.8	0.0	36.1	57.1	47.4	34.1	56.3	48.6	32.9
Incr Delay (d2), s/veh	21.9	0.1	0.2	0.5	0.0	29.0	52.8	53.4	0.5	133.4	0.9	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	0.0	1.2	3.6	3.8	0.0	24.9	4.7	26.5	1.8	22.2	22.9	4.2
LnGrp Delay(d), s/veh	51.7	24.1	25.2	30.3	0.0	65.2	110.0	100.9	34.6	189.7	49.5	33.0
LnGrp LOS	F	C	C	C		E	F	F	C	F	D	C
Approach Vol, veh/h		385			758			1364			1936	
Approach Delay, s/veh		119.0			58.4			98.5			77.8	
Approach LOS		F			E			F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	47.0	42.0		51.0	12.0	57.0		51.0				
Change Period (Y+R), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (G_max), s	37.5	37.5		46.5	7.5	52.5		46.5				
Max Q Clear Time (Q_c), s	39.5	39.5		48.5	8.8	48.2		46.5				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	3.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			84.4									
HCM 2010 LOS			F									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	3	60	10	20	90	25	10	1388	10	21	1895	12
Future Volume (veh/h)	3	60	10	20	90	25	10	1388	10	21	1895	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1900	1765	1863	1900	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	14	63	11	21	95	26	11	1461	11	22	1995	13
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	147	26	131	134	37	227	2989	22	302	2992	19
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	0.83	0.83	0.83	1.00	1.00	1.00
Sat Flow, veh/h	1199	1545	270	1251	1409	386	202	3600	27	339	3605	23
Grp Volume(v), veh/h	14	0	74	21	0	121	11	718	754	22	978	1030
Grp Sat Flow(s), veh/h	1199	0	1815	1251	0	1795	202	1770	1858	339	1770	1859
Q Serve(g_s), s	1.4	0.0	4.6	1.9	0.0	7.9	1.2	13.9	13.9	1.2	0.0	0.0
Cycle Q Clear(g_c), s	9.2	0.0	4.6	6.5	0.0	7.9	1.2	13.9	13.9	15.1	0.0	0.0
Prop In Lane	1.00		0.15	1.00		0.21	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	95	0	172	131	0	170	227	1469	1542	302	1469	1543
V/C Ratio(X)	0.15	0.00	0.43	0.16	0.00	0.71	0.05	0.49	0.49	0.07	0.67	0.67
Avail Cap(c_a), veh/h	176	0	295	215	0	292	227	1469	1542	302	1469	1543
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.47	0.47	0.47	0.53	0.53	0.53
Uniform Delay (d), s/veh	57.2	0.0	51.2	54.3	0.0	52.7	1.8	2.9	2.9	1.1	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	1.7	0.6	0.0	5.4	0.2	0.5	0.5	0.2	1.3	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	0.0	0.0	2.4	0.7	0.0	4.2	0.1	6.8	7.1	0.1	0.5	0.5
LnGrp Delay(d), s/veh	57.9	0.0	52.9	54.9	0.0	58.1	2.0	3.5	3.4	1.3	1.3	1.2
LnGrp LOS	E		D	D		E	A	A	A	A	A	A
Approach Vol, veh/h		88			142			1483			2030	
Approach Delay, s/veh		53.7			57.6			3.4			1.3	
Approach LOS		D			E			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		104.1		15.9		104.1		15.9				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		91.5		19.5		91.5		19.5				
Max Q Clear Time (g_c+I), s		15.9		11.2		17.1		9.9				
Green Ext Time (p_c), s		13.4		0.2		28.0		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				5.5								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	480	480	300	350	480	220	190	1058	120	229	1466	50
Future Volume (veh/h)	480	480	300	350	480	220	190	1058	120	229	1466	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	95	505	316	368	505	232	200	1114	126	241	1543	53
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	331	788	353	259	638	285	165	1247	558	203	1309	45
Arrive On Green	0.20	0.22	0.22	0.15	0.18	0.18	0.10	0.35	0.35	0.12	0.38	0.38
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3492	120
Grp Volume(v), veh/h	505	316	368	505	232	200	1114	126	241	780	816	
Grp Sat Flow(s), veh/h	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1842	
Q Serve(g_s), s	5.8	15.5	23.3	18.5	16.4	12.9	11.8	35.7	4.3	14.5	45.0	45.0
Cycle Q Clear(g_c), s	5.8	15.5	23.3	18.5	16.4	12.9	11.8	35.7	4.3	14.5	45.0	45.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.06	
Lane Grp Cap(c), veh/h	331	788	353	259	638	285	165	1247	558	203	664	691
V/C Ratio(X)	0.29	0.64	0.90	1.42	0.79	0.81	1.21	0.89	0.23	1.19	1.18	1.18
Avail Cap(c_a), veh/h	331	855	383	259	1003	449	165	1247	558	203	664	691
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	0.72	0.72	0.72	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	42.3	45.3	50.8	47.0	27.4	54.1	36.7	11.4	52.8	37.5	37.5	
Incr Delay (d2), s/veh	1.4	21.9	20.8	1.7	4.6	138.4	10.0	0.9	112.1	89.7	91.6	
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	
%ile BackOfQ(50%), veh	7.7	12.3	23.3	8.1	6.0	11.8	19.2	2.0	13.0	38.5	40.4	
LnGrp Delay(d), s/veh	41.5	43.7	67.2	255.6	48.7	32.0	192.5	46.7	12.4	164.9	127.2	129.1
LnGrp LOS	D	D	E	F	D	C	F	D	B	F	F	F
Approach Vol, veh/h	916			1105			1440			1837		
Approach Delay, s/veh	51.6			114.1			64.0			133.0		
Approach LOS	D			F			E			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	46.8	23.0	31.2	16.3	49.5	28.1	26.1					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	18.5	29.0	9.5	45.0	13.5	34.0						
Max Q Clear Time (G+Y+R), s	20.5	25.3	13.8	47.0	7.8	18.4						
Green Ext Time (p_c), s	1.5	0.0	1.5	0.0	0.0	0.1	3.2					
Intersection Summary												
HCM 2010 Ctrl Delay	96.2											
HCM 2010 LOS	F											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	1255	30	30	912	80	40	10	40	100	10	13	
Future Volume (veh/h)	1255	30	30	912	80	40	10	40	100	10	13	
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1900	1667	1863	1900	
Adj Flow Rate, veh/h	1321	32	32	960	84	42	11	42	105	11	14	
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	1401	627	48	1146	513	53	17	63	754	196	249
Arrive On Green	0.20	0.79	0.79	0.03	0.32	0.32	0.03	0.05	0.05	0.24	0.26	0.26
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	339	1295	3079	746	949
Grp Volume(v), veh/h	1321	32	32	960	84	42	0	53	105	0	25	
Grp Sat Flow(s), veh/h	1770	1583	1774	1770	1583	1681	0	1634	1540	0	1695	
Q Serve(g_s), s	0.8	36.8	0.3	2.1	30.2	4.5	3.0	0.0	3.8	3.2	0.0	1.3
Cycle Q Clear(g_c), s	0.8	36.8	0.3	2.1	30.2	4.5	3.0	0.0	3.8	3.2	0.0	1.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	0.79	1.00	0.56			
Lane Grp Cap(c), veh/h	167	1401	627	48	1146	513	53	0	80	754	0	445
V/C Ratio(X)	0.08	0.94	0.05	0.66	0.84	0.16	0.80	0.00	0.66	0.14	0.00	0.06
Avail Cap(c_a), veh/h	167	1725	772	81	1725	772	91	0	272	754	0	445
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.50	0.50	0.50	0.87	0.87	0.87	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.4	2.8	57.8	37.6	29.0	57.7	0.0	56.1	35.4	0.0	33.1	
Incr Delay (d2), s/veh	0.1	5.6	0.0	12.5	2.1	0.1	23.0	0.0	9.0	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	0.0	0.0	0.0
%ile BackOfQ(50%), veh	17.9	0.1	1.2	15.1	2.0	1.7	0.0	1.9	1.4	0.0	0.6	
LnGrp Delay(d), s/veh	18.7	17.0	2.8	70.3	39.7	29.1	80.7	0.0	65.1	35.8	0.0	33.4
LnGrp LOS	D	B	A	E	D	C	F		E	D		C
Approach Vol, veh/h	1366			1076			95		130			
Approach Delay, s/veh	16.9			39.8			72.0		35.3			
Approach LOS	B			D			E		D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	43.9	10.4	7.8	52.0	8.3	36.0	16.4	43.4				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	18.0	20.0	5.5	58.5	6.5	31.5	5.5	58.5				
Max Q Clear Time (g_c+1), s	15.8	4.1	38.8	5.0	3.3	2.8	32.2					
Green Ext Time (p_c), s	0.2	0.0	8.7	0.0	0.1	0.0	6.7					
Intersection Summary												
HCM 2010 Ctrl Delay			29.0									
HCM 2010 LOS			C									

Intersection

Int Delay, s/veh 38.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	178	52	150	231	20	133	40	180	30	40	23
Future Vol, veh/h	22	178	52	150	231	20	133	40	180	30	40	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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	187	55	158	243	21	140	42	189	32	42	24

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	264	0	0	242
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	800	-	-	1324
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	800	-	-	1324
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.7	3	108.2	31.4
HCM LOS			F	D

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)		343	1300	-	-	1324	-	232
HCM Lane V/C Ratio		1.083	0.018	-	-	0.119	-	0.422
HCM Control Delay (s)		108.2	7.8	0	-	8.1	0	31.4
HCM Lane LOS		F	A	A	-	A	A	D
HCM 95th %tile Q(veh)		13.7	0.1	-	-	0.4	-	2

Intersection

Intersection Delay, s/veh 19.7
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↶	↷	↶	↷
Traffic Vol, veh/h	40	148	99	100	141	20	149	210	210	120	160	40
Future Vol, veh/h	40	148	99	100	141	20	149	210	210	120	160	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	42	156	104	105	148	21	157	221	221	126	168	42
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay	24.3	17.8	18.3	19.5
HCM LOS	C	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	60%	0%	88%	0%	80%
Vol Right, %	0%	0%	100%	0%	40%	0%	12%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	210	210	40	247	100	161	120	200
LT Vol	149	0	0	40	0	100	0	120	0
Through Vol	0	210	0	0	148	0	141	0	160
RT Vol	0	0	210	0	99	0	20	0	40
Lane Flow Rate	157	221	221	42	260	105	169	126	211
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.391	0.519	0.475	0.113	0.638	0.285	0.43	0.335	0.52
Departure Headway (Hd)	8.97	8.455	7.733	9.631	8.828	9.75	9.144	9.555	8.891
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	402	427	464	372	408	368	393	376	404
Service Time	6.731	6.215	5.493	7.396	6.592	7.52	6.914	7.323	6.659
HCM Lane V/C Ratio	0.391	0.518	0.476	0.113	0.637	0.285	0.43	0.335	0.522
HCM Control Delay	17.4	20	17.3	13.6	26	16.4	18.7	17.1	21
HCM Lane LOS	C	C	C	B	D	C	C	C	C
HCM 95th-tile Q	1.8	2.9	2.5	0.4	4.3	1.2	2.1	1.4	2.9

Intersection

Intersection Delay, s/c/s
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑		↵	↑↑		↵	↑↑		↵	↑↑	
Traffic Vol, veh/h	50	154	27	40	194	272	11	147	90	249	130	60
Future Vol, veh/h	50	154	27	40	194	272	11	147	90	249	130	60
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	53	162	28	42	204	286	12	155	95	262	137	63
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	13.5	21.9	14.2	18.9
HCM LOS	B	C	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	35%	0%	100%	66%	0%	100%	19%	0%	100%	42%
Vol Right, %	0%	0%	65%	0%	0%	34%	0%	0%	81%	0%	0%	58%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	11	98	139	50	103	78	40	129	337	249	87	103
LT Vol	11	0	0	50	0	0	40	0	0	249	0	0
Through Vol	0	98	49	0	103	51	0	129	65	0	87	43
RT Vol	0	0	90	0	0	27	0	0	272	0	0	60
Lane Flow Rate	12	103	146	53	108	82	42	136	354	262	91	109
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.029	0.242	0.324	0.131	0.254	0.188	0.097	0.295	0.713	0.612	0.20	0.227
Departure Headway (Hd)	8.937	8.437	7.984	8.962	8.462	8.221	8.312	7.812	7.246	8.41	7.91	7.503
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	399	424	449	399	423	435	430	459	496	427	452	478
Service Time	6.716	6.216	5.763	6.742	6.242	6.001	6.078	5.578	5.013	6.179	5.679	5.272
HCM Lane V/C Ratio	0.030	0.243	0.325	0.133	0.255	0.189	0.098	0.296	0.714	0.614	0.201	0.228
HCM Control Delay	12	13.9	14.6	13.1	14.1	12.9	12	13.8	26.2	23.7	12.7	12.5
HCM Lane LOS	B	B	B	B	B	B	B	B	D	C	B	B
HCM 95th-tile Q	0.1	0.9	1.4	0.4	1	0.7	0.3	1.2	5.6	4	0.7	0.9

Intersection

Intersection Delay, s/veh
 Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↔			↔	↔
Traffic Vol, veh/h	70	298	40	110	231	80	10	240	90	80	160	30
Future Vol, veh/h	70	298	40	110	231	80	10	240	90	80	160	30
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	74	314	42	116	243	84	11	253	95	84	168	32
Number of Lanes	1	1	0	1	1	0	1	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	44.8	33.7	19.3	19.3
HCM LOS	E	D	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	50%	0%
Vol Thru, %	0%	100%	47%	0%	88%	0%	74%	50%	73%
Vol Right, %	0%	0%	53%	0%	12%	0%	26%	0%	27%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	160	170	70	338	110	311	160	110
LT Vol	10	0	0	70	0	110	0	80	0
Through Vol	0	160	80	0	298	0	231	80	80
RT Vol	0	0	90	0	40	0	80	0	30
Lane Flow Rate	11	168	179	74	356	116	327	168	116
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.029	0.444	0.452	0.195	0.884	0.307	0.806	0.466	0.306
Departure Headway (Hd)	10.005	9.485	9.099	9.542	8.941	9.568	8.859	9.965	9.503
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	357	379	394	375	406	375	406	360	376
Service Time	7.796	7.275	6.889	7.326	6.725	7.344	6.642	7.759	7.297
HCM Lane V/C Ratio	0.031	0.443	0.454	0.197	0.877	0.309	0.805	0.467	0.309
HCM Control Delay	13.1	19.7	19.2	14.6	51	16.6	39.7	21.2	16.5
HCM Lane LOS	B	C	C	B	F	C	E	C	C
HCM 95th-tile Q	0.1	2.2	2.3	0.7	9	1.3	7.2	2.4	1.3

Intersection

Intersection Delay, s/c/h
 Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑		↵	↑↑		↵	↑↑		↵	↑↑	
Traffic Vol, veh/h	80	428	94	110	371	120	136	200	150	120	140	110
Future Vol, veh/h	80	428	94	110	371	120	136	200	150	120	140	110
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	451	99	116	391	126	143	211	158	126	147	116
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	43.9	35.7	26.9	22.3
HCM LOS	E	E	D	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	31%	0%	100%	60%	0%	100%	51%	0%	100%	30%
Vol Right, %	0%	0%	69%	0%	0%	40%	0%	0%	49%	0%	0%	70%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	136	133	217	80	285	237	110	247	244	120	93	157
LT Vol	136	0	0	80	0	0	110	0	0	120	0	0
Through Vol	0	133	67	0	285	143	0	247	124	0	93	47
RT Vol	0	0	150	0	0	94	0	0	120	0	0	110
Lane Flow Rate	143	140	228	84	300	249	116	260	256	126	98	165
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.457	0.428	0.666	0.26	0.887	0.717	0.358	0.77	0.734	0.415	0.309	0.496
Departure Headway (Hd)	1.491	1.099	1.050	1.135	1.063	1.035	1.144	1.064	1.031	1.828	1.328	1.037
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	314	328	344	323	342	349	323	341	351	304	317	333
Service Time	9.251	8.751	8.266	8.895	8.395	8.117	8.903	8.403	8.059	9.589	9.089	8.598
HCM Lane V/C Ratio	0.455	0.427	0.663	0.26	0.877	0.713	0.359	0.762	0.729	0.414	0.309	0.495
HCM Control Delay	23.6	21.8	32	17.8	58.1	35.6	20	41.6	36.9	22.8	19.1	23.9
HCM Lane LOS	C	C	D	C	F	E	C	E	E	C	C	C
HCM 95th-tile Q	2.3	2.1	4.5	1	8.5	5.3	1.6	6.1	5.6	2	1.3	2.6



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	30	516	12	70	518	100	12	65	130	180	54	90
Future Volume (veh/h)	30	516	12	70	518	100	12	65	130	180	54	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	32	543	13	74	545	105	13	68	137	189	57	95
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	682	305	93	655	126	707	994	845	747	1093	929
Arrive On Green	0.03	0.19	0.19	0.06	0.22	0.22	0.01	0.53	0.53	0.07	0.59	0.59
Sat Flow, veh/h	1681	3539	1583	1681	2963	569	1681	1863	1583	1681	1863	1583
Grp Volume(v), veh/h	32	543	13	74	325	325	13	68	137	189	57	95
Grp Sat Flow(s), veh/h/ln	1681	1770	1583	1681	1770	1762	1681	1863	1583	1681	1863	1583
Q Serve(g_s), s	2.3	17.6	0.8	5.2	21.0	21.2	0.4	2.1	5.3	5.8	1.6	3.2
Cycle Q Clear(g_c), s	2.3	17.6	0.8	5.2	21.0	21.2	0.4	2.1	5.3	5.8	1.6	3.2
Prop In Lane	1.00	1.00	1.00	1.00	0.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	46	682	305	93	391	389	707	994	845	747	1093	929
V/C Ratio(X)	0.70	0.80	0.04	0.79	0.83	0.84	0.02	0.07	0.16	0.25	0.05	0.10
Avail Cap(c_a), veh/h	33	1165	521	217	671	668	787	994	845	906	1093	929
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)	0.53	0.53	0.53	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.9	46.2	39.4	56.0	44.6	44.7	12.3	13.5	14.3	9.9	10.6	10.9
Incr Delay (d2), s/veh	9.6	1.2	0.0	13.8	4.6	4.8	0.0	0.1	0.4	0.2	0.1	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	8.7	0.4	2.8	10.8	10.8	0.2	1.1	2.4	2.7	0.8	1.4	1.4
LnGrp Delay(d),s/veh	67.5	47.4	39.5	69.8	49.2	49.4	12.3	13.7	14.7	10.1	10.6	11.1
LnGrp LOS	E	D	D	E	D	D	B	B	B	B	B	B
Approach Vol, veh/h	588			724			218			341		
Approach Delay, s/veh	48.3			51.4			14.2			10.5		
Approach LOS	D			D			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	42.0	58.6	11.2	27.6	6.3	74.9	7.8	31.0				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Or), s	27.5	15.5	39.5	7.5	39.5	9.5	45.5					
Max Q Clear Time (g+1), s	17.3	7.2	19.6	2.4	5.2	4.3	23.2					
Green Ext Time (p_c), s	0.4	0.7	0.1	3.0	0.0	0.5	0.0	3.4				
Intersection Summary												
HCM 2010 Ctrl Delay		38.6										
HCM 2010 LOS		D										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↕	↘
Traffic Volume (veh/h)	22	748	245	250	664	10	195	210	280	10	280	13
Future Volume (veh/h)	22	748	245	250	664	10	195	210	280	10	280	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	23	787	258	263	699	11	205	221	295	11	295	14
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	896	401	290	1440	23	468	334	446	42	792	37
Arrive On Green	0.02	0.25	0.25	0.17	0.40	0.40	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1681	3539	1583	1681	3566	56	1010	725	967	25	1717	80
Grp Volume(v), veh/h	23	787	258	263	347	363	205	0	516	320	0	0
Grp Sat Flow(s), veh/h	1681	1770	1583	1681	1770	1853	1010	0	1692	1821	0	0
Q Serve(g_s), s	1.6	25.6	17.4	18.4	17.4	17.4	11.6	0.0	28.4	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	25.6	17.4	18.4	17.4	17.4	25.2	0.0	28.4	13.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.57	0.03		0.04
Lane Grp Cap(c), veh/h	37	896	401	290	714	748	468	0	781	872	0	0
V/C Ratio(X)	0.61	0.88	0.64	0.91	0.49	0.49	0.44	0.00	0.66	0.37	0.00	0.00
Avail Cap(c_a), veh/h	77	988	442	357	789	826	468	0	781	872	0	0
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)	0.52	0.52	0.52	0.54	0.54	0.54	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.1	43.0	40.0	48.7	26.5	26.5	25.8	0.0	25.0	21.0	0.0	0.0
Incr Delay (d2), s/veh	8.1	4.7	1.4	14.2	0.3	0.3	3.0	0.0	4.4	1.2	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	113.2	7.8	9.7	8.5	8.9	5.5	0.0	14.1	7.2	0.0	0.0	0.0
LnGrp Delay(d), s/veh	66.3	47.7	41.4	62.9	26.8	26.8	28.8	0.0	29.4	22.2	0.0	0.0
LnGrp LOS	E	D	D	E	C	C	C		C	C		
Approach Vol, veh/h	1068			973			721		320			
Approach Delay, s/veh	46.6			36.6			29.2		22.2			
Approach LOS	D			D			C		C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	59.9	25.2	34.9			59.9	7.2	52.9				
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5	4.5	4.5				
Max Green Setting (Gmax), s	47.5	25.5	33.5			47.5	5.5	53.5				
Max Q Clear Time (g_c+I30), s	30.4	20.4	27.6			15.5	3.6	19.4				
Green Ext Time (p_c), s	4.0	0.3	2.8			1.9	0.0	3.9				
Intersection Summary												
HCM 2010 Ctrl Delay			36.8									
HCM 2010 LOS			D									

Intersection

Intersection Delay, s/veh
 Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	132	323	12	10	206	110	13	40	20	200	30	113
Future Vol, veh/h	132	323	12	10	206	110	13	40	20	200	30	113
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	139	340	13	11	217	116	14	42	21	211	32	119
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	35.1	18.5	12	21.7
HCM LOS	E	C	B	C

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	18%	28%	3%	58%
Vol Thru, %	55%	69%	63%	9%
Vol Right, %	27%	3%	34%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	73	467	326	343
LT Vol	13	132	10	200
Through Vol	40	323	206	30
RT Vol	20	12	110	113
Lane Flow Rate	77	492	343	361
Geometry Grp	1	1	1	1
Degree of Util (X)	0.162	0.85	0.60	0.661
Departure Headway (Hd)	7.583	6.225	6.297	6.589
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	476	580	570	545
Service Time	5.583	4.293	4.373	4.658
HCM Lane V/C Ratio	0.162	0.848	0.602	0.662
HCM Control Delay	12	35.1	18.5	21.7
HCM Lane LOS	B	E	C	C
HCM 95th-tile Q	0.6	9.2	3.9	4.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	97	919	72	110	654	20	113	280	220	70	260	108
Future Volume (veh/h)	97	919	72	110	654	20	113	280	220	70	260	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	92	967	76	116	688	21	119	295	232	74	274	114
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	1047	469	140	813	25	308	774	658	93	360	150
Arrive On Green	0.30	0.59	0.59	0.08	0.23	0.23	0.18	0.42	0.42	0.06	0.29	0.29
Sat Flow, veh/h	1681	3539	1583	1681	3506	107	1681	1863	1583	1681	1251	520
Grp Volume(v), veh/h	92	967	76	116	347	362	119	295	232	74	0	388
Grp Sat Flow(s), veh/h	1770	1770	1583	1681	1770	1844	1681	1863	1583	1681	0	1771
Q Serve(g_s), s	5.2	29.5	1.6	8.2	22.5	22.5	7.5	13.2	12.0	5.2	0.0	24.0
Cycle Q Clear(g_c), s	5.2	29.5	1.6	8.2	22.5	22.5	7.5	13.2	12.0	5.2	0.0	24.0
Prop In Lane	1.00	1.00	1.00	1.00	0.06	1.00	1.00	1.00	1.00	1.00	0.29	0.29
Lane Grp Cap(c), veh/h	248	1047	469	140	410	427	308	774	658	93	0	509
V/C Ratio(X)	0.37	0.92	0.16	0.83	0.85	0.85	0.39	0.38	0.35	0.80	0.00	0.76
Avail Cap(c_a), veh/h	248	1194	534	189	597	622	308	774	658	147	0	509
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.41	0.41	0.41	0.85	0.85	0.85	0.91	0.91	0.91	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.3	7.1	54.1	44.0	44.1	43.1	24.4	24.0	56.0	0.0	39.0	39.0
Incr Delay (d2), s/veh	0.4	5.2	0.1	17.0	6.5	6.3	0.7	1.3	1.3	14.4	0.0	10.3
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/l	14.7	0.7	4.5	11.7	12.2	3.5	7.1	5.5	2.8	0.0	13.2	13.2
LnGrp Delay(d),s/veh	28.3	28.4	7.2	71.1	50.5	50.3	43.8	25.7	25.4	70.4	0.0	49.3
LnGrp LOS	D	C	A	E	D	D	D	C	C	E		D
Approach Vol, veh/h	1135			825			646			462		
Approach Delay, s/veh	27.8			53.3			28.9			52.7		
Approach LOS	C			D			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	54.3	14.5	40.0	26.5	39.0	22.2	32.3					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	37.5	13.5	40.5	13.5	34.5	13.5	40.5					
Max Q Clear Time (g2+I), s	11.2	10.2	31.5	9.5	26.0	7.2	24.5					
Green Ext Time (p_c), s	0.0	2.2	0.1	4.0	0.1	1.3	0.1	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay			38.6									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑		↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	22	254	177	60	126	60	138	470	90	170	400	63
Future Volume (veh/h)	22	254	177	60	126	60	138	470	90	170	400	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	128	267	186	63	133	63	145	495	95	179	421	66
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	326	277	80	156	74	171	959	429	600	1860	832
Arrive On Green	0.09	0.17	0.17	0.05	0.13	0.13	0.14	0.36	0.36	0.36	0.53	0.53
Sat Flow, veh/h	1681	1863	1583	1681	1196	567	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	28	267	186	63	0	196	145	495	95	179	421	66
Grp Sat Flow(s), veh/h	1681	1863	1583	1681	0	1763	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	9.0	16.6	13.2	4.5	0.0	13.0	10.1	13.2	4.2	9.2	7.7	1.6
Cycle Q Clear(g_c), s	9.0	16.6	13.2	4.5	0.0	13.0	10.1	13.2	4.2	9.2	7.7	1.6
Prop In Lane	1.00		1.00	1.00		0.32	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	326	277	80	0	230	171	959	429	600	1860	832
V/C Ratio(X)	0.83	0.82	0.67	0.79	0.00	0.85	0.85	0.52	0.22	0.30	0.23	0.08
Avail Cap(c_a), veh/h	273	504	429	161	0	360	315	959	429	600	1860	832
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77
Uniform Delay (d), s/veh	50.6	47.7	46.3	56.6	0.0	51.0	50.9	32.2	20.5	27.8	15.3	5.9
Incr Delay (d2), s/veh	10.8	6.1	2.8	15.7	0.0	10.9	10.8	2.0	1.2	0.2	0.2	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	9.1	6.0	2.4	0.0	7.1	5.2	6.7	2.0	4.3	3.8	0.7	
LnGrp Delay(d),s/veh	64.4	53.8	49.1	72.3	0.0	62.0	61.7	34.2	21.7	28.0	15.5	6.1
LnGrp LOS	E	D	D	E		E	E	C	C	C	B	A
Approach Vol, veh/h		581			259			735			666	
Approach Delay, s/veh		54.6			64.5			38.0			18.0	
Approach LOS		D			E			D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	47.0	37.0	10.2	25.5	16.7	67.6	15.5	20.2				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	32.5	32.5	11.5	32.5	22.5	35.5	19.5	24.5				
Max Q Clear Time (Q_c), s	11.2	11.2	6.5	18.6	12.1	9.7	11.0	15.0				
Green Ext Time (p_c), s	0.4	2.9	0.0	1.7	0.2	2.7	0.2	0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			39.4									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	991	991	79	60	463	100	110	340	170	250	370	130
Future Volume (veh/h)	991	991	79	60	463	100	110	340	170	250	370	130
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	188	1043	83	63	487	105	116	358	179	263	389	137
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	1175	526	79	888	397	140	605	270	504	1371	816
Arrive On Green	0.13	0.33	0.33	0.05	0.25	0.25	0.08	0.17	0.17	0.30	0.39	0.39
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	188	1043	83	63	487	105	116	358	179	263	389	137
Grp Sat Flow(s), veh/h	1681	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	13.2	33.5	3.4	4.5	14.3	3.2	8.2	11.2	12.7	15.6	9.1	5.5
Cycle Q Clear(g_c), s	13.2	33.5	3.4	4.5	14.3	3.2	8.2	11.2	12.7	15.6	9.1	5.5
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	216	1175	526	79	888	397	140	605	270	504	1371	816
V/C Ratio(X)	0.87	0.89	0.16	0.79	0.55	0.26	0.83	0.59	0.66	0.52	0.28	0.17
Avail Cap(c_a), veh/h	115	1312	587	105	888	397	203	605	270	504	1371	816
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)	0.58	0.58	0.58	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.0	16.4	56.6	39.1	9.0	54.1	45.9	46.5	34.9	25.3	15.4	15.4
Incr Delay (d2), s/veh	0.2	4.4	0.1	19.1	0.5	0.3	16.5	4.2	12.1	1.0	0.5	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	17.1	1.5	2.5	7.1	1.4	4.4	5.8	6.5	7.4	4.5	2.5	2.5
LnGrp Delay(d), s/veh	41.5	42.4	16.5	75.7	39.6	9.2	70.6	50.1	58.6	35.8	25.8	15.9
LnGrp LOS	E	D	B	E	D	A	E	D	E	D	C	B
Approach Vol, veh/h	1314			655			653			789		
Approach Delay, s/veh	43.5			38.2			56.1			27.4		
Approach LOS	D			D			E			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	40.5	25.0	10.2	44.3	14.5	51.0	19.9	34.6				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	29.5	20.5	7.5	44.5	14.5	35.5	22.5	29.5				
Max Q Clear Time (G+Y+R), s	47.6	14.3	6.5	35.5	10.2	11.1	15.2	16.3				
Green Ext Time (p_c), s	0.6	1.4	0.0	4.3	0.1	2.7	0.3	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay			41.2									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	1176	132	70	598	110	133	340	80	200	290	93	
Future Volume (veh/h)	1176	132	70	598	110	133	340	80	200	290	93	
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	1245	1238	139	74	629	116	140	358	84	211	305	98
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	272	1366	611	93	989	442	330	535	124	372	563	178
Arrive On Green	0.16	0.39	0.39	0.06	0.28	0.28	0.20	0.19	0.19	0.22	0.21	0.21
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	2854	662	1681	2649	836
Grp Volume(v), veh/h	1238	139	74	629	116	140	220	222	211	202	201	
Grp Sat Flow(s), veh/h	1770	1583	1681	1770	1583	1681	1770	1746	1681	1770	1715	
Q Serve(g_s), s	17.2	39.6	7.1	5.2	18.7	4.0	8.8	13.9	14.2	13.4	12.2	12.6
Cycle Q Clear(g_c), s	17.2	39.6	7.1	5.2	18.7	4.0	8.8	13.9	14.2	13.4	12.2	12.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	0.38	1.00	0.49			
Lane Grp Cap(c), veh/h	1366	611	93	989	442	330	332	327	372	376	364	
V/C Ratio(X)	0.90	0.91	0.23	0.80	0.64	0.26	0.42	0.66	0.68	0.57	0.54	0.55
Avail Cap(c_a), veh/h	1460	653	119	1018	455	330	332	327	372	376	364	
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)	0.56	0.56	0.56	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	24.8	56.0	37.9	11.7	42.3	45.2	45.4	41.6	42.0	42.2	
Incr Delay (d2), s/veh	4.9	0.1	24.5	1.3	0.3	0.9	10.1	10.7	2.0	5.4	5.9	
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	
%ile BackOfQ(50%), veh	120.2	3.1	3.1	9.3	1.8	4.2	7.7	7.8	6.4	6.5	6.5	
LnGrp Delay(d), s/veh	39.7	24.9	80.6	39.2	12.0	43.1	55.3	56.1	43.6	47.4	48.1	
LnGrp LOS	E	D	C	F	D	B	D	E	E	D	D	D
Approach Vol, veh/h	1622			819			582		614			
Approach Delay, s/veh	42.2			39.0			52.7		46.3			
Approach LOS	D			D			D		D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	27.0	11.1	50.8	28.1	30.0	23.9	38.0					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G), s	22.5	8.5	49.5	18.5	25.5	23.5	34.5					
Max Q Clear Time (G+Y), s	16.2	7.2	41.6	10.8	14.6	19.2	20.7					
Green Ext Time (p_c), s	1.2	0.0	4.7	0.2	1.6	0.3	3.8					
Intersection Summary												
HCM 2010 Ctrl Delay			43.8									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1253	6	0	1001	0	46
Future Vol, veh/h	1253	6	0	1001	0	46
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	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1319	6	0	1054	0	48

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 663
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 404
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 404
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.1
HCM LOS			C

Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	404	-	-	-
HCM Lane V/C Ratio	0.12	-	-	-
HCM Control Delay (s)	15.1	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection

























Int Delay, s/veh 0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↑		↑↑	↑↑	↑
Traffic Vol, veh/h	0	52	0	2050	1827	49
Future Vol, veh/h	0	52	0	2050	1827	49
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	-	-	-	0
Veh in Median Storage#	-	-	0	0	-	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	55	0	2158	1923	52

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 962	-	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	- 6.94	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	- 3.32	-	-
Pot Cap-1 Maneuver	0 256	0	-
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	- 256	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

























Approach	EB	NB	SB
HCM Control Delay ₂	22.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NB	EBLn1	SBT	SBR
Capacity (veh/h)	-	256	-	-
HCM Lane V/C Ratio	-	0.214	-	-
HCM Control Delay (s)	-	22.8	-	-
HCM Lane LOS	-	C	-	-
HCM 95th %tile Q(veh)	-	0.8	-	-

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	90	50	70	40	40	60	70	1831	70	90	1603	90	
Future Volume (veh/h)	90	50	70	40	40	60	70	1831	70	90	1603	90	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
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		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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765	
Adj Flow Rate, veh/h	98	54	76	43	43	65	76	1990	76	98	1742	98	
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1	
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, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	122	84	119	115	57	86	96	2795	870	123	2000	895	
Arrive On Green	0.07	0.13	0.13	0.04	0.09	0.09	0.06	0.58	0.58	0.07	0.60	0.60	
Sat Flow, veh/h	1681	664	935	3261	635	960	1681	4818	1500	1681	3353	1500	
Grp Volume(v), veh/h	98	0	130	43	0	108	76	1990	76	98	1742	98	
Grp Sat Flow(s),veh/h/ln	1681	0	1600	1630	0	1595	1681	1606	1500	1681	1676	1500	
Q Serve(g_s), s	5.6	0.0	7.5	1.3	0.0	6.5	4.4	28.9	2.2	5.6	42.6	2.8	
Cycle Q Clear(g_c), s	5.6	0.0	7.5	1.3	0.0	6.5	4.4	28.9	2.2	5.6	42.6	2.8	
Prop In Lane	1.00		0.58	1.00		0.60	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	122	0	203	115	0	143	96	2795	870	123	2000	895	
V/C Ratio(X)	0.80	0.00	0.64	0.37	0.00	0.75	0.79	0.71	0.09	0.80	0.87	0.11	
Avail Cap(c_a), veh/h	146	0	344	184	0	294	129	3058	952	232	2334	1044	
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	44.6	0.0	40.5	46.1	0.0	43.4	45.5	14.7	9.1	44.5	16.6	8.5	
Incr Delay (d2), s/veh	23.0	0.0	3.3	2.0	0.0	7.8	21.0	0.7	0.0	11.0	3.5	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	3.4	0.0	3.5	0.6	0.0	3.2	2.6	12.9	0.9	3.0	20.6	1.1	
LnGrp Delay(d),s/veh	67.7	0.0	43.8	48.1	0.0	51.2	66.5	15.4	9.1	55.6	20.0	8.6	
LnGrp LOS	E		D	D		D	E	B	A	E	C	A	
Approach Vol, veh/h		228			151			2142			1938		
Approach Delay, s/veh		54.1			50.3			17.0			21.2		
Approach LOS		D			D			B			C		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	11.7	61.2	7.9	16.9	10.1	62.8	11.6	13.3					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax),s	35	62.0	5.5	21.0	7.5	68.0	8.5	18.0					
Max Q Clear Time (g_c+l1),s	7.6	30.9	3.3	9.5	6.4	44.6	7.6	8.5					
Green Ext Time (p_c), s	0.1	17.8	0.0	0.5	0.0	13.6	0.0	0.3					
Intersection Summary													
HCM 2010 Ctrl Delay			21.9										
HCM 2010 LOS			C										

SWC US395/SR18 TIA
 HCM 2010 Signalized Intersection Summary

General Plan With Phase 1 & 2 Project PM Peak Hour
 1: Palmdale Road (SR-18) & Pearmain St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	1193	70	120	1043	440	50	210	50	110	190	20
Future Volume (veh/h)	20	1193	70	120	1043	440	50	210	50	110	190	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1863	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	21	1256	74	126	1098	463	53	221	53	116	200	21
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	1396	624	150	1621	725	67	289	68	453	1071	111
Arrive On Green	0.02	0.39	0.39	0.17	0.92	0.92	0.04	0.10	0.10	0.27	0.33	0.33
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	2846	669	1681	3237	336
Grp Volume(v), veh/h	21	1256	74	126	1098	463	53	136	138	116	108	113
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1774	1770	1583	1681	1770	1745	1681	1770	1803
Q Serve(g_s), s	1.5	40.0	2.9	8.2	8.2	2.6	3.8	9.0	9.3	6.5	5.2	5.3
Cycle Q Clear(g_c), s	1.5	40.0	2.9	8.2	8.2	2.6	3.8	9.0	9.3	6.5	5.2	5.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.38	1.00		0.19
Lane Grp Cap(c), veh/h	35	1396	624	150	1621	725	67	179	177	453	586	597
V/C Ratio(X)	0.60	0.90	0.12	0.84	0.68	0.64	0.79	0.76	0.78	0.26	0.19	0.19
Avail Cap(c_a), veh/h	77	1519	680	200	1755	785	133	280	276	453	586	597
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.2	34.1	15.2	49.0	3.1	0.4	57.1	52.5	52.6	34.4	28.6	28.6
Incr Delay (d2), s/veh	15.0	7.3	0.1	14.1	0.6	1.0	18.3	25.3	28.3	0.3	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	0.8	20.9	1.3	4.6	3.5	0.9	2.1	5.6	5.9	3.1	2.6	2.7
LnGrp Delay(d),s/veh	73.3	41.4	15.2	63.1	3.7	1.4	75.4	77.7	80.9	34.7	28.8	28.8
LnGrp LOS	E	D	B	E	A	A	E	E	F	C	C	C
Approach Vol, veh/h		1351			1687			327			337	
Approach Delay, s/veh		40.5			7.5			78.7			30.8	
Approach LOS		D			A			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.8	16.7	14.7	51.8	9.3	44.2	7.0	59.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	19.0	19.0	13.5	51.5	9.5	27.5	5.5	59.5				
Max Q Clear Time (g_c+I1), s	11.3	11.3	10.2	42.0	5.8	7.3	3.5	10.2				
Green Ext Time (p_c), s	0.2	0.9	0.1	5.3	0.0	1.1	0.0	11.3				
Intersection Summary												
HCM 2010 Ctrl Delay				27.9								
HCM 2010 LOS				C								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘		↕			↕	↘
Traffic Volume (veh/h)	170	1017	66	103	919	20	72	3	61	130	3	280
Future Volume (veh/h)	170	1017	66	103	919	20	72	3	61	130	3	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1900	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	179	1071	69	108	967	21	76	3	64	137	3	295
Adj No. of Lanes	1	2	1	1	2	1	0	1	0	0	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	1259	563	130	1097	491	179	19	124	0	846	719
Arrive On Green	0.12	0.36	0.36	0.15	0.62	0.62	0.21	0.21	0.21	0.20	0.45	0.45
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	628	91	582	0	1863	1583
Grp Volume(v), veh/h	179	1071	69	108	967	21	143	0	0	0	3	295
Grp Sat Flow(s), veh/h	1681	3539	1583	1681	3539	1583	1301	0	0	0	1863	1583
Q Serve(g_s), s	12.5	33.5	3.5	7.5	27.5	0.4	9.5	0.0	0.0	0.0	0.1	15.0
Cycle Q Clear(g_c), s	12.5	33.5	3.5	7.5	27.5	0.4	11.3	0.0	0.0	0.0	0.1	15.0
Prop In Lane	1.00		1.00	1.00		1.00	0.53		0.45	0.00		1.00
Lane Grp Cap(c), veh/h	207	1259	563	130	1097	491	323	0	0	0	846	719
V/C Ratio(X)	0.86	0.85	0.12	0.83	0.88	0.04	0.44	0.00	0.00	0.00	0.00	0.41
Avail Cap(c_a), veh/h	329	1696	759	189	1401	627	323	0	0	0	846	719
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	35.7	26.0	49.9	21.0	5.6	41.4	0.0	0.0	0.0	17.9	22.0
Incr Delay (d2), s/veh	6.0	1.4	0.0	17.9	5.7	0.0	4.4	0.0	0.0	0.0	0.0	1.7
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	116.6	1.5	4.1	14.0	0.2	4.6	0.0	0.0	0.0	0.0	0.1	6.9
LnGrp Delay(d), s/veh	37.6	37.1	26.1	67.9	26.6	5.7	45.8	0.0	0.0	0.0	17.9	23.7
LnGrp LOS	E	D	C	E	C	A	D				B	C
Approach Vol, veh/h	1319			1096			143			298		
Approach Delay, s/veh	39.3			30.3			45.8			23.6		
Approach LOS	D			C			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+R), s	30.0	30.0	13.8	47.2		59.0	19.3	41.7				
Change Period (Y+R), s	4.5	4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (G_max), s	25.5	25.5	13.5	57.5		35.5	23.5	47.5				
Max Q Clear Time (g_c+1), s	13.3	9.5	35.5	17.0	14.5	29.5						
Green Ext Time (p_c), s	0.6	0.1	7.1	0.9	0.3	5.7						
Intersection Summary												
HCM 2010 Ctrl Delay	34.5											
HCM 2010 LOS	C											

Intersection

Int Delay, s/veh 48.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖		↗	↖	↗
Traffic Vol, veh/h	10	50	397	70	70	80	526	1893	60	60	1873	30
Future Vol, veh/h	10	50	397	70	70	80	526	1893	60	60	1873	30
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	-	-	-	-	-	-	300	-	-	0	-	250
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	53	418	74	74	84	554	1993	63	63	1972	32

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	5310	5262	1972	5483
Stage 1	2098	2098	-	3133
Stage 2	3212	3164	-	2350
Critical Hdwy	7.12	6.52	6.22	7.12
Critical Hdwy Stg 1	6.12	5.52	-	6.12
Critical Hdwy Stg 2	6.12	5.52	-	6.12
Follow-up Hdwy	3.518	4.018	3.318	3.518
Pot Cap-1 Maneuver	0	0	~ 78	0
Stage 1	68	93	-	~ 16
Stage 2	14	~ 25	-	~ 48
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	0	~ 78	-
Mov Cap-2 Maneuver	-	0	-	0
Stage 1	68	71	-	~ 16
Stage 2	-	0	-	~ 69

Approach	EB	WB	NB	SB
HCM Control Delay, s			99	0.7
HCM LOS	-	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	~ 285	-	-	-	-	272	-	-
HCM Lane V/C Ratio	1.943	-	-	-	-	0.232	-	-
HCM Control Delay (s)	466.5	-	-	-	-	22.2	-	-
HCM Lane LOS	F	-	-	-	-	C	-	-
HCM 95th %tile Q(veh)	38.9	-	-	-	-	0.9	-	-

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	687	476	434	719	260	476	1554	224	280	1303	97
Future Volume (veh/h)	185	687	476	434	719	260	476	1554	224	280	1303	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	195	723	501	457	757	274	501	1636	236	295	1372	102
Adj No. of Lanes	1	2	1	2	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	708	317	321	737	330	357	1475	660	217	1180	528
Arrive On Green	0.10	0.20	0.20	0.10	0.21	0.21	0.21	0.42	0.42	0.13	0.33	0.33
Sat Flow, veh/h	1681	3539	1583	3079	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	195	723	501	457	757	274	501	1636	236	295	1372	102
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1540	1770	1583	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	11.5	24.0	15.4	12.5	25.0	19.9	25.5	50.0	8.5	15.5	40.0	5.5
Cycle Q Clear(g_c), s	11.5	24.0	15.4	12.5	25.0	19.9	25.5	50.0	8.5	15.5	40.0	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	161	708	317	321	737	330	357	1475	660	217	1180	528
V/C Ratio(X)	1.21	1.02	1.58	1.42	1.03	0.83	1.40	1.11	0.36	1.36	1.16	0.19
Avail Cap(c_a), veh/h	161	708	317	321	737	330	357	1475	660	217	1180	528
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	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	48.0	19.7	53.8	47.5	45.5	47.3	35.0	11.5	52.3	40.0	28.5
Incr Delay (d2), s/veh	138.7	39.3	276.6	202.1	33.0	10.6	197.4	59.5	1.5	188.4	83.0	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	11.5	15.6	31.1	14.3	15.6	9.6	31.4	36.6	4.0	18.5	33.1	2.5
LnGrp Delay(d),s/veh	193.0	87.3	296.3	255.8	80.5	56.1	244.6	94.5	13.0	240.7	123.0	29.3
LnGrp LOS	F	F	F	F	F	E	F	F	B	F	F	C
Approach Vol, veh/h		1419			1488			2373			1769	
Approach Delay, s/veh		175.6			129.9			118.1			137.2	
Approach LOS		F			F			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	54.5	17.0	28.5	30.0	44.5	16.0	29.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	55	50.0	12.5	24.0	25.5	40.0	11.5	25.0				
Max Q Clear Time (g_c+l1), s	7.5	52.0	14.5	26.0	27.5	42.0	13.5	27.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			136.9									
HCM 2010 LOS			F									



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations								
Traffic Volume (veh/h)	103	144	213	2141	2163	33		
Future Volume (veh/h)	103	144	213	2141	2163	33		
Number	7	14	5	2	6	16		
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		
Adj Sat Flow, veh/h	1765	1863	1765	1863	1863	1863		
Adj Flow Rate, veh/h	108	152	224	2254	2277	35		
Adj No. of Lanes	1	1	1	2	2	1		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	207	195	194	2715	2112	945		
Arrive On Green	0.12	0.12	0.12	0.77	0.60	0.60		
Sat Flow, veh/h	1681	1583	1681	3632	3632	1583		
Grp Volume(v), veh/h	108	152	224	2254	2277	35		
Grp Sat Flow(s), veh/h	1681	1583	1681	3632	3632	1583		
Q Serve(g_s), s	4.9	7.6	9.5	33.5	49.0	0.7		
Cycle Q Clear(g_c), s	4.9	7.6	9.5	33.5	49.0	0.7		
Prop In Lane	1.00	1.00	1.00			1.00		
Lane Grp Cap(c), veh/h	207	195	194	2715	2112	945		
V/C Ratio(X)	0.52	0.78	1.15	0.83	1.08	0.04		
Avail Cap(c_a), veh/h	168	347	194	2715	2112	945		
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	30.7	34.9	36.3	6.1	16.6	6.8		
Incr Delay (d2), s/veh	2.0	6.6	11.5	3.1	44.5	0.1		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%), veh	11.9	6.9	10.4	17.1	36.5	0.3		
LnGrp Delay(d), s/veh	35.8	41.5	47.8	9.2	61.1	6.9		
LnGrp LOS	D	D	F	A	F	A		
Approach Vol, veh/h	260		2478		2312			
Approach Delay, s/veh	29.1		21.8		60.3			
Approach LOS	D		C		E			
Timer	1	2	3	4	5	6	7	8
Assigned Phs	2		4		5		6	
Phs Duration (G+Y+Rc), s	67.5		14.6		14.0		53.5	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	63.0		18.0		9.5		49.0	
Max Q Clear Time (g_c+I), s	35.5		9.6		11.5		51.0	
Green Ext Time (p_c), s	20.1		0.5		0.0		0.0	
Intersection Summary								
HCM 2010 Ctrl Delay			40.3					
HCM 2010 LOS			D					



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	287	70	100	20	60	163	80	2133	50	172	1909	326
Future Volume (veh/h)	287	70	100	20	60	163	80	2133	50	172	1909	326
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	802	74	105	21	63	172	84	2245	53	181	2009	343
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	203	592	503	242	71	193	117	1652	739	173	1519	252
Arrive On Green	0.12	0.32	0.32	0.16	0.16	0.16	0.02	0.15	0.15	0.10	0.50	0.50
Sat Flow, veh/h	1681	1863	1583	1137	442	1207	1681	3539	1583	1681	3039	504
Grp Volume(v), veh/h	802	74	105	21	0	235	84	2245	53	181	1146	1206
Grp Sat Flow(s), veh/h	1681	1863	1583	1137	0	1650	1681	1770	1583	1681	1770	1774
Q Serve(g_s), s	14.5	3.4	5.8	1.9	0.0	16.8	6.0	56.0	3.4	12.3	60.0	60.0
Cycle Q Clear(g_c), s	14.5	3.4	5.8	1.9	0.0	16.8	6.0	56.0	3.4	12.3	60.0	60.0
Prop In Lane	1.00	1.00	1.00	1.00	0.73	1.00	1.00	1.00	1.00	1.00	0.28	0.28
Lane Grp Cap(c), veh/h	203	592	503	242	0	263	117	1652	739	173	885	887
V/C Ratio(X)	1.49	0.12	0.21	0.09	0.00	0.89	0.72	1.36	0.07	1.05	1.30	1.36
Avail Cap(c_a), veh/h	203	636	541	268	0	302	117	1652	739	173	885	887
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.09	0.09	0.09	0.09	0.09	0.09
Uniform Delay (d), s/veh	52.8	29.1	29.9	43.2	0.0	49.4	57.5	50.8	28.5	53.8	30.0	30.0
Incr Delay (d2), s/veh	18.5	0.1	0.2	0.2	0.0	24.5	1.9	162.0	0.0	34.1	133.6	162.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%)	205	1.8	2.6	0.6	0.0	9.4	2.8	64.6	1.5	7.4	62.1	69.4
LnGrp Delay(d),s/veh	296.3	29.2	30.1	43.3	0.0	73.9	59.4	212.8	28.5	87.9	163.6	192.7
LnGrp LOS	F	C	C	D		E	E	F	C	F	F	F
Approach Vol, veh/h	481			256			2382		2533			
Approach Delay, s/veh	197.1			71.4			203.3		172.0			
Approach LOS	F			E			F		F			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+R), s	40.5			42.7	12.8	64.5	19.0	23.7				
Change Period (Y+R), s	4.5			4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Or), s	60.0			41.0	5.5	60.0	14.5	22.0				
Max Q Clear Time (t_c+I), s	14.0			7.8	8.0	62.0	16.5	18.8				
Green Ext Time (p_c), s	0.0	0.0		0.7	0.0	0.0	0.0	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay		182.8										
HCM 2010 LOS			F									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	7	110	70	80	140	358	170	1788	130	398	1505	146
Future Volume (veh/h)	7	110	70	80	140	358	170	1788	130	398	1505	146
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	123	116	74	84	147	377	179	1882	137	419	1584	154
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	644	548	400	160	411	175	1283	574	301	1548	693
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.10	0.36	0.36	0.36	0.88	0.88
Sat Flow, veh/h	829	1863	1583	1126	464	1189	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	23	116	74	84	0	524	179	1882	137	419	1584	154
Grp Sat Flow(s), veh/h	829	1863	1583	1126	0	1653	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	5.1	5.2	3.8	6.7	0.0	36.4	12.5	43.5	7.2	21.5	52.5	1.8
Cycle Q Clear(g_c), s	4.5	5.2	3.8	12.0	0.0	36.4	12.5	43.5	7.2	21.5	52.5	1.8
Prop In Lane	1.00	1.00	1.00	1.00	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	95	644	548	400	0	572	175	1283	574	301	1548	693
V/C Ratio(X)	1.30	0.18	0.14	0.21	0.00	0.92	1.02	1.47	0.24	1.39	1.02	0.22
Avail Cap(c_a), veh/h	95	644	548	400	0	572	175	1283	574	301	1548	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	0.00	1.00	0.42	0.42	0.42	0.09	0.09	0.09
Uniform Delay (d), s/veh	27.4	27.4	26.9	31.6	0.0	37.6	53.8	38.3	26.7	38.5	7.5	4.3
Incr Delay (d2), s/veh	0.8	0.1	0.1	0.3	0.0	19.7	50.2	21.0	0.4	17.1	13.8	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2.7	1.7	2.1	0.0	19.7	8.2	59.0	3.2	24.8	25.3	0.8	0.8
LnGrp Delay(d), s/veh	27.4	27.5	27.0	31.8	0.0	57.3	104.1	250.2	27.1	216.6	21.3	4.4
LnGrp LOS	F	C	C	C		E	F	F	C	F	F	A
Approach Vol, veh/h		313			608			2198			2157	
Approach Delay, s/veh		114.8			53.8			224.4			58.0	
Approach LOS		F			D			F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+R), s	48.0	48.0		46.0	17.0	57.0		46.0				
Change Period (Y+R), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (G_max), s	43.5	43.5		41.5	12.5	52.5		41.5				
Max Q Clear Time (Q_c), s	43.5	43.5		43.5	14.5	54.5		38.4				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay		130.2										
HCM 2010 LOS		F										



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	23	120	20	20	80	27	10	2268	30	44	1738	13
Future Volume (veh/h)	23	120	20	20	80	27	10	2268	30	44	1738	13
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1900	1765	1863	1900	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	24	126	21	21	84	28	11	2387	32	46	1829	14
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	177	30	102	152	51	206	2900	39	118	2920	22
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.81	0.81	0.81	0.81	0.81	0.81
Sat Flow, veh/h	1209	1557	260	1171	1338	446	237	3576	48	134	3600	28
Grp Volume(v), veh/h	23	0	147	21	0	112	11	1178	1241	46	898	945
Grp Sat Flow(s), veh/h	1209	0	1817	1171	0	1784	237	1770	1854	134	1770	1858
Q Serve(g_s), s	2.3	0.0	9.4	2.1	0.0	7.1	2.2	45.2	45.8	35.7	23.4	23.5
Cycle Q Clear(g_c), s	9.4	0.0	9.4	11.5	0.0	7.1	25.7	45.2	45.8	81.5	23.4	23.5
Prop In Lane	1.00		0.14	1.00		0.25	1.00		0.03	1.00		0.01
Lane Grp Cap(c), veh/h	126	0	207	102	0	203	206	1435	1504	118	1435	1507
V/C Ratio(X)	0.19	0.00	0.71	0.21	0.00	0.55	0.05	0.82	0.82	0.39	0.63	0.63
Avail Cap(c_a), veh/h	126	0	277	147	0	272	206	1435	1504	118	1435	1507
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	0.09	0.09	0.09	0.22	0.22	0.22
Uniform Delay (d), s/veh	54.7	0.0	51.3	56.8	0.0	50.3	9.3	6.4	6.5	29.7	4.3	4.4
Incr Delay (d2), s/veh	0.7	0.0	5.4	1.0	0.0	2.3	0.0	0.5	0.5	2.1	0.5	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	0.0	0.0	5.0	0.7	0.0	3.6	0.1	21.5	23.0	1.4	11.4	12.0
LnGrp Delay(d), s/veh	55.4	0.0	56.7	57.8	0.0	52.6	9.3	6.9	7.0	31.8	4.8	4.8
LnGrp LOS	E		E	E		D	A	A	A	C	A	A
Approach Vol, veh/h		171			133			2430			1889	
Approach Delay, s/veh		56.5			53.4			7.0			5.5	
Approach LOS		E			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		101.8		18.2		101.8		18.2				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		92.7		18.3		92.7		18.3				
Max Q Clear Time (g_c+I), s		17.8		11.4		83.5		13.5				
Green Ext Time (p_c), s		32.4		0.4		7.5		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				9.5								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	670	200	180	580	294	410	1583	430	335	1363	50	
Future Volume (veh/h)	670	200	180	580	294	410	1583	430	335	1363	50	
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	84	705	211	189	611	309	432	1666	453	353	1435	53
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	794	355	133	854	382	316	1386	620	260	1247	46
Arrive On Green	0.06	0.22	0.22	0.08	0.24	0.24	0.19	0.39	0.39	0.15	0.36	0.36
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3481	128
Grp Volume(v), veh/h	705	211	189	611	309	432	1666	453	353	728	760	
Grp Sat Flow(s), veh/h	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1840	
Q Serve(g_s), s	5.9	23.2	14.3	9.5	19.0	15.4	22.6	47.0	29.3	18.6	43.0	43.0
Cycle Q Clear(g_c), s	5.9	23.2	14.3	9.5	19.0	15.4	22.6	47.0	29.3	18.6	43.0	43.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.07	
Lane Grp Cap(c), veh/h	704	794	355	133	854	382	316	1386	620	260	634	659
V/C Ratio(X)	0.81	0.89	0.59	1.42	0.72	0.81	1.37	1.20	0.73	1.36	1.15	1.15
Avail Cap(c_a), veh/h	119	855	383	133	885	396	316	1386	620	260	634	659
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	0.59	0.59	0.59	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	45.1	41.7	55.3	41.7	20.8	48.7	36.5	31.1	50.7	38.5	38.5	
Incr Delay (d2), s/veh	10.8	2.2	13.2	1.6	7.1	183.5	98.0	7.4	177.3	80.0	81.2	
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	
%ile BackOfQ(50%), veh	12.5	6.5	12.3	9.4	7.5	26.6	41.8	14.0	21.4	35.1	36.7	
LnGrp Delay(d), s/veh	4.5	55.9	43.8	268.4	43.3	28.0	232.2	134.5	38.5	228.0	118.5	119.7
LnGrp LOS	F	E	D	F	D	C	F	F	D	F	F	F
Approach Vol, veh/h	1000			1109			2551			1841		
Approach Delay, s/veh	55.7			77.4			134.0			140.0		
Approach LOS	E			E			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	51.5	14.0	31.4	27.1	47.5	11.9	33.5					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	9.5	29.0	20.5	43.0	8.5	30.0						
Max Q Clear Time (Q_c), s	11.5	25.2	24.6	45.0	7.9	21.0						
Green Ext Time (p_c), s	0.0	0.0	1.8	0.0	0.0	0.0	3.1					
Intersection Summary												
HCM 2010 Ctrl Delay	114.0											
HCM 2010 LOS	F											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	3	1138	50	50	1120	170	40	10	40	220	10	33
Future Volume (veh/h)	3	1138	50	50	1120	170	40	10	40	220	10	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1863	1863	1863	1765	1863	1900	1667	1863	1900
Adj Flow Rate, veh/h	14	1198	53	53	1179	179	42	11	42	232	11	35
Adj No. of Lanes	1	2	1	1	2	1	1	1	0	2	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	1368	612	68	1374	615	53	50	192	475	106	338
Arrive On Green	0.04	0.39	0.39	0.04	0.39	0.39	0.03	0.15	0.15	0.15	0.27	0.27
Sat Flow, veh/h	1681	3539	1583	1774	3539	1583	1681	339	1295	3079	393	1250
Grp Volume(v), veh/h	14	1198	53	53	1179	179	42	0	53	232	0	46
Grp Sat Flow(s), veh/h	1681	3539	1583	1774	3539	1583	1681	0	1634	1540	0	1642
Q Serve(g_s), s	1.0	37.7	1.6	3.6	36.7	4.0	3.0	0.0	3.4	8.3	0.0	2.5
Cycle Q Clear(g_c), s	1.0	37.7	1.6	3.6	36.7	4.0	3.0	0.0	3.4	8.3	0.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.79	1.00		0.76
Lane Grp Cap(c), veh/h	62	1368	612	68	1374	615	53	0	242	475	0	445
V/C Ratio(X)	0.23	0.88	0.09	0.78	0.86	0.29	0.80	0.00	0.22	0.49	0.00	0.10
Avail Cap(c_a), veh/h	77	1607	719	126	1696	759	91	0	279	475	0	445
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)	0.16	0.16	0.16	0.84	0.84	0.84	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.1	9.2	57.2	33.7	4.6	57.7	0.0	45.0	46.4	0.0	32.8	0.5
Incr Delay (d2), s/veh	0.3	0.9	0.0	14.5	3.3	0.2	23.0	0.0	0.5	3.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh	18.5	0.7	2.0	18.5	1.7	1.7	0.0	1.6	3.7	0.0	1.2	0.0
LnGrp Delay(d),s/veh	36.4	35.0	9.2	71.7	37.0	4.8	80.7	0.0	45.5	50.0	0.0	33.3
LnGrp LOS	E	D	A	E	D	A	F		D	D		C
Approach Vol, veh/h	1265			1411			95			278		
Approach Delay, s/veh	34.2			34.2			61.1			47.2		
Approach LOS	C			C			E			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	22.3	9.1	50.9	8.3	37.0	8.9	51.1					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gr), s	20.5	8.5	54.5	6.5	32.5	5.5	57.5					
Max Q Clear Time (t0+1), s	15.4	5.6	39.7	5.0	4.5	3.0	38.7					
Green Ext Time (p_c), s	0.5	0.2	0.0	6.7	0.0	0.2	0.0	7.9				
Intersection Summary												
HCM 2010 Ctrl Delay			36.2									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 39.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	53	186	83	110	147	40	133	80	120	10	40	53
Future Vol, veh/h	53	186	83	110	147	40	133	80	120	10	40	53
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	-	-	-	-	-	-	-	-	-	-	-	-
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	196	87	116	155	42	140	84	126	11	42	56

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	197	0	0	283
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.12	-	-	4.12
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218
Pot Cap-1 Maneuver	876	-	-	1279
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	876	-	-	1279
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.3	3	116.5	18.3
HCM LOS			F	C

Minor Lane/Major Mvm	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)		319	1376	-	-	1279	-	-
HCM Lane V/C Ratio		1.099	0.041	-	-	0.091	-	-
HCM Control Delay (s)		116.5	7.7	0	-	8.1	0	-
HCM Lane LOS		F	A	A	-	A	A	-
HCM 95th %tile Q(veh)		13.6	0.1	-	-	0.3	-	-

Intersection

Intersection Delay, s/veh 20.3
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷	↶	↷	↶	↷
Traffic Vol, veh/h	80	209	99	60	140	50	138	240	90	40	130	40
Future Vol, veh/h	80	209	99	60	140	50	138	240	90	40	130	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	84	220	104	63	147	53	145	253	95	42	137	42
Number of Lanes	1	1	0	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	2
HCM Control Delay	26.2	17.6	18.2	17.3
HCM LOS	D	C	C	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	68%	0%	74%	0%	76%
Vol Right, %	0%	0%	100%	0%	32%	0%	26%	0%	24%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	138	240	90	80	308	60	190	40	170
LT Vol	138	0	0	80	0	60	0	40	0
Through Vol	0	240	0	0	209	0	140	0	130
RT Vol	0	0	90	0	99	0	50	0	40
Lane Flow Rate	145	253	95	84	324	63	200	42	179
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.352	0.576	0.197	0.206	0.725	0.162	0.475	0.111	0.436
Departure Headway (Hd)	8.721	8.207	7.487	8.795	8.053	9.252	8.549	9.467	8.777
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	413	440	479	408	451	388	422	379	410
Service Time	6.468	5.954	5.233	6.542	5.8	7.005	6.301	7.222	6.531
HCM Lane V/C Ratio	0.351	0.575	0.198	0.206	0.718	0.162	0.474	0.111	0.437
HCM Control Delay	16.2	21.6	12.1	13.8	29.4	13.8	18.8	13.4	18.2
HCM Lane LOS	C	C	B	B	D	B	C	B	C
HCM 95th-tile Q	1.6	3.5	0.7	0.8	5.7	0.6	2.5	0.4	2.2

Intersection

Intersection Delay, s/veh
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑		↵	↑↑		↵	↑↑		↵	↑↑	
Traffic Vol, veh/h	20	204	20	80	175	301	13	107	130	239	60	10
Future Vol, veh/h	20	204	20	80	175	301	13	107	130	239	60	10
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	215	21	84	184	317	14	113	137	252	63	11
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	13.9	21.4	14.2	20.4
HCM LOS	B	C	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	22%	0%	100%	77%	0%	100%	16%	0%	100%	67%
Vol Right, %	0%	0%	78%	0%	0%	23%	0%	0%	84%	0%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	13	71	166	20	136	88	80	117	359	239	40	30
LT Vol	13	0	0	20	0	0	80	0	0	239	0	0
Through Vol	0	71	36	0	136	68	0	117	58	0	40	20
RT Vol	0	0	130	0	0	20	0	0	301	0	0	10
Lane Flow Rate	14	75	174	21	143	93	84	123	378	252	42	32
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.033	0.172	0.372	0.051	0.325	0.206	0.187	0.256	0.727	0.593	0.093	0.068
Departure Headway (Hd)	8.728	8.228	7.679	8.68	8.188	8.021	8.002	7.502	6.915	8.481	7.981	7.748
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	409	435	467	411	438	446	448	478	522	425	448	461
Service Time	6.501	6.001	5.452	6.456	5.956	5.796	5.762	5.262	4.676	6.249	5.749	5.516
HCM Lane V/C Ratio	0.034	0.172	0.373	0.051	0.326	0.209	0.188	0.257	0.724	0.593	0.094	0.069
HCM Control Delay	11.8	12.7	15	11.9	14.9	12.9	12.6	12.8	26.1	23	11.6	11.1
HCM Lane LOS	B	B	B	B	B	B	B	B	D	C	B	B
HCM 95th-tile Q	0.1	0.6	1.7	0.2	1.4	0.8	0.7	1	6	3.7	0.3	0.2

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔		↔	↔			↔	
Traffic Vol, veh/h	20	199	30	50	170	10	20	50	40	10	70	20
Future Vol, veh/h	20	199	30	50	170	10	20	50	40	10	70	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	209	32	53	179	11	21	53	42	11	74	21
Number of Lanes	1	1	0	1	1	0	1	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	3
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	2	3	2	2
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.9	10.9	9.5	9.7
HCM LOS	B	B	A	A

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	100%	0%	22%	0%
Vol Thru, %	0%	100%	29%	0%	87%	0%	94%	78%	64%
Vol Right, %	0%	0%	71%	0%	13%	0%	6%	0%	36%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	33	57	20	229	50	180	45	55
LT Vol	20	0	0	20	0	50	0	10	0
Through Vol	0	33	17	0	199	0	170	35	35
RT Vol	0	0	40	0	30	0	10	0	20
Lane Flow Rate	21	35	60	21	241	53	189	47	58
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.04	0.06	0.09	0.03	0.38	0.09	0.30	0.08	0.09
Departure Headway (Hd)	6.91	6.40	5.90	6.36	5.76	6.40	5.86	6.54	6.17
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	518	559	607	564	624	560	614	547	580
Service Time	4.65	4.14	3.64	4.09	3.49	4.13	3.59	4.28	3.91
HCM Lane V/C Ratio	0.04	0.06	0.09	0.03	0.38	0.09	0.30	0.08	0.1
HCM Control Delay	9.9	9.6	9.3	9.3	12.1	9.8	11.2	9.9	9.6
HCM Lane LOS	A	A	A	A	B	A	B	A	A
HCM 95th-tile Q	0.1	0.2	0.3	0.1	1.8	0.3	1.3	0.3	0.3

Intersection

Intersection Delay, s/veh
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↵	↑↑		↵	↑↑		↵	↑↑		↵	↑↑	
Traffic Vol, veh/h	20	406	87	160	457	10	99	70	120	40	100	20
Future Vol, veh/h	20	406	87	160	457	10	99	70	120	40	100	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	427	92	168	481	11	104	74	126	42	105	21
Number of Lanes	1	2	0	1	2	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	3	3
HCM Control Delay	21.5	21.5	15	13.7
HCM LOS	C	C	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	16%	0%	100%	61%	0%	100%	94%	0%	100%	62%
Vol Right, %	0%	0%	84%	0%	0%	39%	0%	0%	6%	0%	0%	38%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	47	143	20	271	222	160	305	162	40	67	53
LT Vol	99	0	0	20	0	0	160	0	0	40	0	0
Through Vol	0	47	23	0	271	135	0	305	152	0	67	33
RT Vol	0	0	120	0	0	87	0	0	10	0	0	20
Lane Flow Rate	104	49	151	21	285	234	168	321	171	42	70	56
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.27	0.12	0.345	0.05	0.644	0.511	0.392	0.702	0.372	0.115	0.182	0.141
Departure Headway (Hd)	9.315	8.815	8.228	8.632	8.132	7.858	8.383	7.883	7.84	9.82	9.32	9.058
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	405	435	413	442	456	428	455	456	367	387	398
Service Time	7.114	6.614	6.028	6.421	5.921	5.648	6.169	5.669	5.626	7.52	7.02	6.758
HCM Lane V/C Ratio	0.272	0.121	0.347	0.051	0.645	0.513	0.393	0.705	0.375	0.114	0.181	0.141
HCM Control Delay	15.6	12.8	15.4	11.9	24.6	18.7	16.5	27.4	15.2	13.8	14.1	13.2
HCM Lane LOS	C	B	C	B	C	C	C	D	C	B	B	B
HCM 95th-tile Q	1.1	0.4	1.5	0.2	4.4	2.8	1.8	5.4	1.7	0.4	0.7	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	70	723	13	100	652	221	13	57	70	120	57	30
Future Volume (veh/h)	70	723	13	100	652	221	13	57	70	120	57	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	74	761	14	105	686	233	14	60	74	126	60	32
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	912	408	178	800	272	614	799	680	642	877	745
Arrive On Green	0.06	0.26	0.26	0.11	0.31	0.31	0.02	0.43	0.43	0.06	0.47	0.47
Sat Flow, veh/h	1681	3539	1583	1681	2595	881	1681	1863	1583	1681	1863	1583
Grp Volume(v), veh/h	74	761	14	105	468	451	14	60	74	126	60	32
Grp Sat Flow(s), veh/h/ln	1765	1863	1863	1681	1770	1707	1681	1863	1583	1681	1863	1583
Q Serve(g_s), s	5.2	24.4	0.7	7.1	29.8	29.8	0.6	2.3	2.3	4.8	2.1	1.0
Cycle Q Clear(g_c), s	5.2	24.4	0.7	7.1	29.8	29.8	0.6	2.3	2.3	4.8	2.1	1.0
Prop In Lane	1.00	1.00	1.00	1.00	0.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	912	408	178	546	526	614	799	680	642	877	745
V/C Ratio(X)	0.79	0.83	0.03	0.59	0.86	0.86	0.02	0.08	0.11	0.20	0.07	0.04
Avail Cap(c_a), veh/h	189	1401	627	273	789	761	665	799	680	707	877	745
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)	0.23	0.23	0.23	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.0	42.1	25.7	51.1	39.0	39.0	18.7	20.2	9.6	16.1	17.4	9.7
Incr Delay (d2), s/veh	8.5	0.6	0.0	3.1	6.5	6.7	0.0	0.2	0.3	0.1	0.2	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	25.1	12.0	0.3	3.5	15.5	15.0	0.3	1.2	1.1	2.2	1.1	0.4
LnGrp Delay(d),s/veh	69.5	42.7	25.7	54.2	45.5	45.8	18.7	20.4	9.9	16.3	17.5	9.9
LnGrp LOS	E	D	C	D	D	D	B	C	A	B	B	A
Approach Vol, veh/h	849			1024			148			218		
Approach Delay, s/veh	43.9			46.5			15.0			15.7		
Approach LOS	D			D			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	45.0	56.0	17.2	35.4	6.4	61.0	11.2	41.5				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gr), s	23.5	19.5	47.5	5.5	29.5	13.5	53.5					
Max Q Clear Time (g_c+1), s	11.3	9.1	26.4	2.6	4.1	7.2	31.8					
Green Ext Time (p_c), s	0.4	0.1	4.5	0.0	0.3	0.1	5.2					
Intersection Summary												
HCM 2010 Ctrl Delay	40.4											
HCM 2010 LOS	D											



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘		↕	↘
Traffic Volume (veh/h)	53	1228	86	170	960	10	77	60	160	30	60	33
Future Volume (veh/h)	53	1228	86	170	960	10	77	60	160	30	60	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	56	1293	91	179	1011	11	81	63	168	32	63	35
Adj No. of Lanes	1	2	1	1	2	0	1	1	0	0	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	1471	658	207	1780	19	425	157	419	130	249	126
Arrive On Green	0.04	0.42	0.42	0.12	0.50	0.50	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	1681	3539	1583	1681	3586	39	1224	450	1201	266	713	360
Grp Volume(v), veh/h	56	1293	91	179	499	523	81	0	231	130	0	0
Grp Sat Flow(s), veh/h	1770	1770	1583	1681	1770	1856	1224	0	1651	1339	0	0
Q Serve(g_s), s	4.0	40.4	4.3	12.5	23.7	23.7	0.0	0.0	12.7	0.7	0.0	0.0
Cycle Q Clear(g_c), s	4.0	40.4	4.3	12.5	23.7	23.7	10.8	0.0	12.7	13.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.73	0.25		0.27
Lane Grp Cap(c), veh/h	71	1471	658	207	878	921	425	0	576	505	0	0
V/C Ratio(X)	0.79	0.88	0.14	0.87	0.57	0.57	0.19	0.00	0.40	0.26	0.00	0.00
Avail Cap(c_a), veh/h	133	1696	759	301	1025	1075	425	0	576	505	0	0
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)	0.58	0.58	0.58	0.44	0.44	0.44	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.3	32.3	21.7	51.7	21.2	21.2	28.9	0.0	29.6	27.7	0.0	0.0
Incr Delay (d2), s/veh	0.8	3.1	0.1	8.1	0.3	0.2	1.0	0.0	2.1	1.2	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	120.4	120.4	1.9	6.3	11.6	12.1	2.1	0.0	6.1	3.5	0.0	0.0
LnGrp Delay(d),s/veh	17.7	35.4	21.8	59.8	21.5	21.4	29.9	0.0	31.6	28.9	0.0	0.0
LnGrp LOS	E	D	C	E	C	C	C		C	C		
Approach Vol, veh/h	1440			1201			312			130		
Approach Delay, s/veh	35.8			27.2			31.2			28.9		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	46.4	19.2	54.4			46.4	9.6	64.1				
Change Period (Y+Rc), s	4.5	4.5	4.5			4.5	4.5	4.5				
Max Green Setting (Gmax), s	27.5	21.5	57.5			27.5	9.5	69.5				
Max Q Clear Time (g_c+I1), s	14.3	14.5	42.4			15.4	6.0	25.7				
Green Ext Time (p_c), s	1.3	0.2	7.5			0.4	0.0	6.5				
Intersection Summary												
HCM 2010 Ctrl Delay			31.7									
HCM 2010 LOS			C									

Intersection

Intersection Delay, s/veh
 Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	43	192	13	20	243	80	13	10	10	50	20	73
Future Vol, veh/h	43	192	13	20	243	80	13	10	10	50	20	73
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	45	202	14	21	256	84	14	11	11	53	21	77
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.5	11.6	8.9	9.7
HCM LOS	B	B	A	A

Lane	NBLn	EBLn	WBLn	SBLn
Vol Left, %	39%	17%	6%	35%
Vol Thru, %	30%	77%	71%	14%
Vol Right, %	30%	5%	23%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	248	343	143
LT Vol	13	43	20	50
Through Vol	10	192	243	20
RT Vol	10	13	80	73
Lane Flow Rate	35	261	361	151
Geometry Grp	1	1	1	1
Degree of Util (X)	0.054	0.35	0.46	0.216
Departure Headway (Hd)	5.598	4.828	4.596	5.158
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	644	739	776	688
Service Time	3.598	2.902	2.663	3.245
HCM Lane V/C Ratio	0.054	0.353	0.465	0.219
HCM Control Delay	8.9	10.5	11.6	9.7
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.2	1.6	2.5	0.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	90	1005	113	200	997	60	133	210	110	50	310	100
Future Volume (veh/h)	90	1005	113	200	997	60	133	210	110	50	310	100
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	95	1058	119	211	1049	63	140	221	116	53	326	105
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1127	504	236	1319	79	161	567	482	146	399	129
Arrive On Green	0.02	0.11	0.11	0.14	0.39	0.39	0.10	0.30	0.30	0.09	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	1681	3393	204	1681	1863	1583	1681	1351	435
Grp Volume(v), veh/h	95	1058	119	211	547	565	140	221	116	53	0	431
Grp Sat Flow(s), veh/h	1765	1770	1583	1681	1770	1827	1681	1863	1583	1681	0	1786
Q Serve(g_s), s	6.8	35.6	6.2	14.8	32.8	32.8	9.9	11.2	6.6	3.6	0.0	26.9
Cycle Q Clear(g_c), s	6.8	35.6	6.2	14.8	32.8	32.8	9.9	11.2	6.6	3.6	0.0	26.9
Prop In Lane	1.00	1.00	1.00	1.00	0.11	1.00	1.00	1.00	1.00	1.00	0.24	0.24
Lane Grp Cap(c), veh/h	118	1127	504	236	688	710	161	567	482	146	0	528
V/C Ratio(X)	0.81	0.94	0.24	0.89	0.80	0.80	0.87	0.39	0.24	0.36	0.00	0.82
Avail Cap(c_a), veh/h	133	1135	508	245	688	710	161	567	482	146	0	528
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.44	0.38	0.38	0.38	0.97	0.97	0.97	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.8	52.5	22.6	50.7	32.4	32.5	53.5	33.0	31.3	51.6	0.0	39.3
Incr Delay (d2), s/veh	8.4	7.5	0.1	14.8	2.6	2.5	35.8	2.0	1.2	1.5	0.0	13.1
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/l	18.7	2.7	7.8	16.4	17.0	6.2	6.1	3.0	1.7	0.0	15.2	15.2
LnGrp Delay(d),s/veh	1.2	60.0	22.7	65.5	35.0	34.9	89.3	34.9	32.5	53.1	0.0	52.4
LnGrp LOS	E	E	C	E	D	C	F	C	C	D		D
Approach Vol, veh/h	1272			1323			477			484		
Approach Delay, s/veh	57.4			39.8			50.3			52.5		
Approach LOS	E			D			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	41.0	21.3	42.7	16.0	40.0	12.9	51.1					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	36.5	17.5	38.5	11.5	34.5	9.5	46.5					
Max Q Clear Time (g_c+I), s	13.2	16.8	37.6	11.9	28.9	8.8	34.8					
Green Ext Time (p_c), s	0.0	1.4	0.0	0.6	0.0	1.1	0.0	4.8				
Intersection Summary												
HCM 2010 Ctrl Delay			49.2									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑	↗	↖	↑	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (veh/h)	139	139	100	30	170	40	160	450	30	50	410	63
Future Volume (veh/h)	139	139	100	30	170	40	160	450	30	50	410	63
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1900	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	56	146	105	32	179	42	168	474	32	53	432	66
Adj No. of Lanes	1	1	1	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	296	251	46	210	49	193	1342	600	479	1942	869
Arrive On Green	0.04	0.16	0.16	0.03	0.14	0.14	0.23	0.76	0.76	0.28	0.55	0.55
Sat Flow, veh/h	1681	1863	1583	1681	1460	343	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	146	105	32	0	221	168	474	32	53	432	66	
Grp Sat Flow(s), veh/h	1863	1863	1583	1681	0	1802	1681	1770	1583	1681	1770	1583
Q Serve(g_s), s	4.0	8.6	7.2	2.3	0.0	14.4	11.5	5.3	0.5	2.8	7.5	1.7
Cycle Q Clear(g_c), s	4.0	8.6	7.2	2.3	0.0	14.4	11.5	5.3	0.5	2.8	7.5	1.7
Prop In Lane	1.00	1.00	1.00	1.00	0.19	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	71	296	251	46	0	259	193	1342	600	479	1942	869
V/C Ratio(X)	0.79	0.49	0.42	0.70	0.00	0.85	0.87	0.35	0.05	0.11	0.22	0.08
Avail Cap(c_a), veh/h	189	536	455	119	0	443	371	1342	600	479	1942	869
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.61	0.61	0.61
Uniform Delay (d), s/veh	50.9	46.1	45.5	57.9	0.0	50.1	45.3	9.6	6.3	31.7	13.9	7.0
Incr Delay (d2), s/veh	7.2	1.3	1.1	17.3	0.0	7.8	11.2	0.7	0.2	0.1	0.2	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	4.5	3.2	1.3	0.0	7.7	5.9	2.6	0.2	1.3	3.7	0.8	
LnGrp Delay(d),s/veh	4.1	47.3	46.6	75.1	0.0	57.9	56.5	10.4	6.5	31.8	14.1	7.1
LnGrp LOS	E	D	D	E		E	E	B	A	C	B	A
Approach Vol, veh/h		307			253			674			551	
Approach Delay, s/veh		52.0			60.1			21.7			14.9	
Approach LOS		D			E			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	50.0	50.0	7.8	23.6	18.3	70.4	9.6	21.8				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (G_max), s	45.5	45.5	8.5	34.5	26.5	32.5	13.5	29.5				
Max Q Clear Time (g+1), s	4.8	17.3	4.3	10.6	13.5	9.5	6.0	16.4				
Green Ext Time (p_c), s	0.0	3.1	0.0	1.0	0.3	2.7	0.0	0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			30.3									
HCM 2010 LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	829	829	113	170	1050	220	133	520	80	220	410	133
Future Volume (veh/h)	829	829	113	170	1050	220	133	520	80	220	410	133
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	873	873	119	179	1105	232	140	547	84	232	432	140
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	217	996	445	294	1158	518	164	782	350	290	1047	673
Arrive On Green	0.13	0.28	0.28	0.17	0.33	0.33	0.10	0.22	0.22	0.17	0.30	0.30
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	3539	1583	1681	3539	1583
Grp Volume(v), veh/h	873	119	179	1105	232	140	547	84	232	432	140	
Grp Sat Flow(s), veh/h	1770	1583	1681	1770	1583	1681	1770	1583	1681	1770	1583	
Q Serve(g_s), s	13.6	28.2	7.0	11.8	36.7	13.9	9.8	17.1	5.2	15.9	11.7	0.0
Cycle Q Clear(g_c), s	13.6	28.2	7.0	11.8	36.7	13.9	9.8	17.1	5.2	15.9	11.7	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	217	996	445	294	1158	518	164	782	350	290	1047	673
V/C Ratio(X)	0.89	0.88	0.27	0.61	0.95	0.45	0.85	0.70	0.24	0.80	0.41	0.21
Avail Cap(c_a), veh/h	217	1135	508	294	1165	521	164	782	350	290	1047	673
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)	0.41	0.41	0.41	0.27	0.27	0.27	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.1	33.5	45.7	39.5	31.8	53.3	43.1	38.5	47.6	33.9	21.8	
Incr Delay (d2), s/veh	3.2	0.1	1.0	6.2	0.2	32.4	5.2	1.6	14.5	1.2	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	
%ile BackOfQ(50%), veh	14.3	3.1	5.6	19.0	6.1	6.1	8.9	2.5	8.6	5.9	3.0	
LnGrp Delay(d), s/veh	44.3	33.6	46.7	45.7	32.0	85.7	48.3	40.1	62.1	35.1	22.5	
LnGrp LOS	E	D	C	D	D	C	F	D	D	E	D	C
Approach Vol, veh/h	1185			1516			771			804		
Approach Delay, s/veh	47.2			43.7			54.2			40.7		
Approach LOS	D			D			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	25.5	31.0	25.5	38.3	16.2	40.0	20.0	43.8				
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (or Max), s	26.5	16.5	38.5	11.5	35.5	15.5	39.5					
Max Q Clear Time (or I), s	19.4	13.8	30.2	11.8	13.7	15.6	38.7					
Green Ext Time (p_c), s	2.1	0.1	3.5	0.0	3.0	0.0	0.6					
Intersection Summary												
HCM 2010 Ctrl Delay			46.0									
HCM 2010 LOS			D									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	953	953	143	140	1143	130	203	470	100	200	430	233
Future Volume (veh/h)	953	953	143	140	1143	130	203	470	100	200	430	233
Number	7	4	14	3	8	18	5	2	12	1	6	16
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	1.00	1.00	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h	1765	1863	1863	1765	1863	1863	1765	1863	1900	1765	1863	1900
Adj Flow Rate, veh/h	140	1003	151	147	1203	137	214	495	105	211	453	245
Adj No. of Lanes	1	2	1	1	2	1	1	2	0	1	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	1131	506	235	1286	575	258	729	154	236	529	284
Arrive On Green	0.10	0.32	0.32	0.14	0.36	0.36	0.15	0.25	0.25	0.14	0.24	0.24
Sat Flow, veh/h	1681	3539	1583	1681	3539	1583	1681	2910	614	1681	2226	1195
Grp Volume(v), veh/h	1003	151	147	1203	137	214	300	300	211	359	339	
Grp Sat Flow(s), veh/h	1770	1583	1681	1770	1583	1681	1770	1754	1681	1770	1652	
Q Serve(g_s), s	9.9	32.3	8.6	9.9	39.3	4.8	14.8	18.4	18.6	14.8	23.3	23.6
Cycle Q Clear(g_c), s	9.9	32.3	8.6	9.9	39.3	4.8	14.8	18.4	18.6	14.8	23.3	23.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	0.35	1.00	0.72			
Lane Grp Cap(c), veh/h	1131	506	235	1286	575	258	443	439	236	420	392	
V/C Ratio(X)	0.87	0.89	0.30	0.63	0.94	0.24	0.83	0.68	0.68	0.89	0.86	0.86
Avail Cap(c_a), veh/h	1253	561	235	1312	587	258	443	439	245	420	392	
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)	0.51	0.51	0.51	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	30.7	48.7	36.8	11.7	49.3	40.6	40.7	50.7	43.8	43.9	
Incr Delay (d2), s/veh	4.1	0.2	5.2	12.4	0.2	20.0	8.1	8.3	30.8	19.5	21.4	
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	
%ile BackOfQ(50%), veh	16.4	3.8	5.0	21.4	2.1	8.3	10.0	10.0	8.9	13.7	13.1	
LnGrp Delay(d), s/veh	42.8	30.9	53.8	49.2	11.9	69.3	48.7	49.0	81.5	63.3	65.3	
LnGrp LOS	E	D	C	D	D	B	E	D	D	F	E	E
Approach Vol, veh/h	1294			1487			814		909			
Approach Delay, s/veh	45.0			46.2			54.2		68.3			
Approach LOS	D			D			D		E			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+R), s	34.6	21.3	42.8	22.9	33.0	16.0	48.1					
Change Period (Y+R), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (G_max), s	28.5	13.5	42.5	17.5	28.5	11.5	44.5					
Max Q Clear Time (G+Y+R), s	12.6	11.9	34.3	16.8	25.6	11.9	41.3					
Green Ext Time (p_c), s	2.1	0.1	4.1	0.0	1.1	0.0	2.3					
Intersection Summary												
HCM 2010 Ctrl Delay			51.8									
HCM 2010 LOS			D									

Intersection

Int Delay, s/veh 0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↑
Traffic Vol, veh/h	1320	7	0	1297	0	46
Future Vol, veh/h	1320	7	0	1297	0	46
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	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1389	7	0	1365	0	48

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	- - - 698
Stage 1	-	-	- - -
Stage 2	-	-	- - -
Critical Hdwy	-	-	- - - 6.94
Critical Hdwy Stg 1	-	-	- - -
Critical Hdwy Stg 2	-	-	- - -
Follow-up Hdwy	-	-	- - - 3.32
Pot Cap-1 Maneuver	-	-	0 - 0 383
Stage 1	-	-	0 - 0 -
Stage 2	-	-	0 - 0 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	- - - 383
Mov Cap-2 Maneuver	-	-	- - -
Stage 1	-	-	- - -
Stage 2	-	-	- - -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	15.8
HCM LOS			C

Minor Lane/Major Mvm	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	383	-	-	-
HCM Lane V/C Ratio	0.126	-	-	-
HCM Control Delay (s)	15.8	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection

Int Delay, s/veh 0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↕↕	↕↕	↗
Traffic Vol, veh/h	0	60	44	2237	2145	68
Future Vol, veh/h	0	60	44	2237	2145	68
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	-	-	-	0
Veh in Median Storage#	-	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	63	46	2355	2258	72




















Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	- 1129	2330	0 - 0
Stage 1	- -	- -	- - -
Stage 2	- -	- -	- - -
Critical Hdwy	- 6.94	4.14	- - -
Critical Hdwy Stg 1	- -	- -	- - -
Critical Hdwy Stg 2	- -	- -	- - -
Follow-up Hdwy	- 3.32	2.22	- - -
Pot Cap-1 Maneuver	0 198	210	- - -
Stage 1	0 -	- -	- - -
Stage 2	0 -	- -	- - -
Platoon blocked, %			- - -
Mov Cap-1 Maneuver	- 198	210	- - -
Mov Cap-2 Maneuver	- -	- -	- - -
Stage 1	- -	- -	- - -
Stage 2	- -	- -	- - -

























Approach	EB	NB	SB
HCM Control Delay ³	4.5	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBEBLn1	SBT	SBR
Capacity (veh/h)	210	- 198	- -	- -
HCM Lane V/C Ratio	0.221	- 0.319	- -	- -
HCM Control Delay (s)	26.9	- 31.5	- -	- -
HCM Lane LOS	D	- D	- -	- -
HCM 95th %tile Q(veh)	0.8	- 1.3	- -	- -

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	60	140	80	60	120	150	2209	110	170	1990	180
Future Volume (veh/h)	150	60	140	80	60	120	150	2209	110	170	1990	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	163	65	152	87	65	130	163	2401	120	185	2163	196
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	2	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	81	189	128	68	135	138	2615	814	198	1940	868
Arrive On Green	0.08	0.17	0.17	0.04	0.13	0.13	0.08	0.54	0.54	0.12	0.58	0.58
Sat Flow, veh/h	1681	470	1100	3261	526	1053	1681	4818	1500	1681	3353	1500
Grp Volume(v), veh/h	163	0	217	87	0	195	163	2401	120	185	2163	196
Grp Sat Flow(s),veh/h/ln	1681	0	1571	1630	0	1579	1681	1606	1500	1681	1676	1500
Q Serve(g_s), s	11.5	0.0	18.6	3.7	0.0	17.2	11.5	63.6	5.6	15.3	81.0	8.9
Cycle Q Clear(g_c), s	11.5	0.0	18.6	3.7	0.0	17.2	11.5	63.6	5.6	15.3	81.0	8.9
Prop In Lane	1.00		0.70	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	138	0	269	128	0	203	138	2615	814	198	1940	868
V/C Ratio(X)	1.18	0.00	0.81	0.68	0.00	0.96	1.18	0.92	0.15	0.93	1.11	0.23
Avail Cap(c_a), veh/h	138	0	269	128	0	203	138	2615	814	198	1940	868
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	64.3	0.0	55.8	66.4	0.0	60.6	64.3	29.2	15.9	61.2	29.5	14.3
Incr Delay (d2), s/veh	133.3	0.0	16.3	13.6	0.0	51.7	133.3	5.8	0.1	45.5	59.6	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	10.4	0.0	9.3	1.9	0.0	10.4	10.4	29.4	2.3	9.6	53.2	3.7
LnGrp Delay(d),s/veh	197.5	0.0	72.0	80.0	0.0	112.4	197.5	35.0	16.0	106.7	89.1	14.4
LnGrp LOS	F		E	E		F	F	C	B	F	F	B
Approach Vol, veh/h		380			282			2684			2544	
Approach Delay, s/veh		125.9			102.4			44.0			84.6	
Approach LOS		F			F			D			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	80.5	10.0	28.5	16.0	85.5	16.0	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	65	76.0	5.5	24.0	11.5	81.0	11.5	18.0				
Max Q Clear Time (g_c+l1), s	7.5	65.6	5.7	20.6	13.5	83.0	13.5	19.2				
Green Ext Time (p_c), s	0.0	9.1	0.0	0.4	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			69.6									
HCM 2010 LOS			E									

























General Plan With Project Phase 1 & 2
With Recommended Improvements

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	50	355	40	30	40	195	1756	60	60	1388	70
Future Volume (veh/h)	40	50	355	40	30	40	195	1756	60	60	1388	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1765	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	42	53	374	42	32	42	205	1848	63	63	1461	74
Adj No. of Lanes	0	1	0	0	1	0	2	3	0	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	64	70	399	115	89	92	257	2669	91	81	2518	784
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.16	1.00	1.00	0.05	0.50	0.50
Sat Flow, veh/h	100	223	1273	236	284	295	3261	5051	172	1774	5085	1583
Grp Volume(v), veh/h	469	0	0	116	0	0	205	1240	671	63	1461	74
Grp Sat Flow(s),veh/h/ln	1597	0	0	815	0	0	1630	1695	1832	1774	1695	1583
Q Serve(g_s), s	23.2	0.0	0.0	0.0	0.0	0.0	7.3	0.0	0.0	4.2	24.4	3.0
Cycle Q Clear(g_c), s	34.2	0.0	0.0	10.6	0.0	0.0	7.3	0.0	0.0	4.2	24.4	3.0
Prop In Lane	0.09		0.80	0.36		0.36	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	533	0	0	296	0	0	257	1791	968	81	2518	784
V/C Ratio(X)	0.88	0.00	0.00	0.39	0.00	0.00	0.80	0.69	0.69	0.78	0.58	0.09
Avail Cap(c_a), veh/h	584	0	0	339	0	0	340	1791	968	111	2518	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.52	0.52	0.52	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.9	0.0	0.0	30.9	0.0	0.0	49.6	0.0	0.0	56.7	21.4	16.0
Incr Delay (d2), s/veh	13.6	0.0	0.0	0.8	0.0	0.0	5.2	1.2	2.1	21.0	1.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.1	0.0	0.0	3.0	0.0	0.0	3.4	0.3	0.6	2.5	11.6	1.3
LnGrp Delay(d),s/veh	53.5	0.0	0.0	31.8	0.0	0.0	54.8	1.2	2.1	77.7	22.4	16.3
LnGrp LOS	D			C			D	A	A	E	C	B
Approach Vol, veh/h		469			116			2116			1598	
Approach Delay, s/veh		53.5			31.8			6.7			24.3	
Approach LOS		D			C			A			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	67.9		42.1	13.9	63.9		42.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax),s	75	57.5		41.5	12.5	52.5		41.5				
Max Q Clear Time (g_c+l1),s	6.2	2.0		36.2	9.3	26.4		12.6				
Green Ext Time (p_c), s	0.0	19.2		1.4	0.2	10.9		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				19.0								
HCM 2010 LOS				B								

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	646	635	224	471	170	464	1347	251	230	1017	76
Future Volume (veh/h)	174	646	635	224	471	170	464	1347	251	230	1017	76
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	183	680	668	236	496	179	488	1418	264	242	1071	80
Adj No. of Lanes	2	2	1	2	2	1	2	2	1	2	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	438	766	718	269	600	268	773	1623	726	285	1572	490
Arrive On Green	0.13	0.22	0.22	0.09	0.17	0.17	0.08	0.15	0.15	0.03	0.10	0.10
Sat Flow, veh/h	3261	3539	1583	3079	3539	1583	3261	3539	1583	3261	5085	1583
Grp Volume(v), veh/h	183	680	668	236	496	179	488	1418	264	242	1071	80
Grp Sat Flow(s),veh/h/ln	1630	1770	1583	1540	1770	1583	1630	1770	1583	1630	1695	1583
Q Serve(g_s), s	6.2	22.4	19.4	9.1	16.2	10.2	17.4	47.0	12.6	8.9	24.4	5.5
Cycle Q Clear(g_c), s	6.2	22.4	19.4	9.1	16.2	10.2	17.4	47.0	12.6	8.9	24.4	5.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	438	766	718	269	600	268	773	1623	726	285	1572	490
V/C Ratio(X)	0.42	0.89	0.93	0.88	0.83	0.67	0.63	0.87	0.36	0.85	0.68	0.16
Avail Cap(c_a), veh/h	438	793	730	269	764	342	773	1623	726	285	1572	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	0.33	0.33	0.33
Upstream Filter(l)	1.00	1.00	1.00	0.79	0.79	0.79	1.00	1.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	47.6	45.6	31.0	54.1	48.1	30.2	50.2	47.5	17.2	57.5	48.2	39.7
Incr Delay (d2), s/veh	0.6	11.7	18.4	21.6	4.8	2.6	1.7	6.8	1.4	17.5	2.0	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	12.2	11.9	4.7	8.3	4.7	8.0	24.6	5.8	4.7	11.8	2.5
LnGrp Delay(d),s/veh	48.3	57.3	49.4	75.7	52.9	32.8	51.9	54.4	18.6	75.0	50.2	40.3
LnGrp LOS	D	E	D	E	D	C	D	D	B	E	D	D
Approach Vol, veh/h		1531			911			2170			1393	
Approach Delay, s/veh		52.8			54.9			49.5			53.9	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	59.5	15.0	30.5	32.9	41.6	20.6	24.8				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	10.5	54.1	10.5	26.9	27.5	37.1	11.5	25.9				
Max Q Clear Time (g_c+I1), s	10.9	49.0	11.1	24.4	19.4	26.4	8.2	18.2				
Green Ext Time (p_c), s	0.0	3.7	0.0	1.6	1.1	4.9	0.2	2.1				
Intersection Summary												
HCM 2010 Ctrl Delay				52.2								
HCM 2010 LOS				D								

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	295	60	100	60	60	346	40	1601	30	213	1719	205
Future Volume (veh/h)	295	60	100	60	60	346	40	1601	30	213	1719	205
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	311	63	105	63	63	364	42	1685	32	224	1809	216
Adj No. of Lanes	1	1	1	1	1	1	1	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	315	615	523	154	196	508	53	1737	541	362	2675	833
Arrive On Green	0.19	0.33	0.33	0.11	0.11	0.11	0.02	0.23	0.23	0.43	1.00	1.00
Sat Flow, veh/h	1681	1863	1583	1149	1863	1583	1681	5085	1583	1681	5085	1583
Grp Volume(v), veh/h	311	63	105	63	63	364	42	1685	32	224	1809	216
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1149	1863	1583	1681	1695	1583	1681	1695	1583
Q Serve(g_s), s	22.1	2.8	5.7	6.4	3.8	0.0	3.0	39.4	1.9	12.4	0.0	0.0
Cycle Q Clear(g_c), s	22.1	2.8	5.7	9.2	3.8	0.0	3.0	39.4	1.9	12.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	315	615	523	154	196	508	53	1737	541	362	2675	833
V/C Ratio(X)	0.99	0.10	0.20	0.41	0.32	0.72	0.80	0.97	0.06	0.62	0.68	0.26
Avail Cap(c_a), veh/h	315	761	647	244	342	632	77	1737	541	362	2675	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.77	0.77	0.48	0.48	0.48
Uniform Delay (d), s/veh	48.6	27.9	28.8	53.5	49.7	35.9	58.4	45.7	31.2	30.3	0.0	0.0
Incr Delay (d2), s/veh	47.0	0.1	0.2	1.7	0.9	2.9	23.4	13.0	0.2	1.5	0.7	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	14.4	1.5	2.5	2.1	2.0	11.0	1.7	20.6	0.9	5.9	0.2	0.1
LnGrp Delay(d),s/veh	95.6	27.9	29.0	55.3	50.7	38.9	81.7	58.7	31.3	31.8	0.7	0.4
LnGrp LOS	F	C	C	E	D	D	F	E	C	C	A	A
Approach Vol, veh/h		479			490			1759			2249	
Approach Delay, s/veh		72.1			42.5			58.7			3.8	
Approach LOS		E			D			E			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.4	45.5		44.1	8.3	67.6	27.0	17.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	65	41.0		49.0	5.5	52.0	22.5	22.0				
Max Q Clear Time (g_c+l1), s	14.4	41.4		7.7	5.0	2.0	24.1	11.2				
Green Ext Time (p_c), s	0.1	0.0		0.7	0.0	20.2	0.0	1.4				
Intersection Summary												
HCM 2010 Ctrl Delay			33.6									
HCM 2010 LOS			C									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	105	110	150	140	90	490	90	1146	60	387	1318	135
Future Volume (veh/h)	105	110	150	140	90	490	90	1146	60	387	1318	135
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	111	116	158	147	95	516	95	1206	63	407	1387	142
Adj No. of Lanes	1	1	1	1	1	1	1	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	224	473	402	273	473	402	189	1879	585	443	2649	825
Arrive On Green	0.25	0.25	0.25	0.25	0.25	0.25	0.22	0.74	0.74	0.09	0.17	0.17
Sat Flow, veh/h	765	1863	1583	1043	1863	1583	1681	5085	1583	1681	5085	1583
Grp Volume(v), veh/h	111	116	158	147	95	516	95	1206	63	407	1387	142
Grp Sat Flow(s),veh/h/ln	765	1863	1583	1043	1863	1583	1681	1695	1583	1681	1695	1583
Q Serve(g_s), s	16.0	5.9	9.9	15.7	4.8	30.5	5.9	14.1	1.4	28.8	29.8	9.2
Cycle Q Clear(g_c), s	20.8	5.9	9.9	21.6	4.8	30.5	5.9	14.1	1.4	28.8	29.8	9.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	224	473	402	273	473	402	189	1879	585	443	2649	825
V/C Ratio(X)	0.50	0.25	0.39	0.54	0.20	1.28	0.50	0.64	0.11	0.92	0.52	0.17
Avail Cap(c_a), veh/h	224	473	402	273	473	402	189	1879	585	553	2649	825
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	0.67	0.67	0.67
Uniform Delay (d), s/veh	43.4	35.6	37.1	44.2	35.2	44.8	43.6	11.7	10.0	53.5	36.1	27.6
Incr Delay (d2), s/veh	1.7	0.3	0.6	2.1	0.2	144.8	1.8	1.5	0.3	13.2	0.5	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	3.5	3.1	4.4	4.7	2.5	29.5	2.8	6.5	0.6	15.1	14.1	4.1
LnGrp Delay(d),s/veh	45.1	35.9	37.7	46.3	35.4	189.6	45.4	13.2	10.4	66.7	36.6	27.9
LnGrp LOS	D	D	D	D	D	F	D	B	B	E	D	C
Approach Vol, veh/h		385			758			1364			1936	
Approach Delay, s/veh		39.3			142.5			15.3			42.3	
Approach LOS		D			F			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	36.2	48.8		35.0	18.0	67.0		35.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	39.5	36.5		30.5	13.5	62.5		30.5				
Max Q Clear Time (g_c+I), s	10.8	16.1		22.8	7.9	31.8		32.5				
Green Ext Time (p_c), s	0.8	7.8		1.1	0.1	11.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			50.8									
HCM 2010 LOS			D									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	480	300	350	480	220	190	1058	120	229	1466	50
Future Volume (veh/h)	90	480	300	350	480	220	190	1058	120	229	1466	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	95	505	316	368	505	232	200	1114	126	241	1543	53
Adj No. of Lanes	1	2	1	2	2	1	2	3	1	2	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	291	789	353	423	636	284	374	2064	643	298	1931	66
Arrive On Green	0.17	0.22	0.22	0.13	0.18	0.18	0.11	0.41	0.41	0.09	0.38	0.38
Sat Flow, veh/h	1681	3539	1583	3261	3539	1583	3261	5085	1583	3261	5049	173
Grp Volume(v), veh/h	95	505	316	368	505	232	200	1114	126	241	1036	560
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1630	1770	1583	1630	1695	1583	1630	1695	1832
Q Serve(g_s), s	5.9	15.5	23.3	13.3	16.4	13.5	6.9	20.0	4.0	8.7	32.6	32.6
Cycle Q Clear(g_c), s	5.9	15.5	23.3	13.3	16.4	13.5	6.9	20.0	4.0	8.7	32.6	32.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	291	789	353	423	636	284	374	2064	643	298	1297	701
V/C Ratio(X)	0.33	0.64	0.90	0.87	0.79	0.82	0.53	0.54	0.20	0.81	0.80	0.80
Avail Cap(c_a), veh/h	291	858	384	475	976	437	374	2064	643	394	1297	701
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	0.72	0.72	0.72	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	43.5	42.3	45.3	51.2	47.1	30.1	50.1	27.1	9.9	53.5	32.9	32.9
Incr Delay (d2), s/veh	0.6	1.4	21.6	11.1	1.9	5.1	1.5	1.0	0.7	6.2	3.5	6.4
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	2.8	7.7	12.3	6.6	8.2	6.3	3.2	9.6	1.9	4.2	15.9	17.7
LnGrp Delay(d),s/veh	44.1	43.7	66.9	62.3	49.0	35.1	51.6	28.1	10.6	59.7	36.5	39.3
LnGrp LOS	D	D	E	E	D	D	D	C	B	E	D	D
Approach Vol, veh/h		916			1105			1440			1837	
Approach Delay, s/veh		51.7			50.5			29.9			40.4	
Approach LOS		D			D			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.5	53.2	20.1	31.2	18.3	50.4	25.3	26.1				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	45	40.9	17.5	29.1	9.5	45.9	13.5	33.1				
Max Q Clear Time (g_c+I1), s	10.7	22.0	15.3	25.3	8.9	34.6	7.9	18.4				
Green Ext Time (p_c), s	0.3	7.1	0.3	1.5	0.0	6.8	0.1	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay			41.6									
HCM 2010 LOS			D									

Intersection	
Intersection Delay, s/veh	18.4
Intersection LOS	C

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	22	178	52	150	231	20	133	40	180	30	40	23
Future Vol, veh/h	22	178	52	150	231	20	133	40	180	30	40	23
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	187	55	158	243	21	140	42	189	32	42	24
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	14.4	22.4	18.5	11.5
HCM LOS	B	C	C	B

























Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	9%	37%	32%
Vol Thru, %	11%	71%	58%	43%
Vol Right, %	51%	21%	5%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	353	252	401	93
LT Vol	133	22	150	30
Through Vol	40	178	231	40
RT Vol	180	52	20	23
Lane Flow Rate	372	265	422	98
Geometry Grp	1	1	1	1
Degree of Util (X)	0.621	0.456	0.707	0.187
Departure Headway (Hd)	6.019	6.195	6.03	6.866
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	598	581	599	521
Service Time	4.064	4.246	4.075	4.93
HCM Lane V/C Ratio	0.622	0.456	0.705	0.188
HCM Control Delay	18.5	14.4	22.4	11.5
HCM Lane LOS	C	B	C	B
HCM 95th-tile Q	4.3	2.4	5.7	0.7

























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	50	70	40	40	60	70	1831	70	90	1603	90
Future Volume (veh/h)	90	50	70	40	40	60	70	1831	70	90	1603	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	98	54	76	43	43	65	76	1990	76	98	1742	98
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	3	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	86	120	122	59	89	96	2657	827	124	2738	852
Arrive On Green	0.07	0.13	0.13	0.04	0.09	0.09	0.06	0.55	0.55	0.07	0.57	0.57
Sat Flow, veh/h	1681	664	935	3261	635	960	1681	4818	1500	1681	4818	1500
Grp Volume(v), veh/h	98	0	130	43	0	108	76	1990	76	98	1742	98
Grp Sat Flow(s),veh/h/ln	1681	0	1600	1630	0	1595	1681	1606	1500	1681	1606	1500
Q Serve(g_s), s	4.9	0.0	6.6	1.1	0.0	5.7	3.9	27.2	2.1	4.9	21.1	2.6
Cycle Q Clear(g_c), s	4.9	0.0	6.6	1.1	0.0	5.7	3.9	27.2	2.1	4.9	21.1	2.6
Prop In Lane	1.00		0.58	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	123	0	206	122	0	148	96	2657	827	124	2738	852
V/C Ratio(X)	0.80	0.00	0.63	0.35	0.00	0.73	0.79	0.75	0.09	0.79	0.64	0.11
Avail Cap(c_a), veh/h	166	0	389	208	0	333	146	3463	1078	263	3798	1183
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	39.3	0.0	35.6	40.5	0.0	38.1	40.2	14.8	9.1	39.3	12.6	8.6
Incr Delay (d2), s/veh	17.4	0.0	3.2	1.7	0.0	6.7	15.3	0.7	0.0	10.6	0.2	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	2.9	0.0	3.1	0.5	0.0	2.8	2.2	12.1	0.9	2.7	9.3	1.1
LnGrp Delay(d),s/veh	56.7	0.0	38.8	42.2	0.0	44.8	55.4	15.5	9.2	49.9	12.8	8.7
LnGrp LOS	E		D	D		D	E	B	A	D	B	A
Approach Vol, veh/h		228			151			2142			1938	
Approach Delay, s/veh		46.5			44.0			16.6			14.5	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.9	52.1	7.7	15.6	9.4	53.5	10.8	12.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	35	62.0	5.5	21.0	7.5	68.0	8.5	18.0				
Max Q Clear Time (g_c+l1),s	6.9	29.2	3.1	8.6	5.9	23.1	6.9	7.7				
Green Ext Time (p_c), s	0.1	18.3	0.0	0.5	0.0	17.4	0.0	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			18.2									
HCM 2010 LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	50	397	70	70	80	526	1893	60	60	1873	30
Future Volume (veh/h)	10	50	397	70	70	80	526	1893	60	60	1873	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1765	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	11	53	418	74	74	84	554	1993	63	63	1972	32
Adj No. of Lanes	0	1	0	0	1	0	2	3	0	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	36	60	423	89	89	78	584	2808	89	81	2140	666
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	0.12	0.37	0.37	0.05	0.42	0.42
Sat Flow, veh/h	17	208	1470	171	309	272	3261	5065	160	1774	5085	1583
Grp Volume(v), veh/h	482	0	0	232	0	0	554	1333	723	63	1972	32
Grp Sat Flow(s),veh/h/ln	1695	0	0	752	0	0	1630	1695	1835	1774	1695	1583
Q Serve(g_s), s	0.0	0.0	0.0	0.5	0.0	0.0	20.2	40.3	40.4	4.2	44.0	1.4
Cycle Q Clear(g_c), s	34.0	0.0	0.0	34.5	0.0	0.0	20.2	40.3	40.4	4.2	44.0	1.4
Prop In Lane	0.02		0.87	0.32		0.36	1.00		0.09	1.00		1.00
Lane Grp Cap(c), veh/h	518	0	0	256	0	0	584	1880	1017	81	2140	666
V/C Ratio(X)	0.93	0.00	0.00	0.91	0.00	0.00	0.95	0.71	0.71	0.78	0.92	0.05
Avail Cap(c_a), veh/h	518	0	0	256	0	0	584	1880	1017	126	2140	666
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	0.00	0.00	0.50	0.50	0.50	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	0.0	0.0	41.5	0.0	0.0	52.2	29.5	29.5	56.7	32.9	20.5
Incr Delay (d2), s/veh	23.6	0.0	0.0	32.9	0.0	0.0	15.5	1.1	2.1	14.9	8.0	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	19.3	0.0	0.0	10.0	0.0	0.0	10.4	19.2	21.1	2.4	22.0	0.6
LnGrp Delay(d),s/veh	66.7	0.0	0.0	74.4	0.0	0.0	67.7	30.6	31.6	71.5	40.9	20.7
LnGrp LOS	E			E			E	C	C	E	D	C
Approach Vol, veh/h		482			232			2610			2067	
Approach Delay, s/veh		66.7			74.4			38.8			41.5	
Approach LOS		E			E			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	71.0		39.0	26.0	55.0		39.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	35.0	63.5		34.5	21.5	50.5		34.5				
Max Q Clear Time (g_c+l1), s	35.0	42.4		36.0	22.2	46.0		36.5				
Green Ext Time (p_c), s	0.0	13.5		0.0	0.0	3.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			43.9									
HCM 2010 LOS			D									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	687	476	434	719	260	476	1554	224	280	1303	97
Future Volume (veh/h)	185	687	476	434	719	260	476	1554	224	280	1303	97
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1667	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	195	723	501	457	757	274	501	1636	236	295	1372	102
Adj No. of Lanes	2	2	1	2	2	1	2	3	1	2	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	777	605	500	1085	485	530	1893	589	312	1553	484
Arrive On Green	0.08	0.22	0.22	0.16	0.31	0.31	0.16	0.37	0.37	0.19	0.61	0.61
Sat Flow, veh/h	3261	3539	1583	3079	3539	1583	3261	5085	1583	3261	5085	1583
Grp Volume(v), veh/h	195	723	501	457	757	274	501	1636	236	295	1372	102
Grp Sat Flow(s),veh/h/ln	1630	1770	1583	1540	1770	1583	1630	1695	1583	1630	1695	1583
Q Serve(g_s), s	7.1	24.0	19.1	17.5	22.6	17.4	18.2	35.7	8.2	10.7	27.4	3.5
Cycle Q Clear(g_c), s	7.1	24.0	19.1	17.5	22.6	17.4	18.2	35.7	8.2	10.7	27.4	3.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	246	777	605	500	1085	485	530	1893	589	312	1553	484
V/C Ratio(X)	0.79	0.93	0.83	0.91	0.70	0.56	0.95	0.86	0.40	0.94	0.88	0.21
Avail Cap(c_a), veh/h	258	782	607	500	1085	485	530	1893	589	312	1553	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	0.61	0.61	0.61	1.00	1.00	1.00	0.32	0.32	0.32
Uniform Delay (d), s/veh	54.5	45.9	13.8	49.4	36.7	34.9	49.7	34.9	10.7	48.2	21.5	16.9
Incr Delay (d2), s/veh	14.8	17.6	9.3	14.6	1.2	0.9	26.1	5.6	2.0	17.1	2.7	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	3.7	13.6	9.8	8.4	11.2	7.8	10.1	17.6	3.9	5.5	12.8	1.5
LnGrp Delay(d),s/veh	69.3	63.5	23.1	64.1	37.9	35.8	75.8	40.4	12.8	65.3	24.2	17.2
LnGrp LOS	E	E	C	E	D	D	E	D	B	E	C	B
Approach Vol, veh/h		1419			1488			2373			1769	
Approach Delay, s/veh		50.0			45.6			45.2			30.7	
Approach LOS		D			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	49.2	24.0	30.8	24.0	41.2	13.6	41.3				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	15.5	44.5	19.5	26.5	19.5	36.5	9.5	36.5				
Max Q Clear Time (g_c+l1),s	11.2	37.7	19.5	26.0	20.2	29.4	9.1	24.6				
Green Ext Time (p_c), s	0.0	5.1	0.0	0.3	0.0	4.6	0.0	4.3				
Intersection Summary												
HCM 2010 Ctrl Delay			42.6									
HCM 2010 LOS			D									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	287	70	100	20	60	163	80	2133	50	172	1909	326
Future Volume (veh/h)	287	70	100	20	60	163	80	2133	50	172	1909	326
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	302	74	105	21	63	172	84	2245	53	181	2009	343
Adj No. of Lanes	1	1	1	1	1	1	1	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	314	540	459	137	112	269	121	2390	744	185	2586	805
Arrive On Green	0.19	0.29	0.29	0.06	0.06	0.06	0.07	0.47	0.47	0.11	0.51	0.51
Sat Flow, veh/h	1681	1863	1583	1137	1863	1583	1681	5085	1583	1681	5085	1583
Grp Volume(v), veh/h	302	74	105	21	63	172	84	2245	53	181	2009	343
Grp Sat Flow(s),veh/h/ln	1681	1863	1583	1137	1863	1583	1681	1695	1583	1681	1695	1583
Q Serve(g_s), s	18.6	3.1	5.3	1.8	3.4	2.9	5.1	43.7	1.9	11.2	33.5	6.3
Cycle Q Clear(g_c), s	18.6	3.1	5.3	1.8	3.4	2.9	5.1	43.7	1.9	11.2	33.5	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	314	540	459	137	112	269	121	2390	744	185	2586	805
V/C Ratio(X)	0.96	0.14	0.23	0.15	0.56	0.64	0.69	0.94	0.07	0.98	0.78	0.43
Avail Cap(c_a), veh/h	314	822	699	309	393	509	121	2390	744	185	2586	805
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	42.0	27.4	28.1	46.9	47.7	18.5	47.3	26.2	15.1	46.2	20.8	3.2
Incr Delay (d2), s/veh	40.1	0.1	0.3	0.5	4.4	2.5	15.8	8.8	0.2	58.9	2.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.1	1.6	2.3	0.6	1.9	3.0	2.9	22.3	0.9	8.2	16.2	5.1
LnGrp Delay(d),s/veh	82.1	27.5	28.4	47.4	52.1	21.0	63.1	35.0	15.3	105.2	23.2	4.8
LnGrp LOS	F	C	C	D	D	C	E	D	B	F	C	A
Approach Vol, veh/h		481			256			2382			2533	
Approach Delay, s/veh		62.0			30.8			35.6			26.6	
Approach LOS		E			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	53.5		34.7	12.0	57.5	24.0	10.7				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax),s	49.0			46.0	7.5	53.0	19.5	22.0				
Max Q Clear Time (g_c+l1),s	45.7			7.3	7.1	35.5	20.6	5.4				
Green Ext Time (p_c), s	0.0	3.0		0.7	0.0	13.0	0.0	0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			33.6									
HCM 2010 LOS			C									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	117	110	70	80	140	358	170	1788	130	398	1505	146
Future Volume (veh/h)	117	110	70	80	140	358	170	1788	130	398	1505	146
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1863
Adj Flow Rate, veh/h	123	116	74	84	147	377	179	1882	137	419	1584	154
Adj No. of Lanes	1	1	1	1	1	1	1	3	1	1	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	206	450	383	275	450	383	301	1992	620	427	2373	739
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.12	0.26	0.26	0.25	0.47	0.47
Sat Flow, veh/h	829	1863	1583	1126	1863	1583	1681	5085	1583	1681	5085	1583
Grp Volume(v), veh/h	123	116	74	84	147	377	179	1882	137	419	1584	154
Grp Sat Flow(s),veh/h/ln	829	1863	1583	1126	1863	1583	1681	1695	1583	1681	1695	1583
Q Serve(g_s), s	17.2	6.0	4.5	7.8	7.8	28.4	12.1	43.6	8.1	29.7	29.0	6.9
Cycle Q Clear(g_c), s	25.0	6.0	4.5	13.9	7.8	28.4	12.1	43.6	8.1	29.7	29.0	6.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	206	450	383	275	450	383	301	1992	620	427	2373	739
V/C Ratio(X)	0.60	0.26	0.19	0.31	0.33	0.99	0.59	0.94	0.22	0.98	0.67	0.21
Avail Cap(c_a), veh/h	206	450	383	275	450	383	301	1992	620	427	2373	739
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00	0.42	0.42	0.42	0.59	0.59	0.59
Uniform Delay (d), s/veh	47.8	36.8	36.2	42.4	37.5	45.3	48.7	43.0	29.9	44.5	24.8	18.9
Incr Delay (d2), s/veh	4.6	0.3	0.2	0.6	0.4	41.9	1.3	5.4	0.3	28.5	0.9	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	4.2	3.1	2.0	2.5	4.1	16.9	5.7	21.4	3.6	17.1	13.7	3.1
LnGrp Delay(d),s/veh	52.3	37.1	36.4	43.0	37.9	87.2	50.0	48.4	30.3	73.0	25.7	19.3
LnGrp LOS	D	D	D	D	D	F	D	D	C	E	C	B
Approach Vol, veh/h		313			608			2198			2157	
Approach Delay, s/veh		42.9			69.2			47.4			34.4	
Approach LOS		D			E			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	35.0	51.5		33.5	26.0	60.5		33.5				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	30.5	47.0		29.0	21.5	56.0		29.0				
Max Q Clear Time (g_c+I), s	31.7	45.6		27.0	14.1	31.0		30.4				
Green Ext Time (p_c), s	0.0	1.3		0.3	0.2	12.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			44.3									
HCM 2010 LOS			D									

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	670	200	180	580	294	410	1583	430	335	1363	50
Future Volume (veh/h)	80	670	200	180	580	294	410	1583	430	335	1363	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1863	1863	1765	1863	1863	1765	1863	1863	1765	1863	1900
Adj Flow Rate, veh/h	84	705	211	189	611	309	432	1666	453	353	1435	53
Adj No. of Lanes	1	2	1	2	2	1	2	3	1	2	3	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	798	357	241	840	376	613	1971	614	532	1825	67
Arrive On Green	0.06	0.23	0.23	0.07	0.24	0.24	0.19	0.39	0.39	0.16	0.36	0.36
Sat Flow, veh/h	1681	3539	1583	3261	3539	1583	3261	5085	1583	3261	5034	186
Grp Volume(v), veh/h	84	705	211	189	611	309	432	1666	453	353	966	522
Grp Sat Flow(s),veh/h/ln	1681	1770	1583	1630	1770	1583	1630	1695	1583	1630	1695	1830
Q Serve(g_s), s	5.9	23.1	14.3	6.8	19.1	15.3	14.9	35.8	29.5	12.2	30.5	30.5
Cycle Q Clear(g_c), s	5.9	23.1	14.3	6.8	19.1	15.3	14.9	35.8	29.5	12.2	30.5	30.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	104	798	357	241	840	376	613	1971	614	532	1229	663
V/C Ratio(X)	0.81	0.88	0.59	0.79	0.73	0.82	0.70	0.85	0.74	0.66	0.79	0.79
Avail Cap(c_a), veh/h	119	870	389	258	900	402	613	1971	614	532	1229	663
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	0.59	0.59	0.59	1.00	1.00	1.00	0.72	0.72	0.72
Uniform Delay (d), s/veh	55.6	44.9	41.5	54.6	42.2	20.5	45.6	33.5	31.5	47.1	34.1	34.1
Incr Delay (d2), s/veh	28.9	10.0	2.0	8.6	1.7	7.6	3.7	4.7	7.8	2.3	3.8	6.7
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	3.6	12.4	6.5	3.4	9.5	7.5	7.0	17.5	14.2	5.7	14.9	16.6
LnGrp Delay(d),s/veh	84.5	55.0	43.5	63.2	43.8	28.1	49.2	38.2	39.3	49.4	37.9	40.9
LnGrp LOS	F	D	D	E	D	C	D	D	D	D	D	D
Approach Vol, veh/h		1000			1109			2551			1841	
Approach Delay, s/veh		55.0			42.8			40.2			40.9	
Approach LOS		E			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.1	51.0	13.4	31.6	27.1	48.0	11.9	33.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	16.5	46.5	9.5	29.5	19.5	43.5	8.5	30.5				
Max Q Clear Time (g_c+I1), s	14.2	37.8	8.8	25.1	16.9	32.5	7.9	21.1				
Green Ext Time (p_c), s	0.3	6.7	0.0	2.0	0.4	6.3	0.0	3.2				
Intersection Summary												
HCM 2010 Ctrl Delay				43.1								
HCM 2010 LOS				D								























Intersection

Intersection Delay, s/veh 15.7
 Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	53	186	83	110	147	40	133	80	120	10	40	53
Future Vol, veh/h	53	186	83	110	147	40	133	80	120	10	40	53
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	56	196	87	116	155	42	140	84	126	11	42	56
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	16	15.6	17.1	11
HCM LOS	C	C	C	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	40%	16%	37%	10%
Vol Thru, %	24%	58%	49%	39%
Vol Right, %	36%	26%	13%	51%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	333	322	297	103
LT Vol	133	53	110	10
Through Vol	80	186	147	40
RT Vol	120	83	40	53
Lane Flow Rate	351	339	313	108
Geometry Grp	1	1	1	1
Degree of Util (X)	0.585	0.554	0.524	0.193
Departure Headway (Hd)	6.013	5.881	6.035	6.415
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	603	613	597	557
Service Time	4.013	3.928	4.084	4.475
HCM Lane V/C Ratio	0.582	0.553	0.524	0.194
HCM Control Delay	17.1	16	15.6	11
HCM Lane LOS	C	C	C	B
HCM 95th-tile Q	3.8	3.4	3	0.7

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	150	60	140	80	60	120	150	2209	110	170	1990	180
Future Volume (veh/h)	150	60	140	80	60	120	150	2209	110	170	1990	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1765	1765	1800	1765	1765	1800	1765	1765	1765	1765	1765	1765
Adj Flow Rate, veh/h	163	65	152	87	65	130	163	2401	120	185	2163	196
Adj No. of Lanes	1	1	0	2	1	0	1	3	1	1	3	1
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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	82	191	128	68	137	139	2594	808	200	2768	862
Arrive On Green	0.08	0.17	0.17	0.04	0.13	0.13	0.08	0.54	0.54	0.12	0.57	0.57
Sat Flow, veh/h	1681	470	1100	3261	526	1053	1681	4818	1500	1681	4818	1500
Grp Volume(v), veh/h	163	0	217	87	0	195	163	2401	120	185	2163	196
Grp Sat Flow(s),veh/h/ln	1681	0	1571	1630	0	1579	1681	1606	1500	1681	1606	1500
Q Serve(g_s), s	11.5	0.0	18.4	3.7	0.0	17.0	11.5	63.6	5.6	15.1	48.1	8.9
Cycle Q Clear(g_c), s	11.5	0.0	18.4	3.7	0.0	17.0	11.5	63.6	5.6	15.1	48.1	8.9
Prop In Lane	1.00		0.70	1.00		0.67	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	0	272	128	0	205	139	2594	808	200	2768	862
V/C Ratio(X)	1.17	0.00	0.80	0.68	0.00	0.95	1.17	0.93	0.15	0.92	0.78	0.23
Avail Cap(c_a), veh/h	139	0	272	129	0	205	139	2641	822	200	2814	876
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	63.6	0.0	55.0	65.7	0.0	59.9	63.6	29.4	16.1	60.5	22.8	14.4
Incr Delay (d2), s/veh	128.9	0.0	15.1	13.2	0.0	49.0	128.9	6.2	0.1	43.0	1.5	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	10.3	0.0	9.1	1.9	0.0	10.2	10.3	29.5	2.3	9.4	21.6	3.7
LnGrp Delay(d),s/veh	192.5	0.0	70.1	78.9	0.0	108.9	192.5	35.7	16.1	103.5	24.2	14.6
LnGrp LOS	F		E	E		F	F	D	B	F	C	B
Approach Vol, veh/h		380			282			2684			2544	
Approach Delay, s/veh		122.6			99.6			44.3			29.3	
Approach LOS		F			F			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	79.2	10.0	28.5	16.0	84.2	16.0	22.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	65.0	76.0	5.5	24.0	11.5	81.0	11.5	18.0				
Max Q Clear Time (g_c+l1), s	17.0	65.6	5.7	20.4	13.5	50.1	13.5	19.0				
Green Ext Time (p_c), s	0.0	9.1	0.0	0.4	0.0	20.3	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			45.5									
HCM 2010 LOS			D									

Appendix E
Signal Warrant Analysis Worksheets

Existing Conditions
Peak Hour Signal Warrants

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Topaz Road

Total of Both Approaches (VPH): **354**

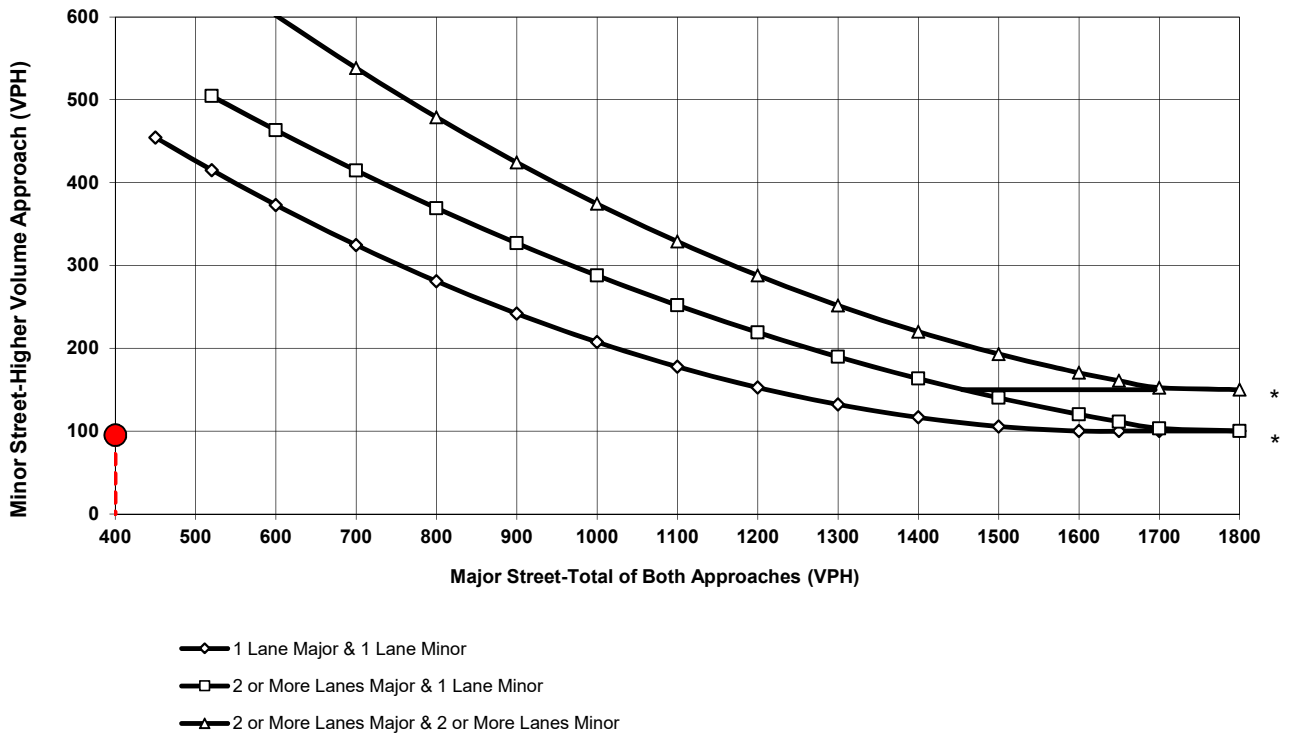
Higher Volume Approach (VPH): **95**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
PM Peak Hour Volume Warrant
Topaz Road/Luna Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road**

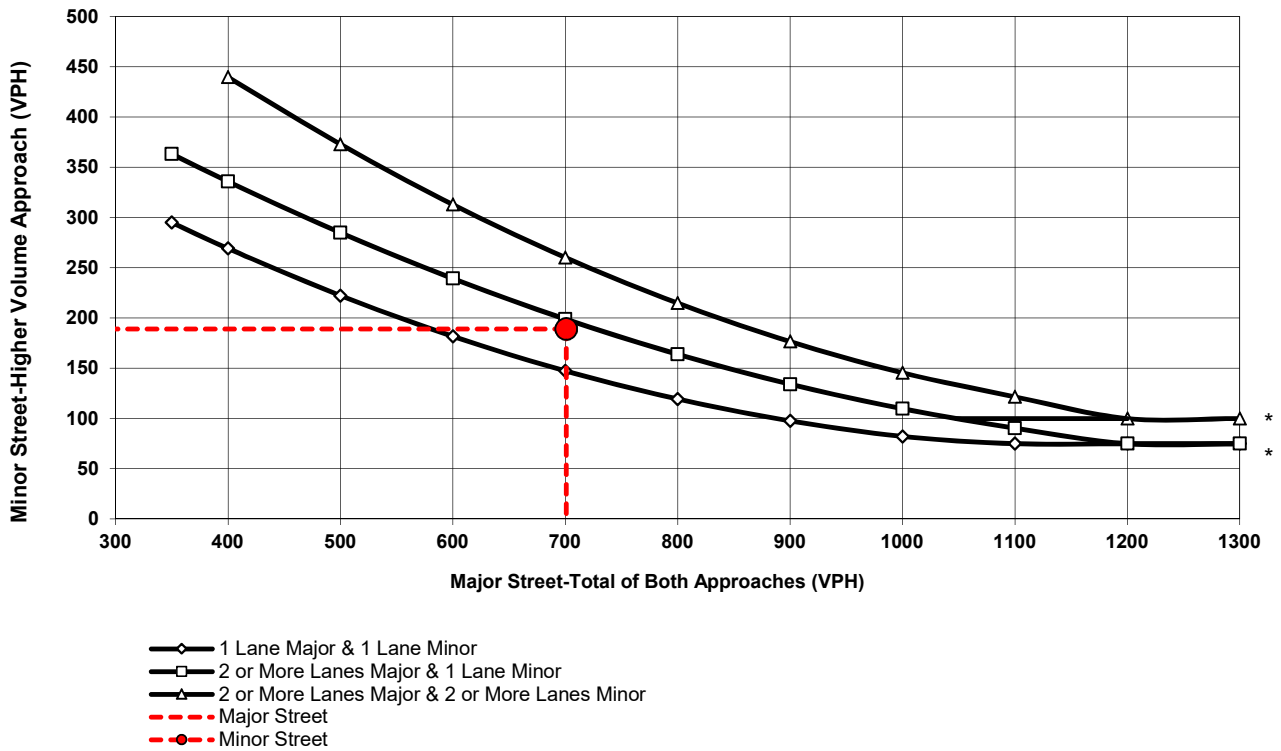
Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **701**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **189**
Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
PM Peak Hour Volume Warrant
Topaz Road/La Mesa Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: PM

Major Street: Palmdale Road (SR-18) (EW)

Minor Street: Pearmain Street (NS)

Total of Both Approaches (VPH): 1951

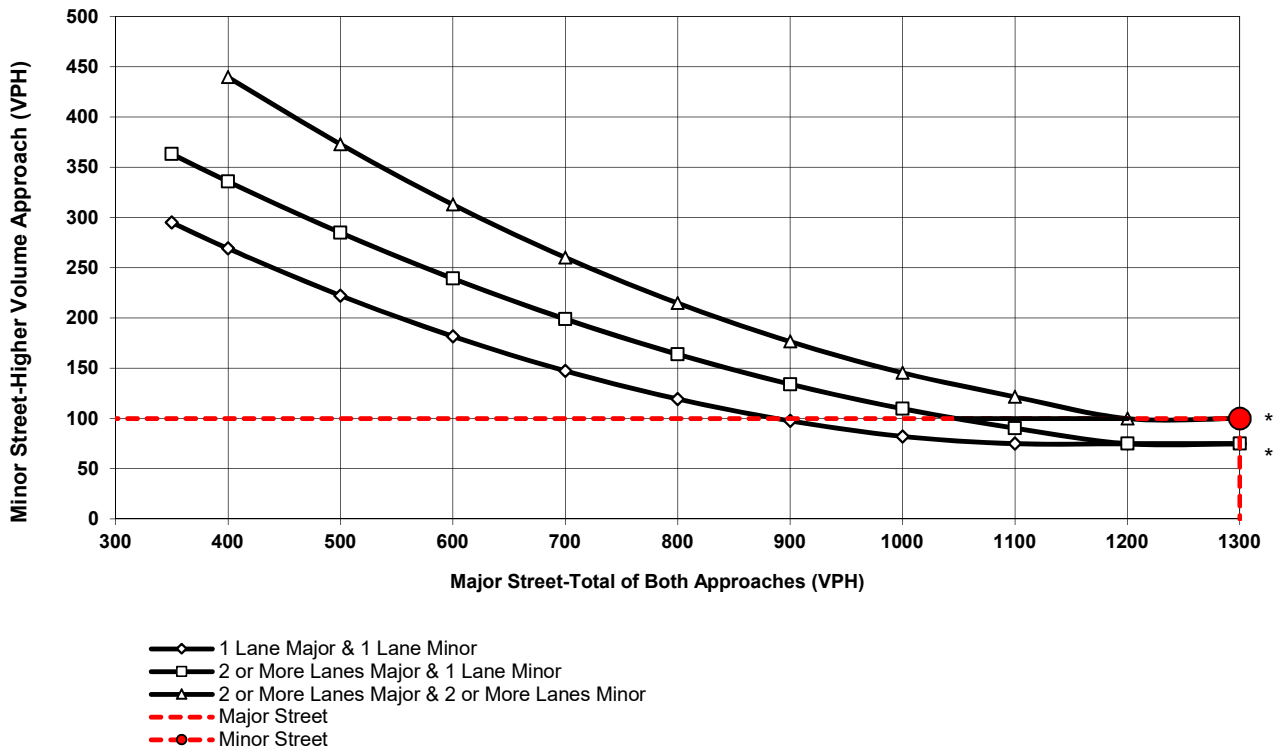
Higher Volume Approach (VPH): 100

Number of Approach Lanes: 2

Number of Approach Lanes: 2

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
PM Peak Hour Volume Warrant
Pearmain Street/Palmdale Road (SR-18)**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **343**

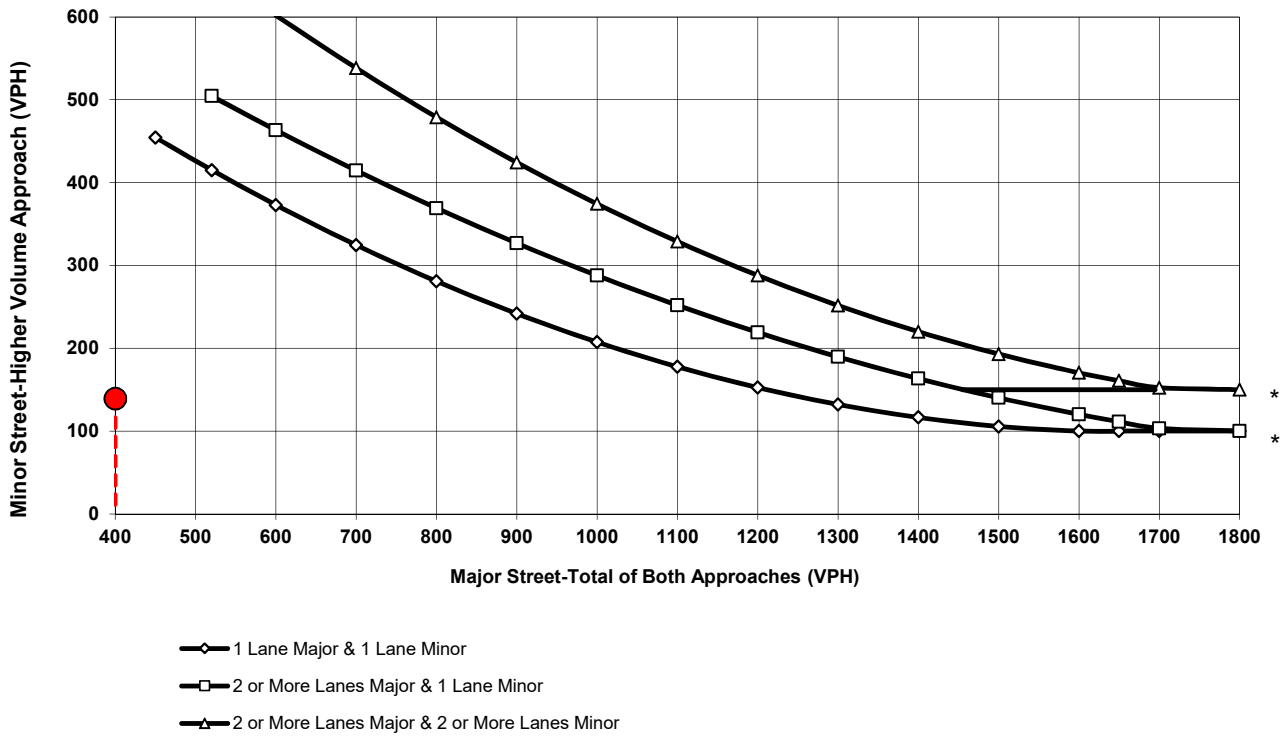
Higher Volume Approach (VPH): **139**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road (EW)**

Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **423**

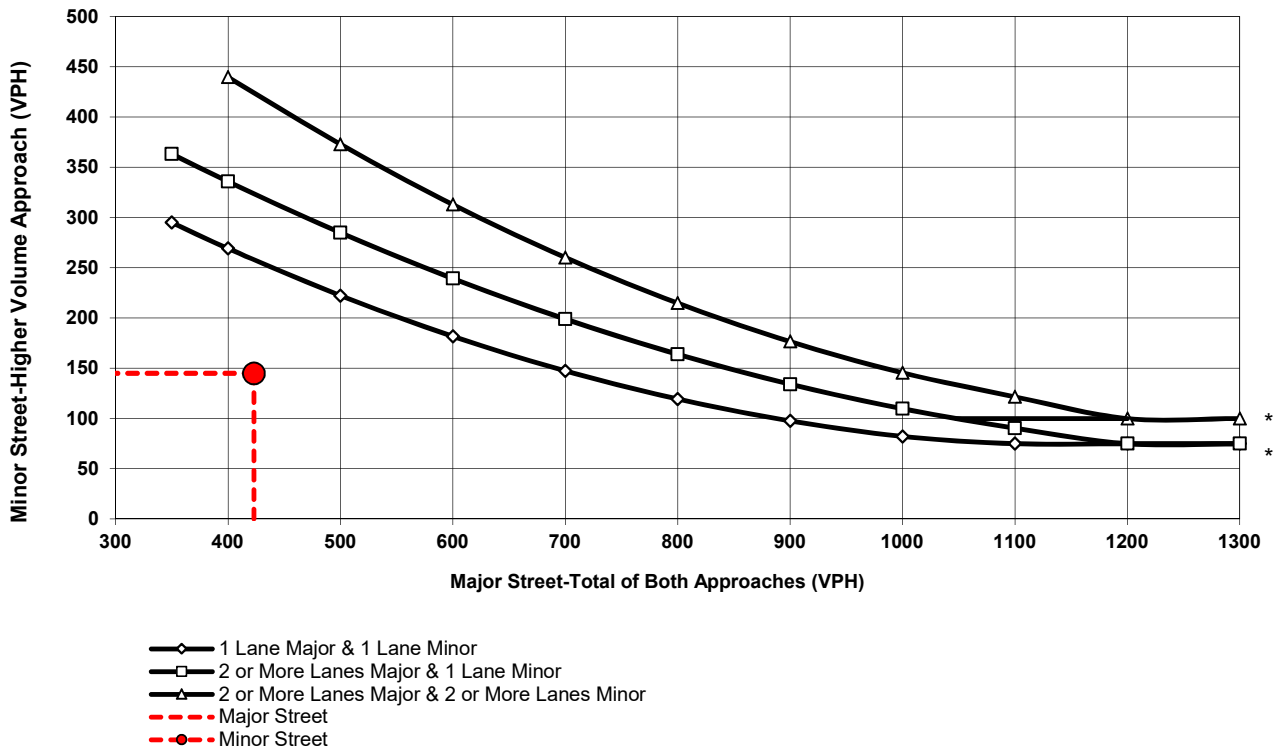
Higher Volume Approach (VPH): **145**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
PM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Dos Palmas Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **274**

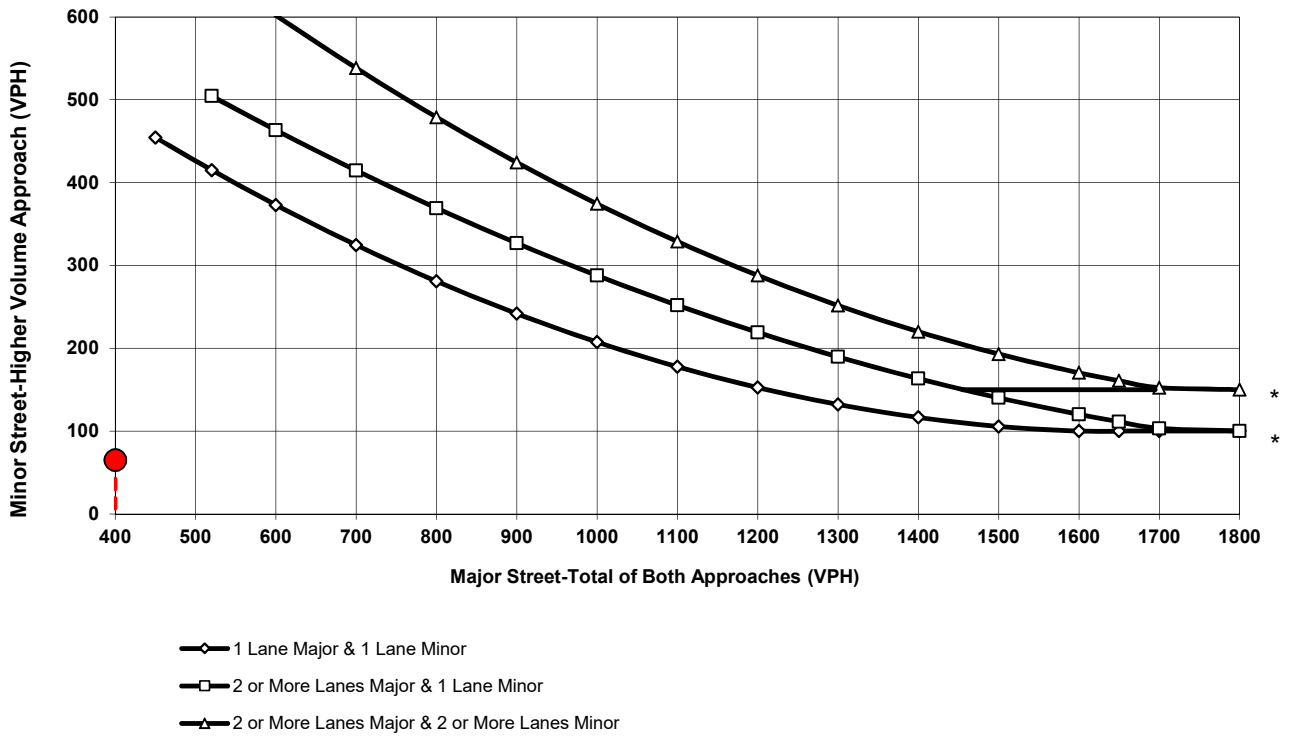
Higher Volume Approach (VPH): **65**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Cobalt Road

Total of Both Approaches (VPH): **465**

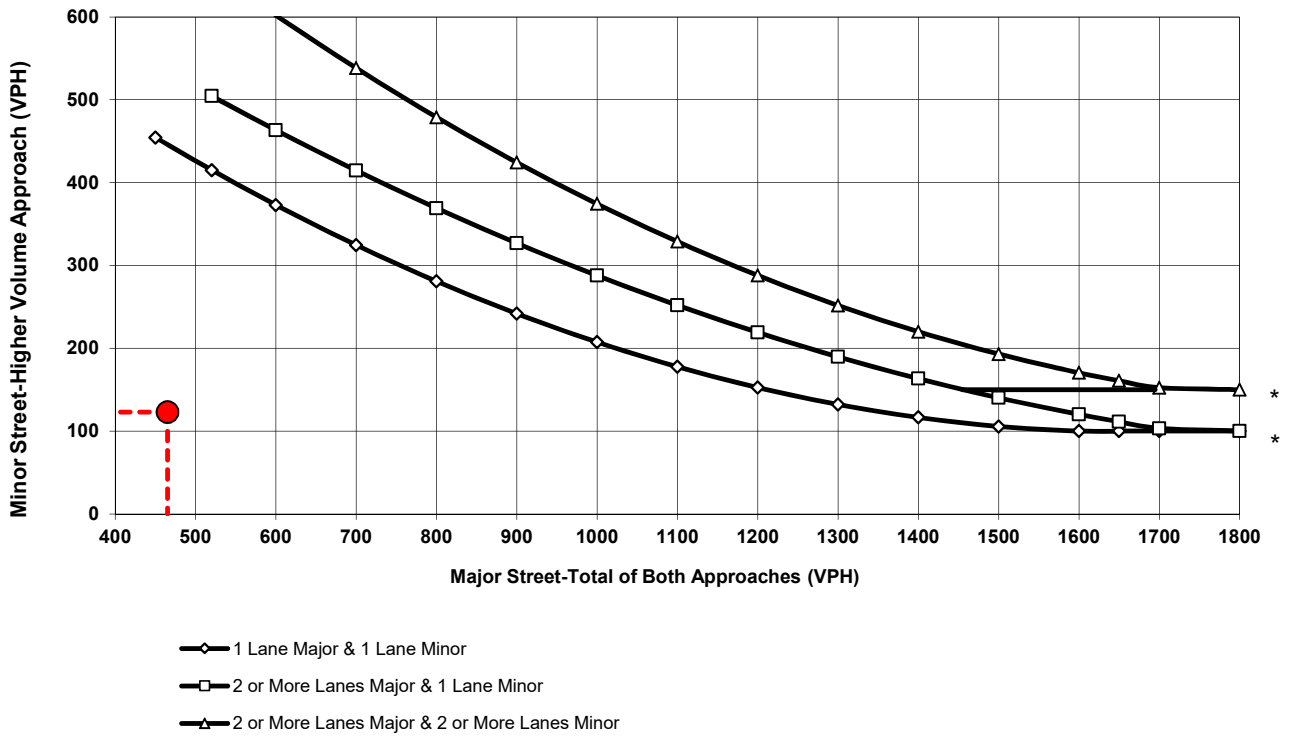
Higher Volume Approach (VPH): **123**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
PM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: PM

Major Street: US-395 (NS)

Minor Street: Seneca Rd (EW)

Total of Both Approaches (VPH): **1741**

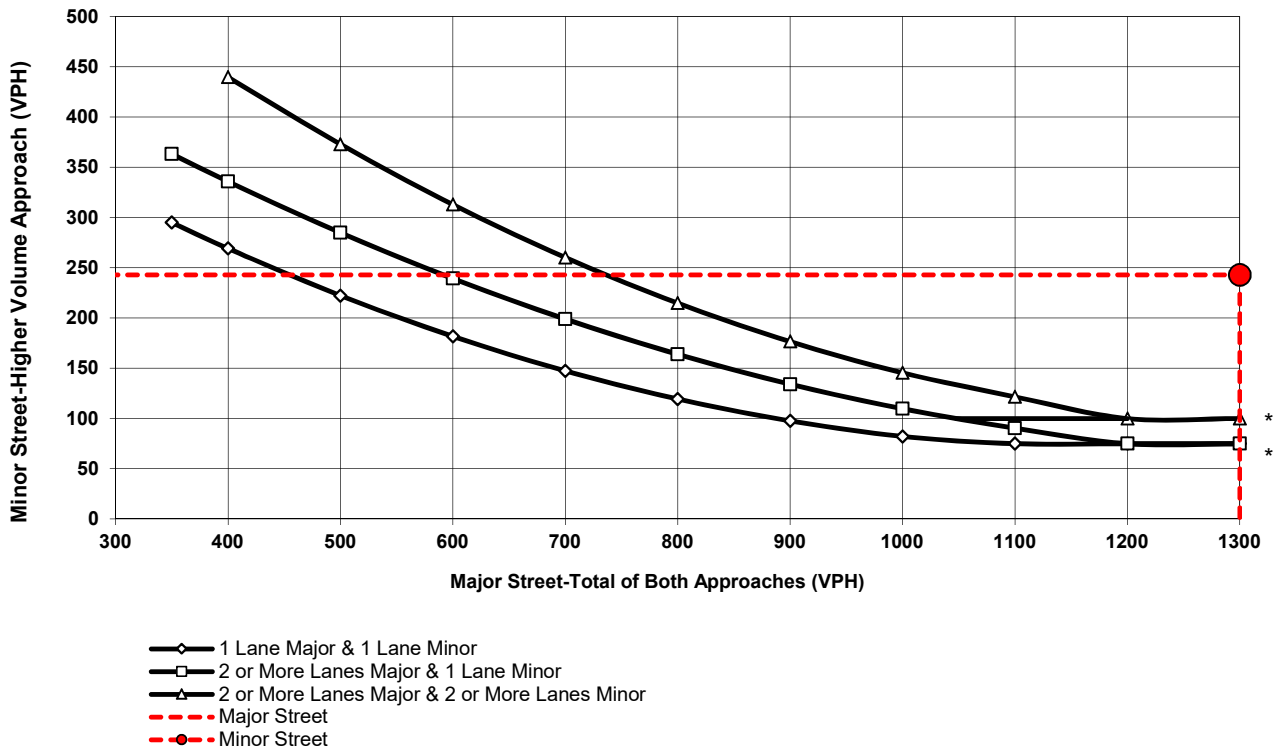
Higher Volume Approach (VPH): **243**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
PM Peak Hour Volume Warrant
US-395/Seneca Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **701**

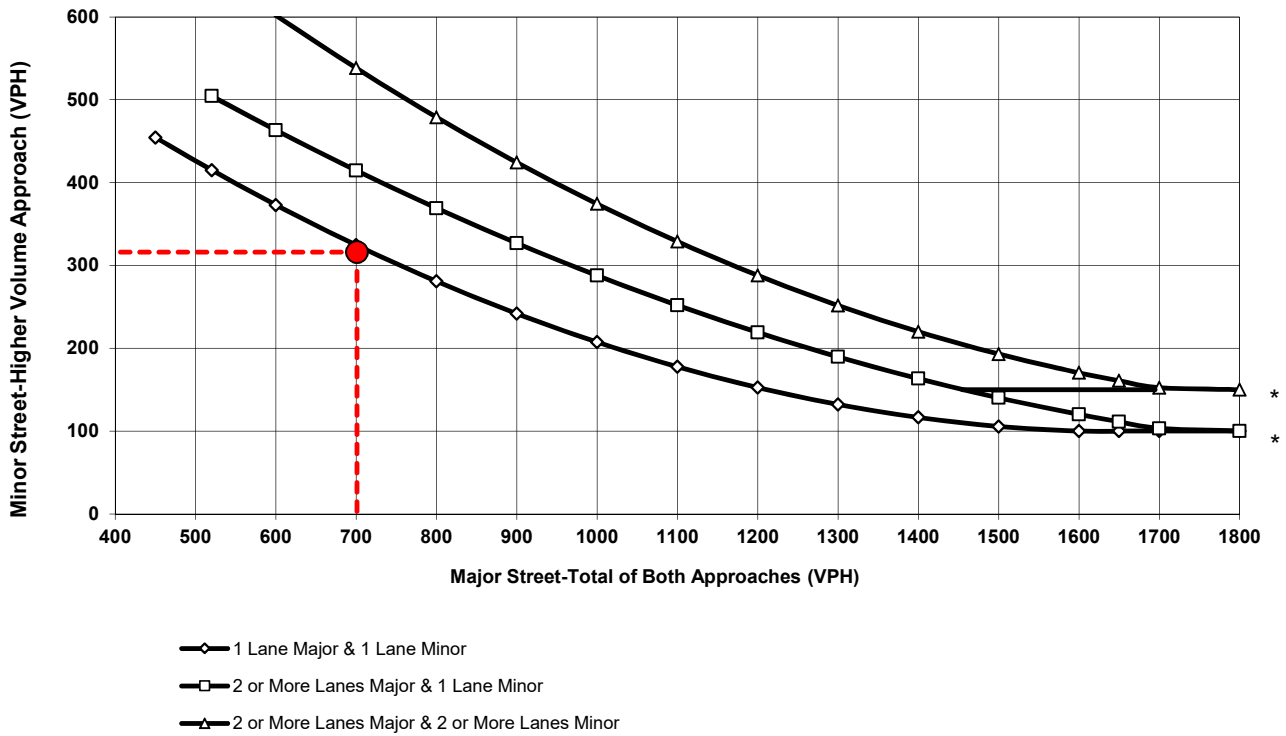
Higher Volume Approach (VPH): **316**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
AM Peak Hour Volume Warrant
Topaz Road/Luna Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **AM**

Major Street: **La Mesa Road**

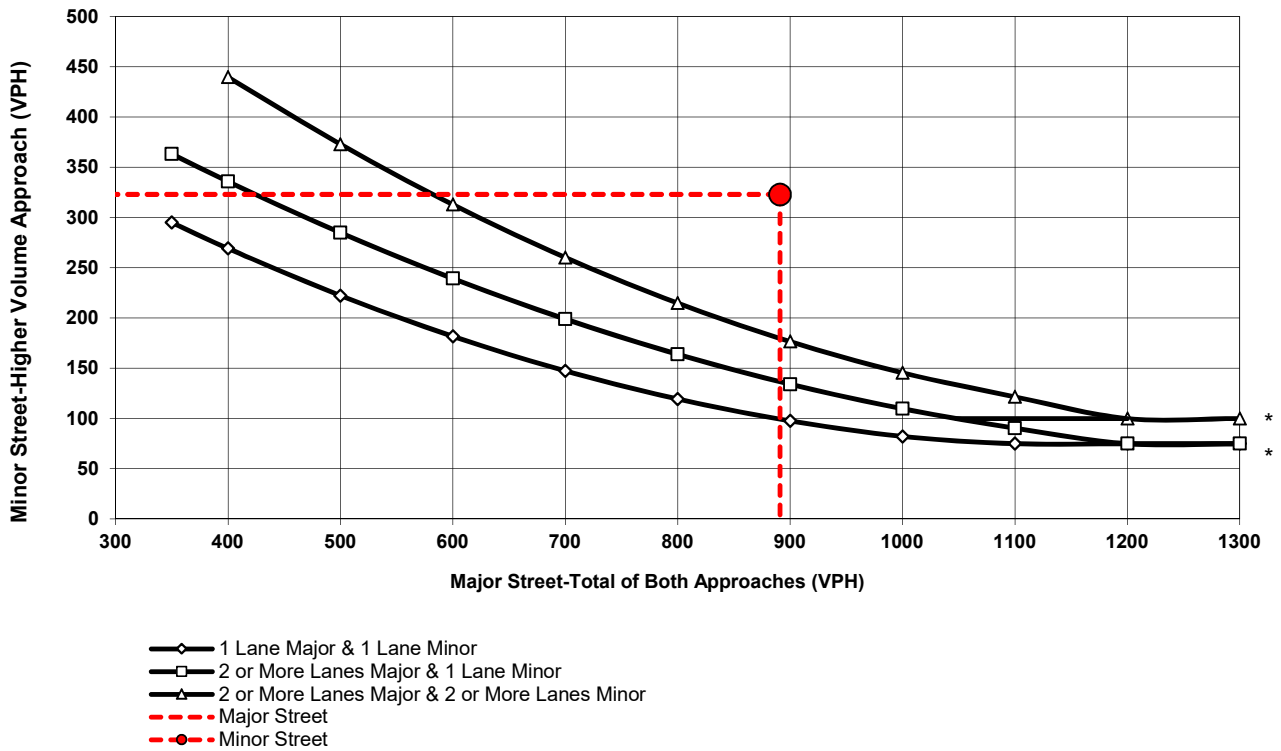
Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **891**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **323**
Number of Approach Lanes: **2**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
AM Peak Hour Volume Warrant
Topaz Road/La Mesa Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **AM**

Major Street: **Palmdale Road (SR-18) (EW)**

Minor Street: **Pearmain Street (NS)**

Total of Both Approaches (VPH): **1596**

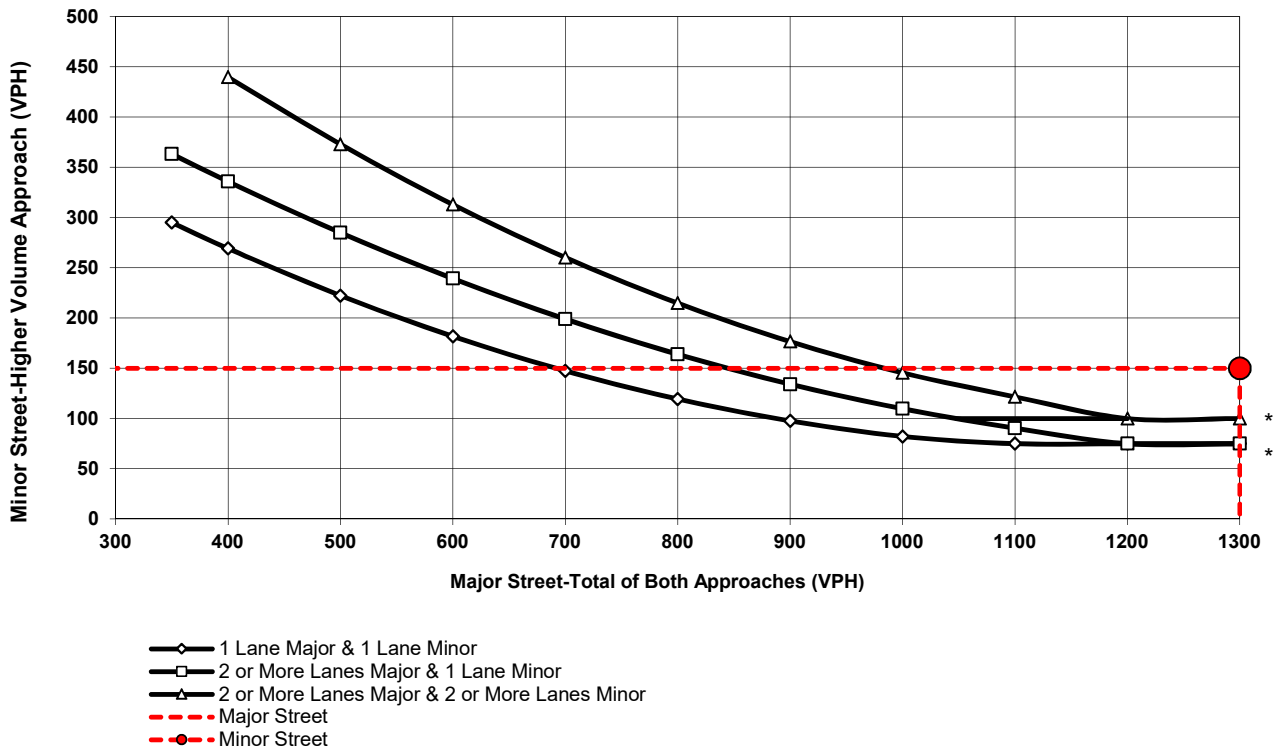
Higher Volume Approach (VPH): **150**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
AM Peak Hour Volume Warrant
Pearmain Street/Palmdale Road (SR-18)**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Mesa Linda Road**

Minor Street: **Luna Road**

Total of Both Approaches (VPH): **634**

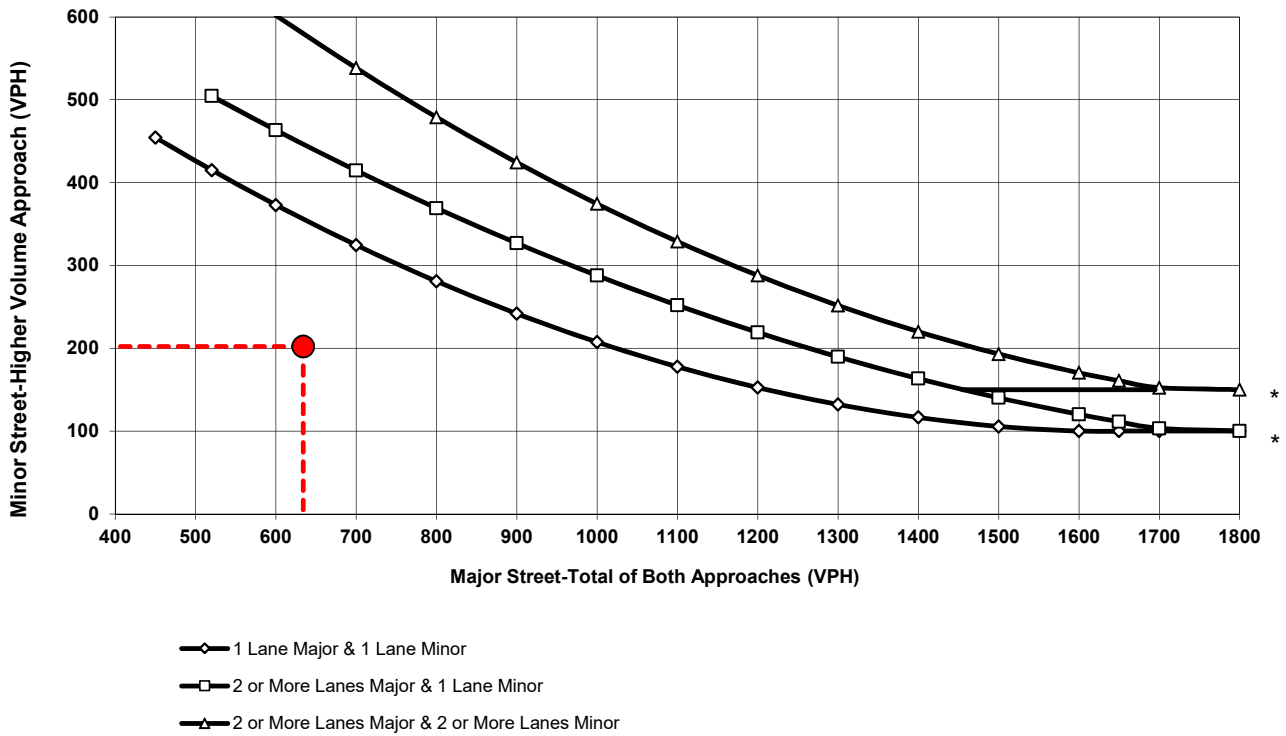
Higher Volume Approach (VPH): **202**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **AM**

Major Street: **La Mesa Road (EW)**

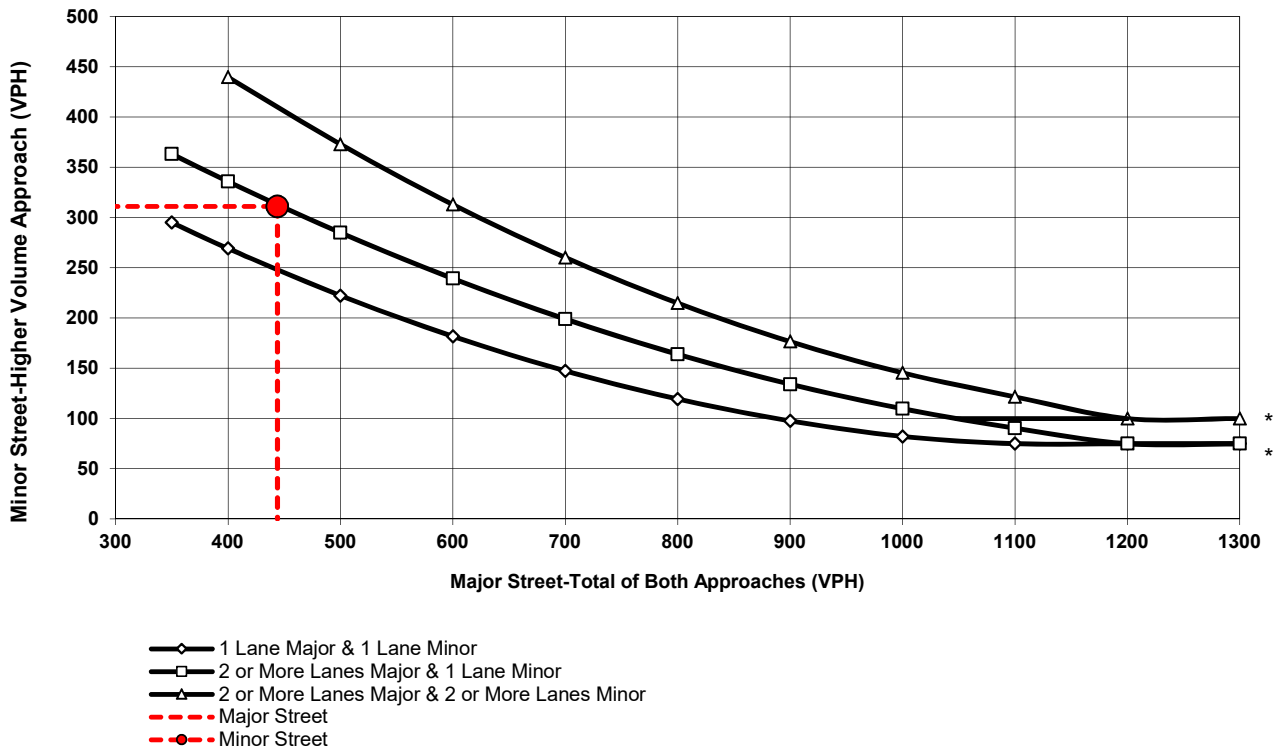
Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **444**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **311**
Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
AM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Dos Palmas Road**

Minor Street: **Mesa Linda Road**

Total of Both Approaches (VPH): **449**

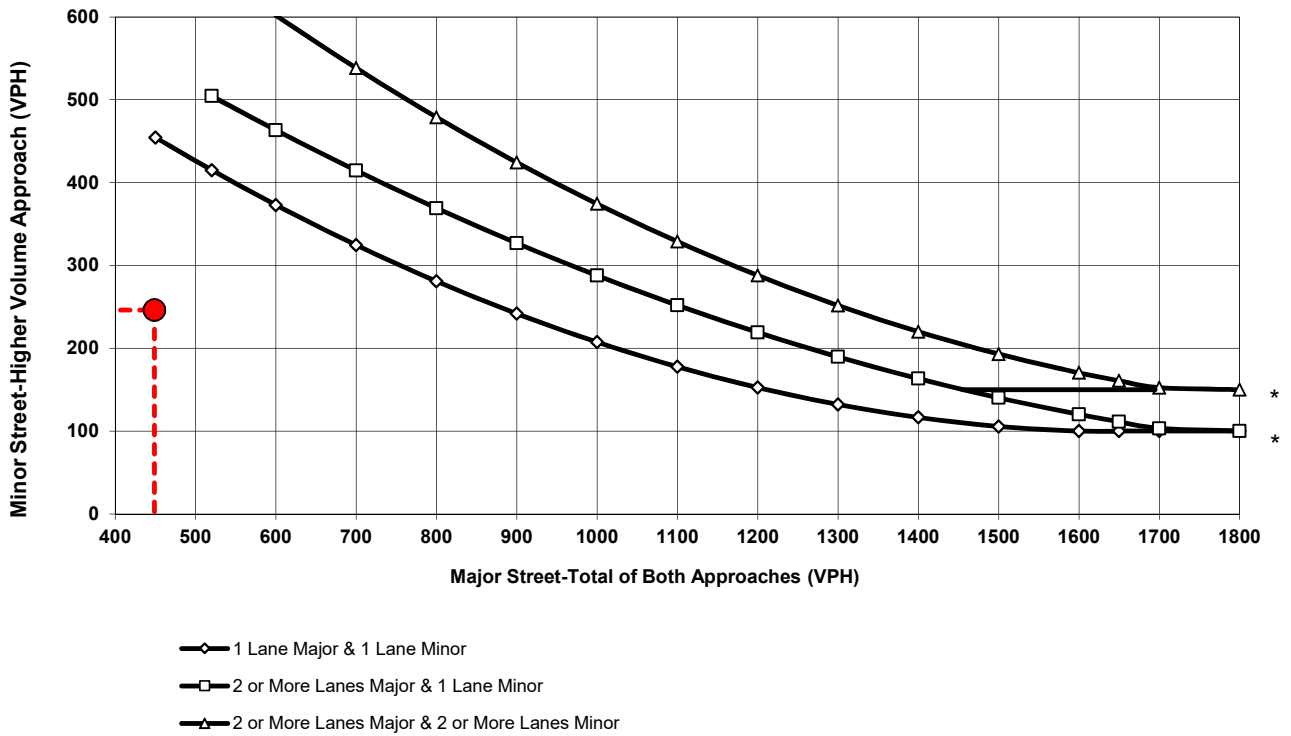
Higher Volume Approach (VPH): **246**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

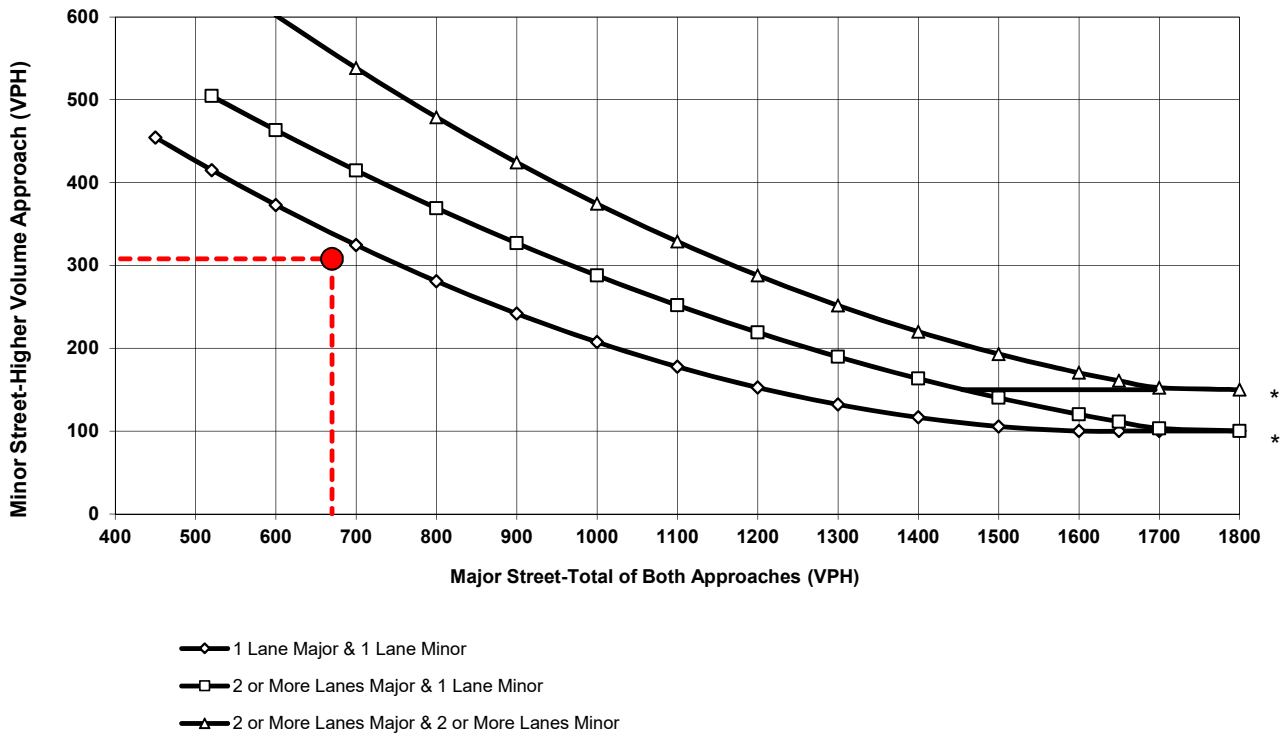
Minor Street: **Cobalt Road**

Total of Both Approaches (VPH): **670**
Number of Approach Lanes: **1**

Higher Volume Approach (VPH): **308**
Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
AM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

EXISTING CONDITIONS PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **AM**

Major Street: **US-395 (NS)**

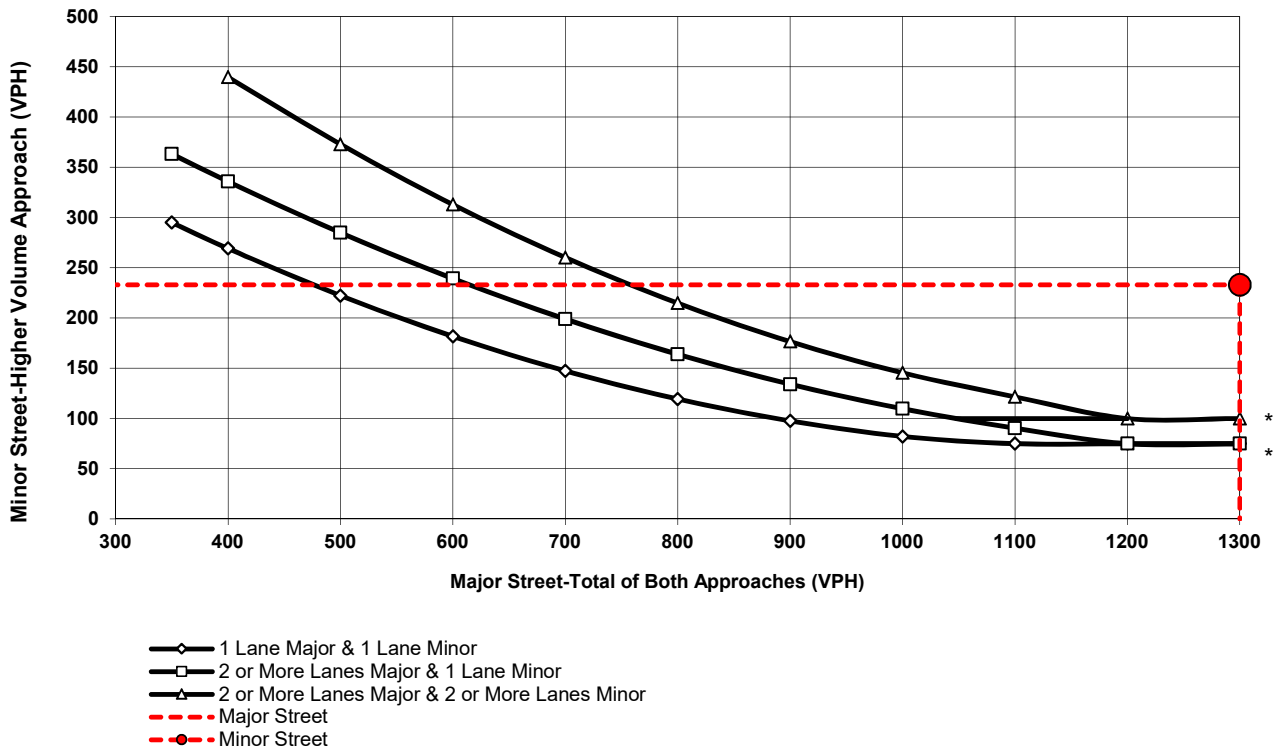
Minor Street: **Seneca Rd (EW)**

Total of Both Approaches (VPH): **1453**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **233**
Number of Approach Lanes: **1**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Conditions
AM Peak Hour Volume Warrant
US-395/Seneca Road**

EXISTING PLUS PROJECT CONDITIONS

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Topaz Road

Total of Both Approaches (VPH): **433**

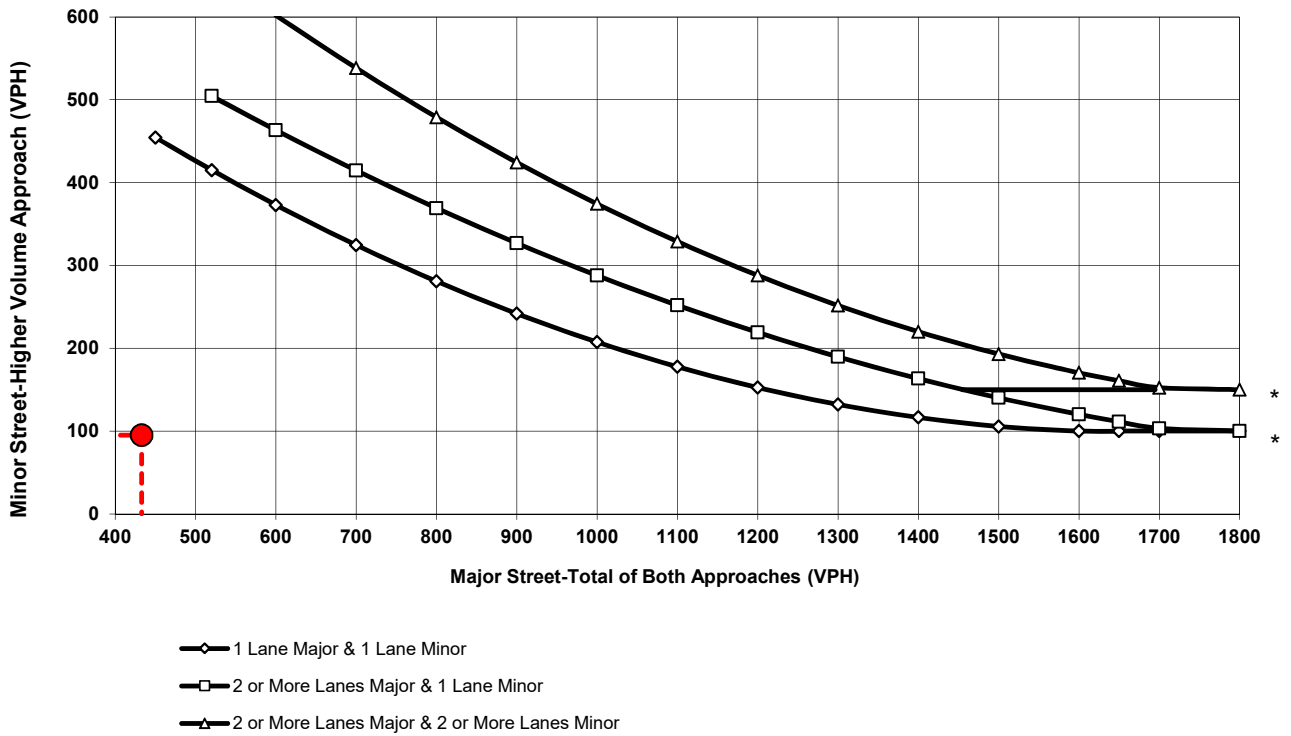
Higher Volume Approach (VPH): **95**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/Luna Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road**

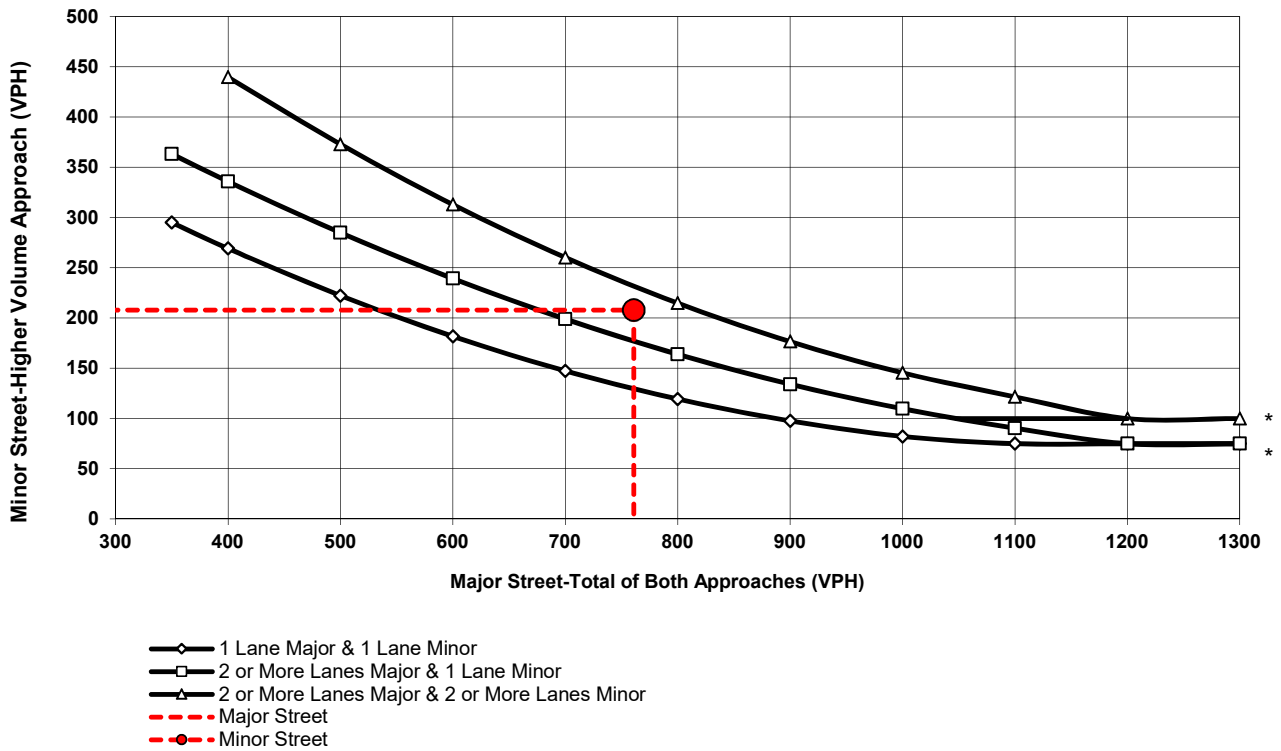
Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **761**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **208**
Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/La Mesa Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **451**

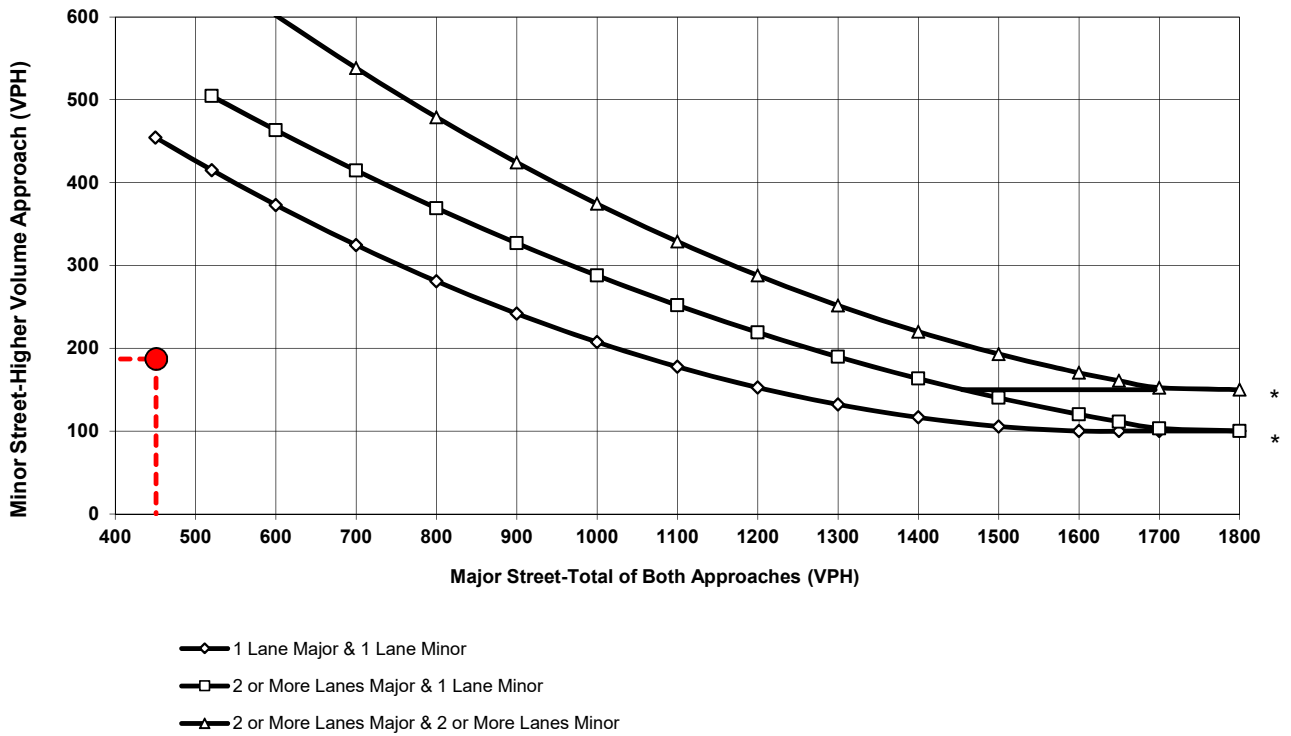
Higher Volume Approach (VPH): **187**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road (EW)**

Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **483**

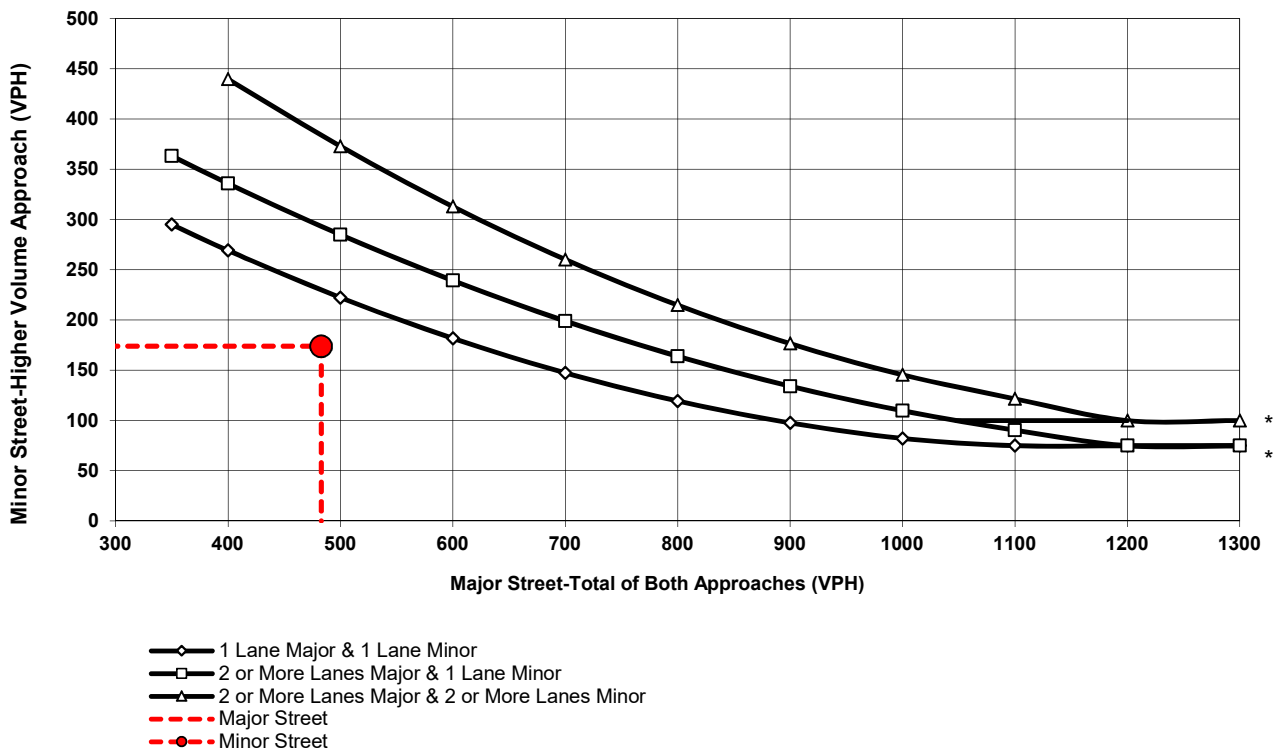
Higher Volume Approach (VPH): **174**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Dos Palmas Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **333**

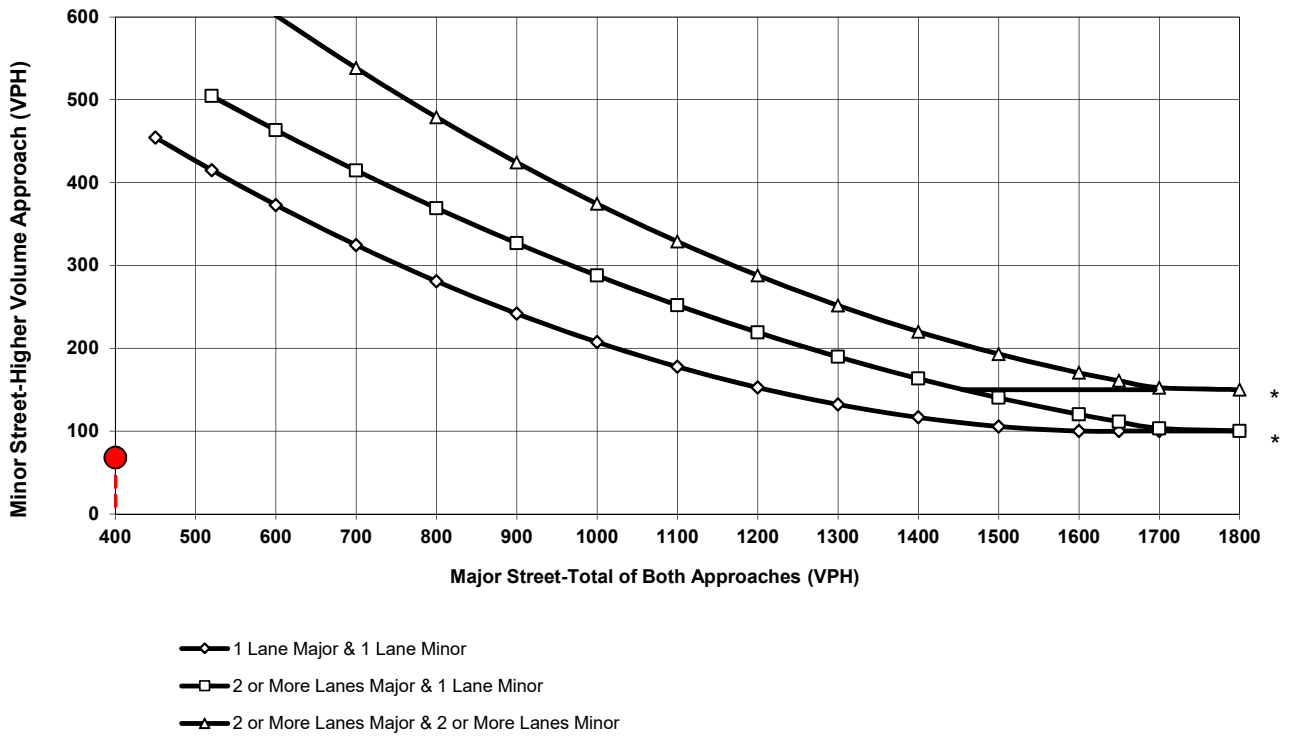
Higher Volume Approach (VPH): **68**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Cobalt Road

Total of Both Approaches (VPH): **536**

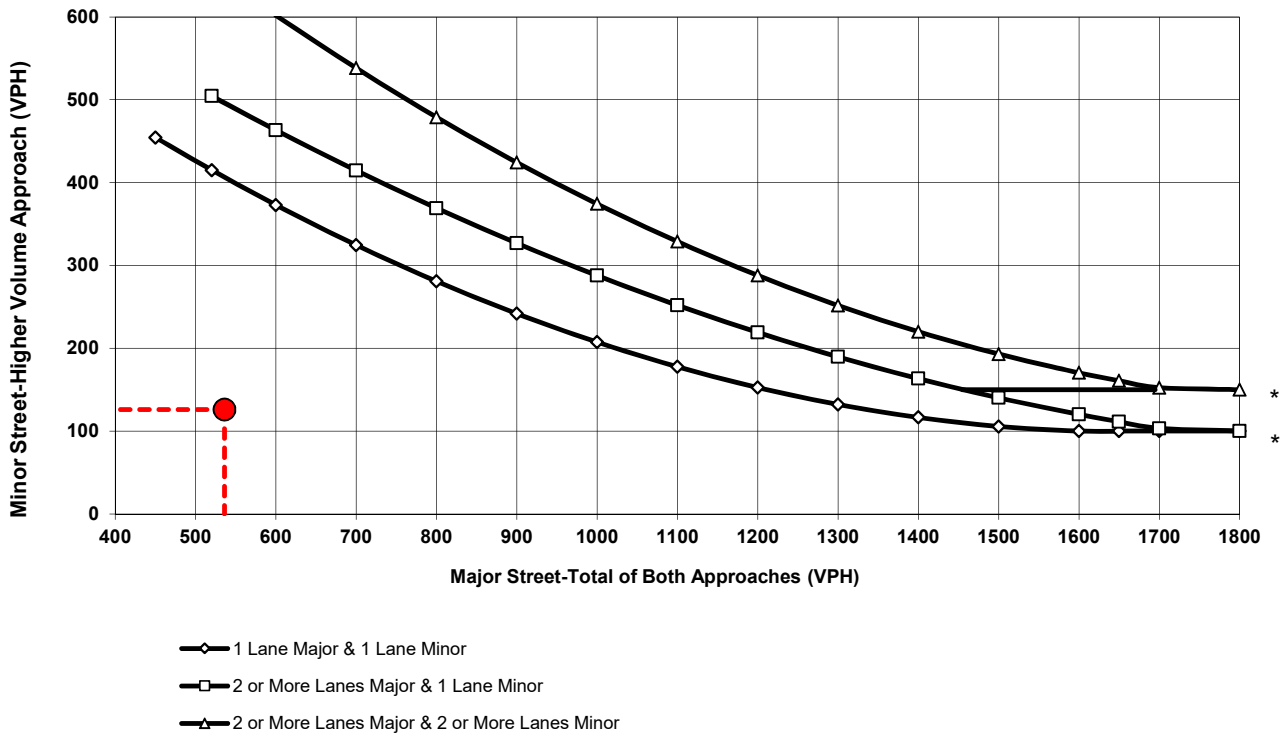
Higher Volume Approach (VPH): **126**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
PM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **US-395 (NS)**

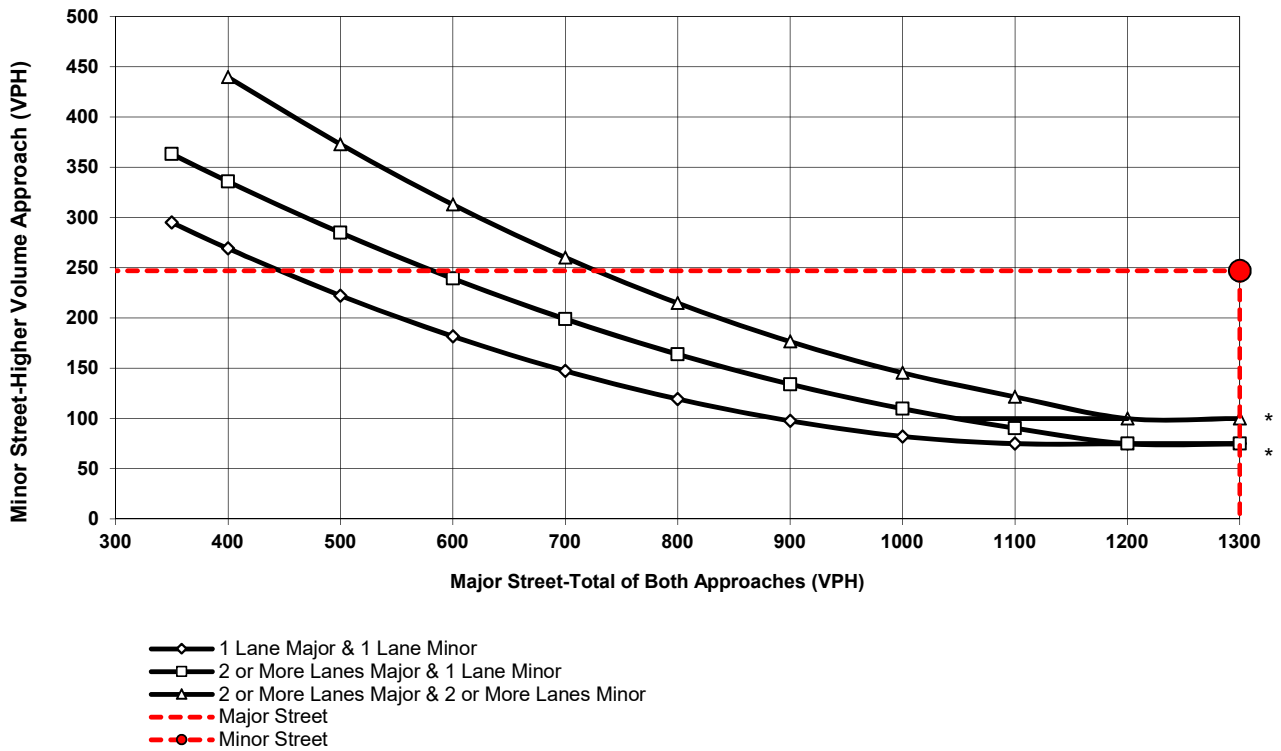
Minor Street: **Proposed Signalized Access (EW)**

Total of Both Approaches (VPH): **2448**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **247**
Number of Approach Lanes: **1**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
PM Peak Hour Volume Warrant
US-395/Proposed Signalized Access**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **760**

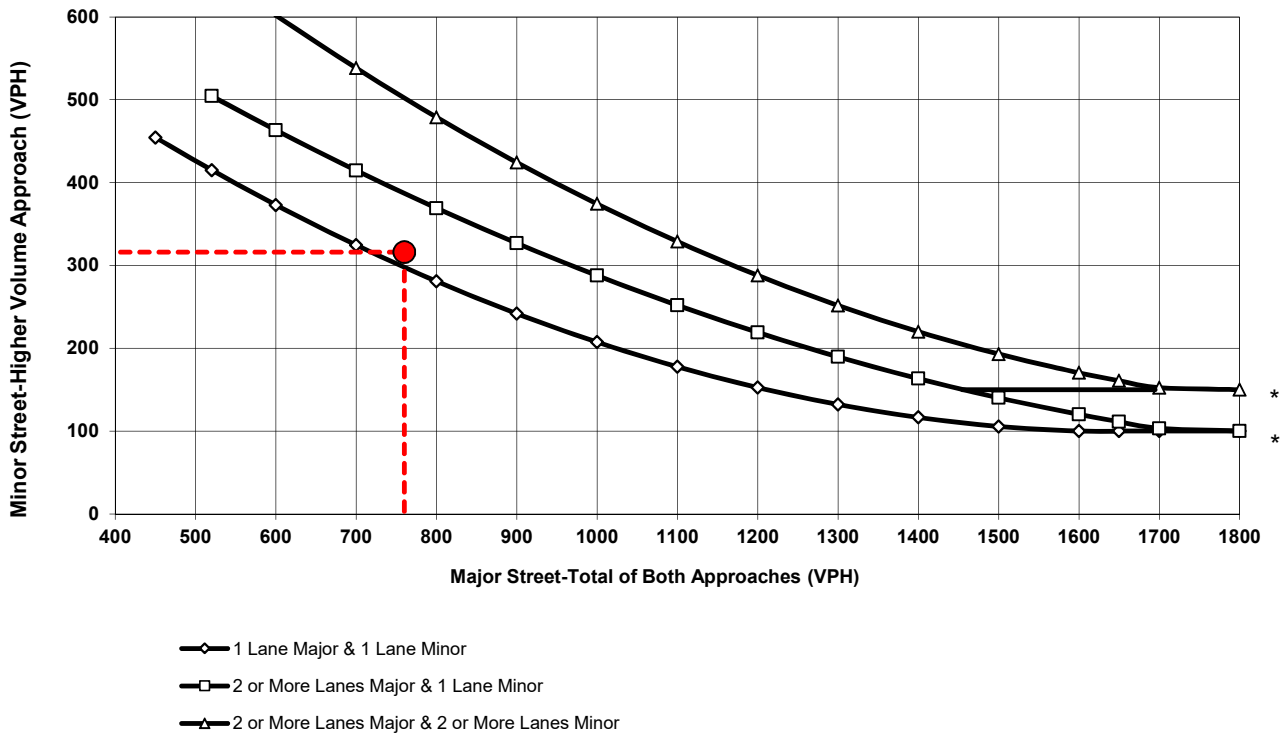
Higher Volume Approach (VPH): **316**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
AM Peak Hour Volume Warrant
Topaz Road/Luna Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Mesa Linda Road**

Minor Street: **Luna Road**

Total of Both Approaches (VPH): **673**

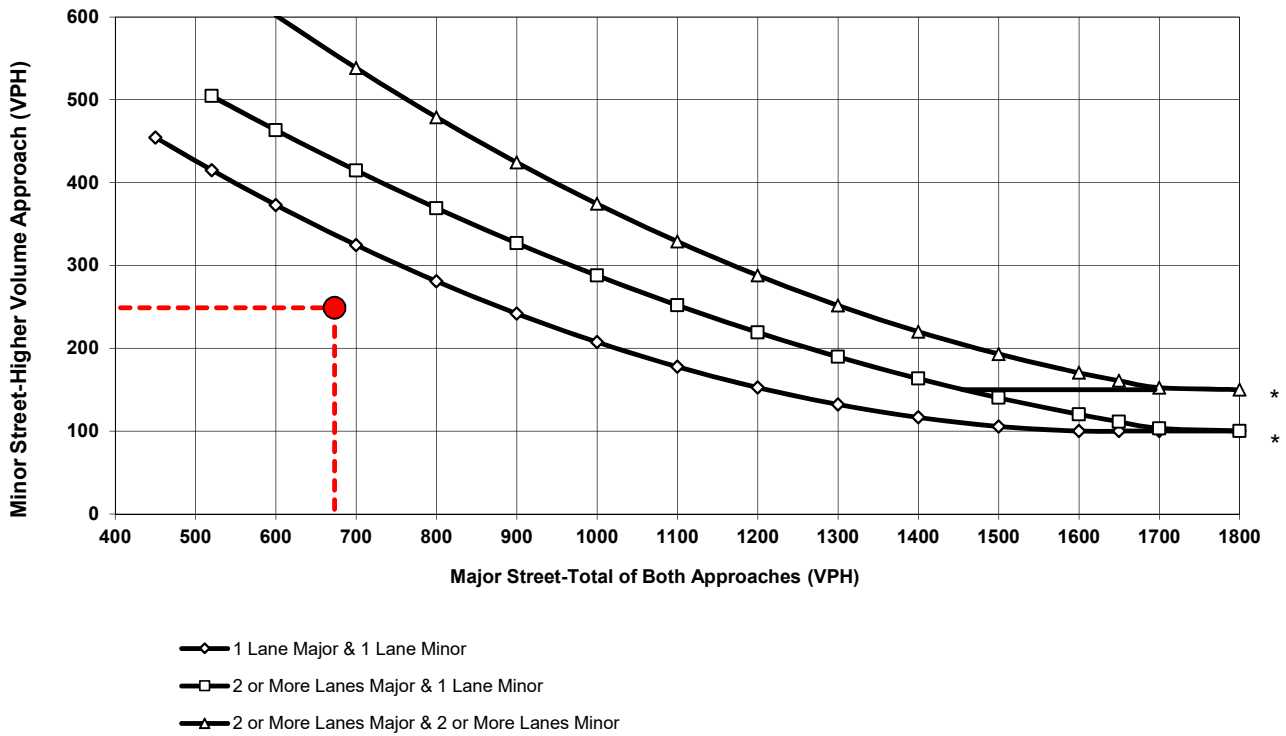
Higher Volume Approach (VPH): **249**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **AM**

Major Street: **La Mesa Road (EW)**

Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **491**

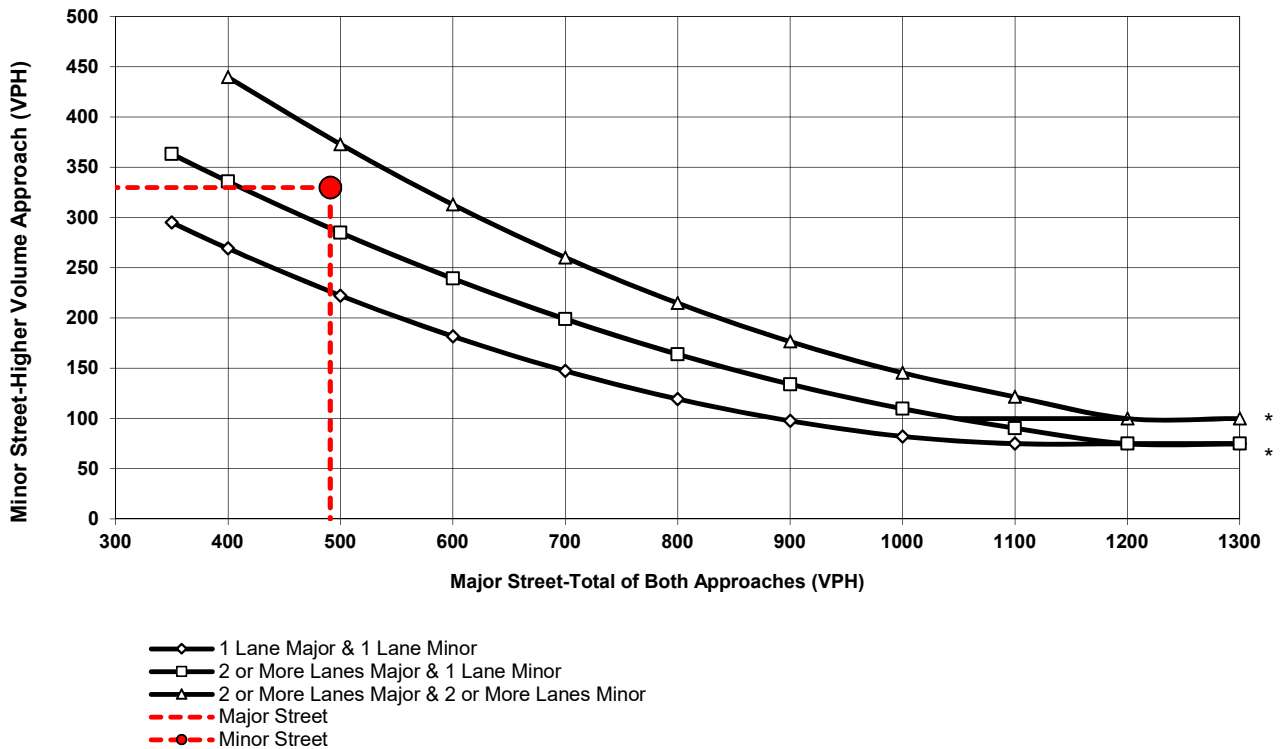
Higher Volume Approach (VPH): **330**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: AM

Major Street: Dos Palmas Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **492**

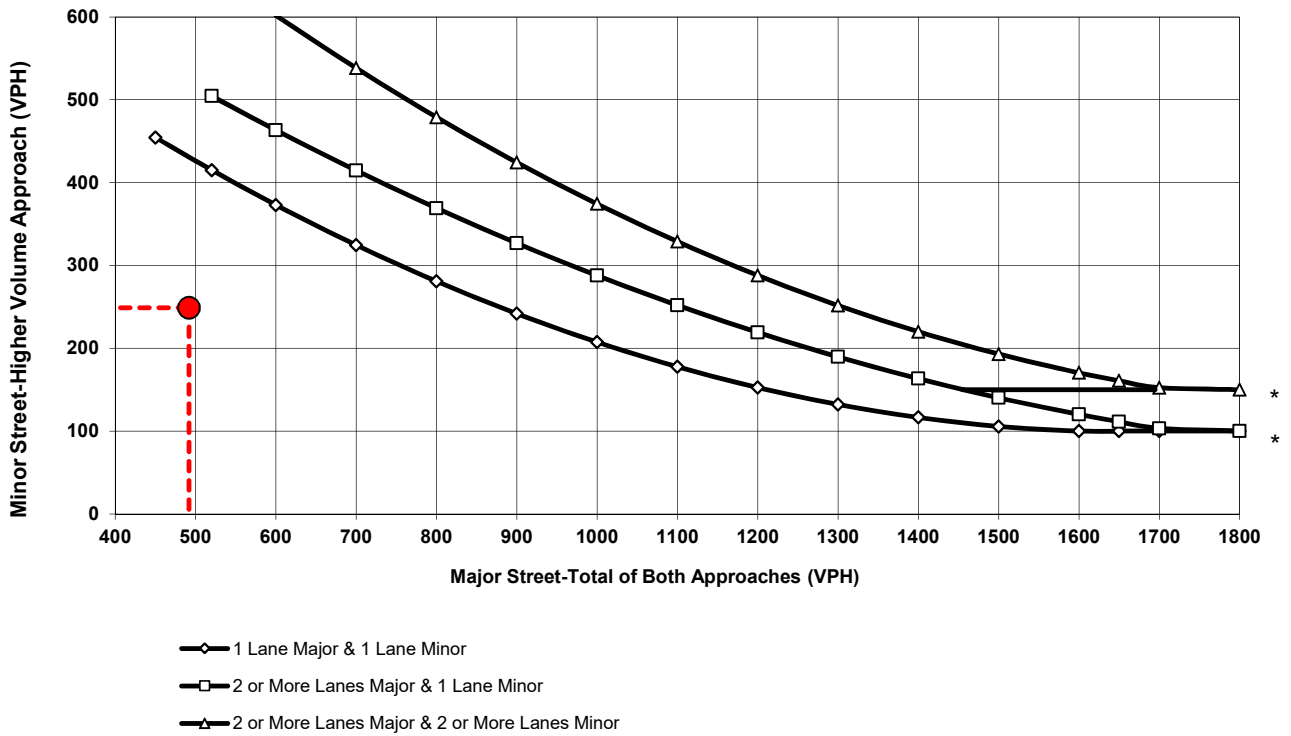
Higher Volume Approach (VPH): **249**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Cobalt Road**

Total of Both Approaches (VPH): **723**

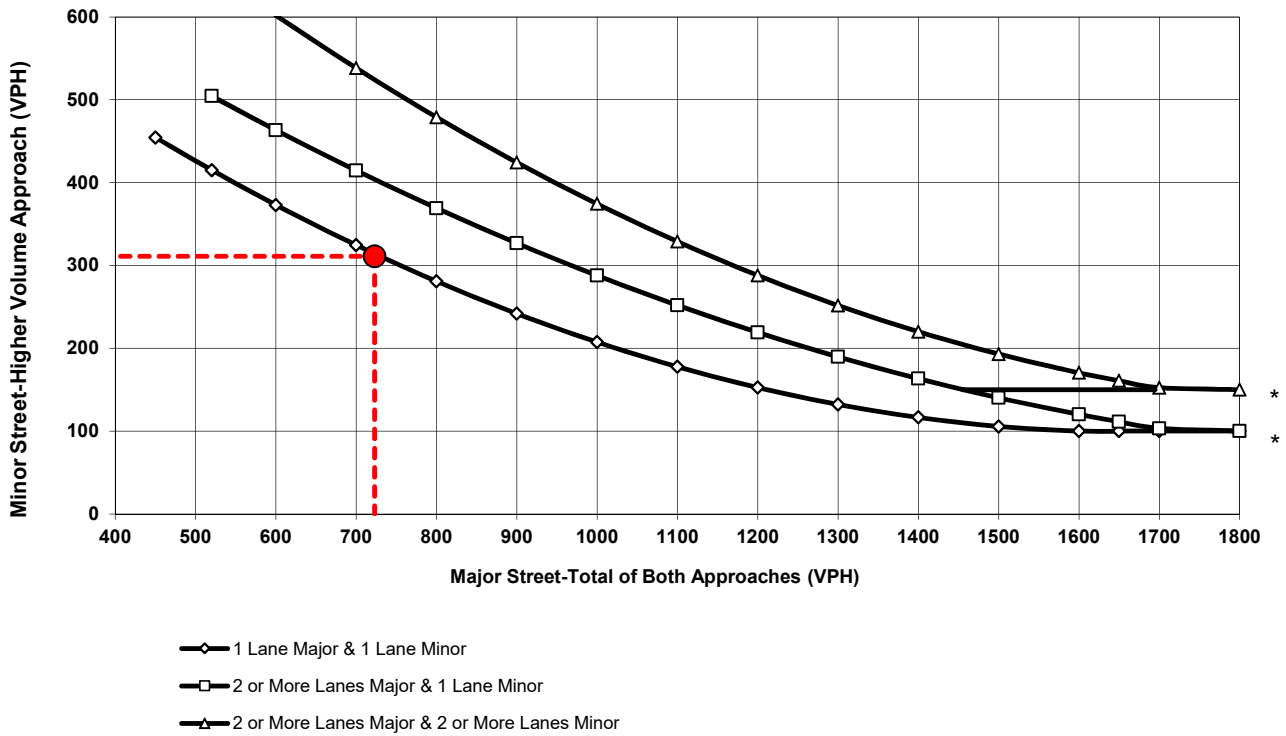
Higher Volume Approach (VPH): **311**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
AM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

EXISTING PLUS PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **AM**

Major Street: **US-395 (NS)**

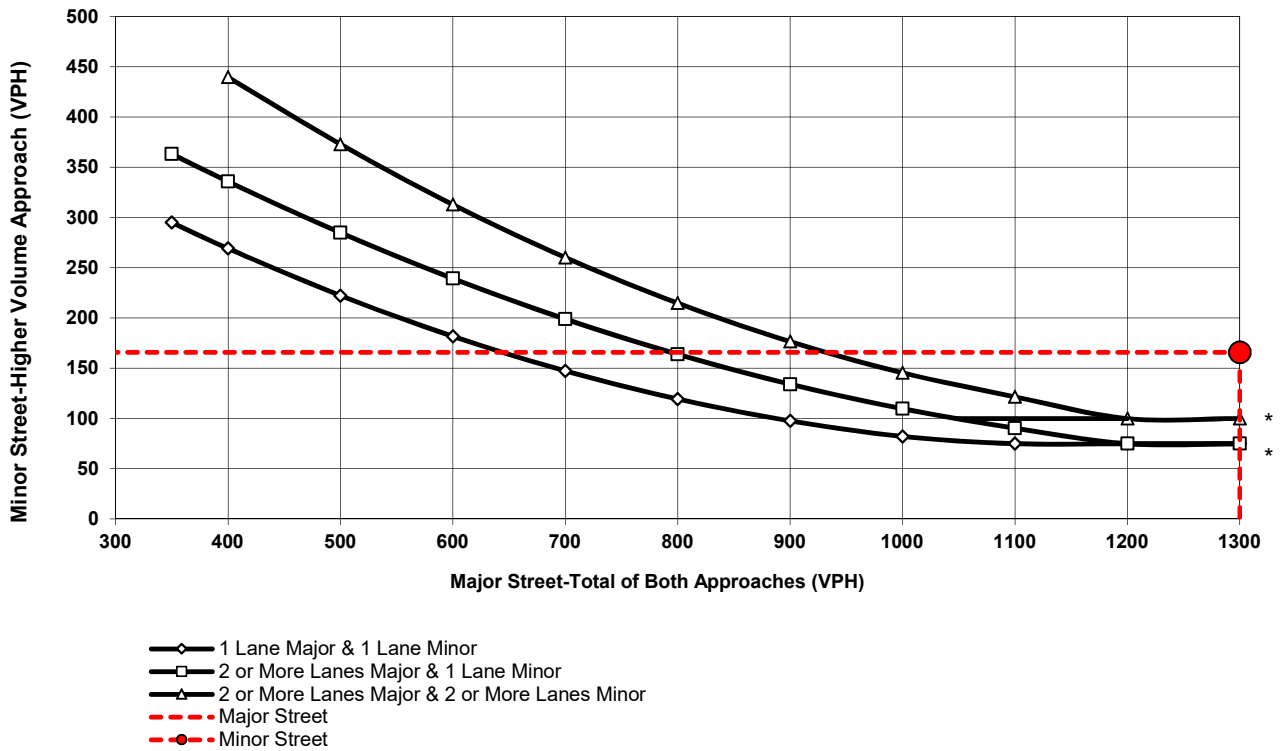
Minor Street: **Proposed Signalized Access (EW)**

Total of Both Approaches (VPH): **2347**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **166**
Number of Approach Lanes: **1**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Existing Plus Project Conditions
AM Peak Hour Volume Warrant
US-395/Proposed Signalized Access**

Opening Year Without Project
Peak Hour Signal Warrants

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Topaz Road

Total of Both Approaches (VPH): **376**

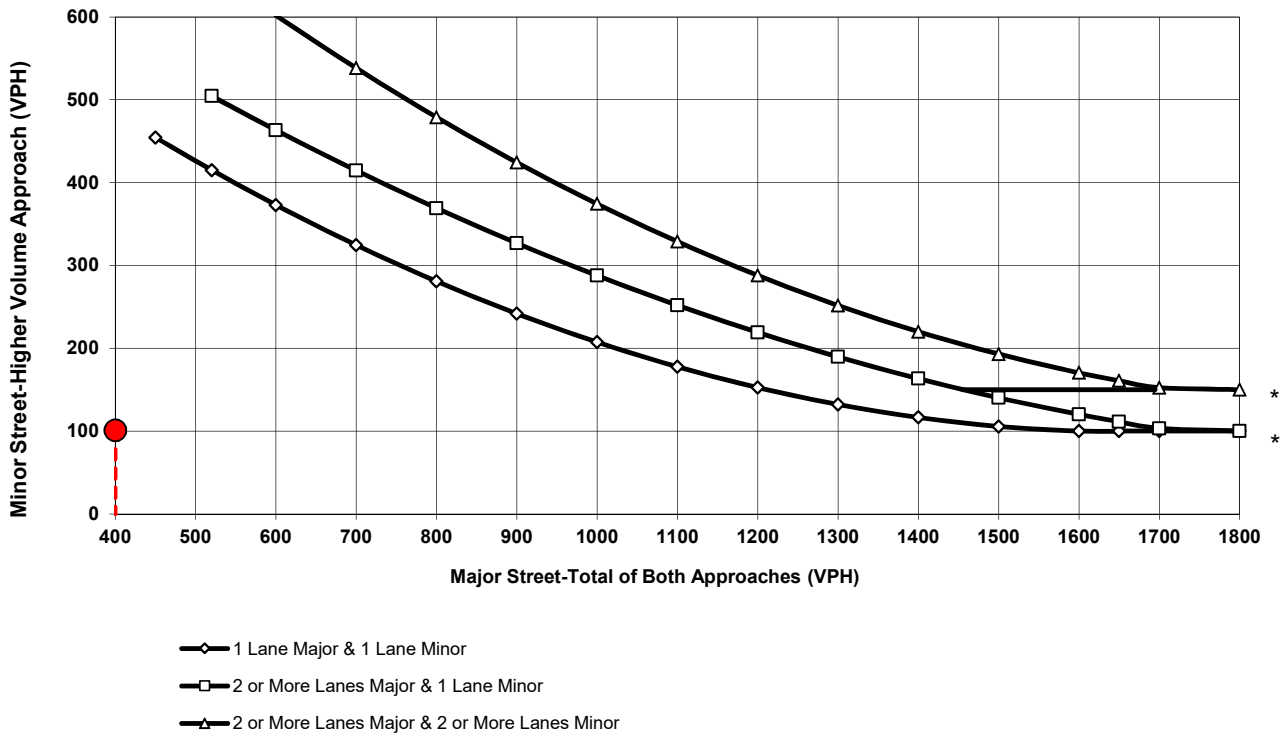
Higher Volume Approach (VPH): **101**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/Luna Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road**

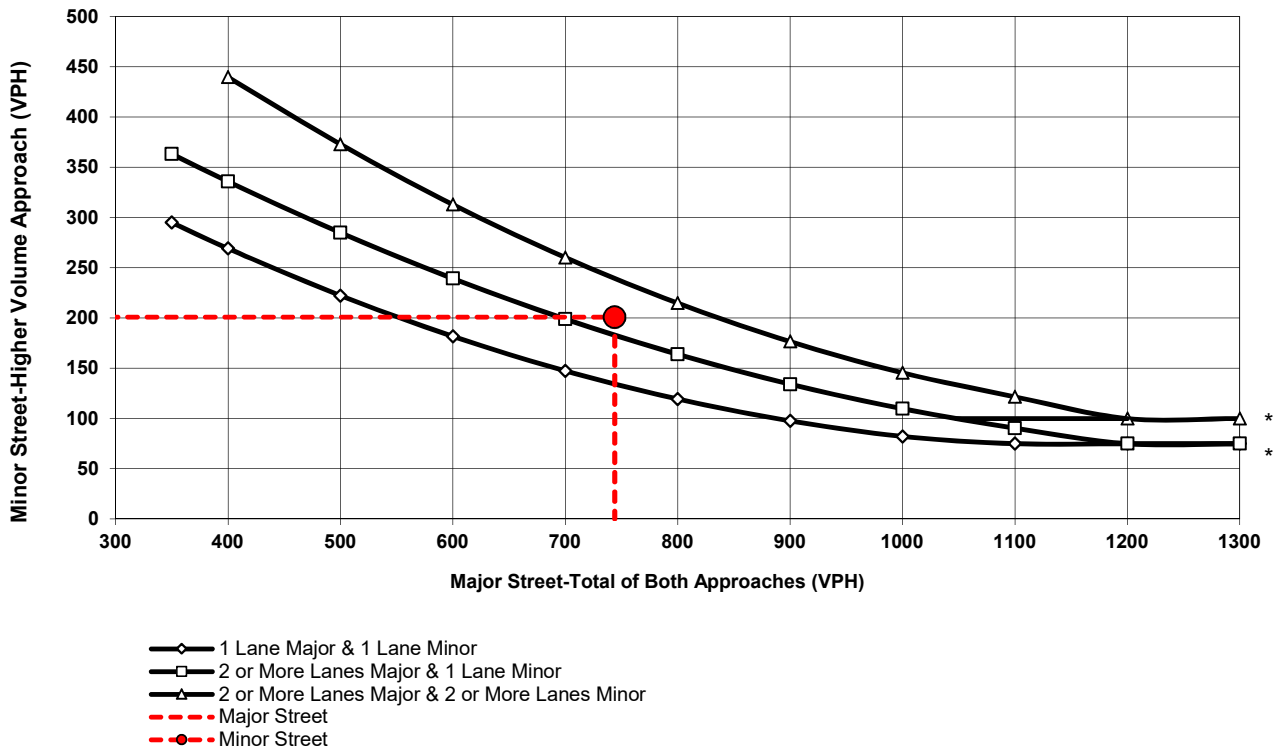
Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **744**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **201**
Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/La Mesa Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Mesa Linda Road

Minor Street: Luna Road

Total of Both Approaches (VPH): **363**

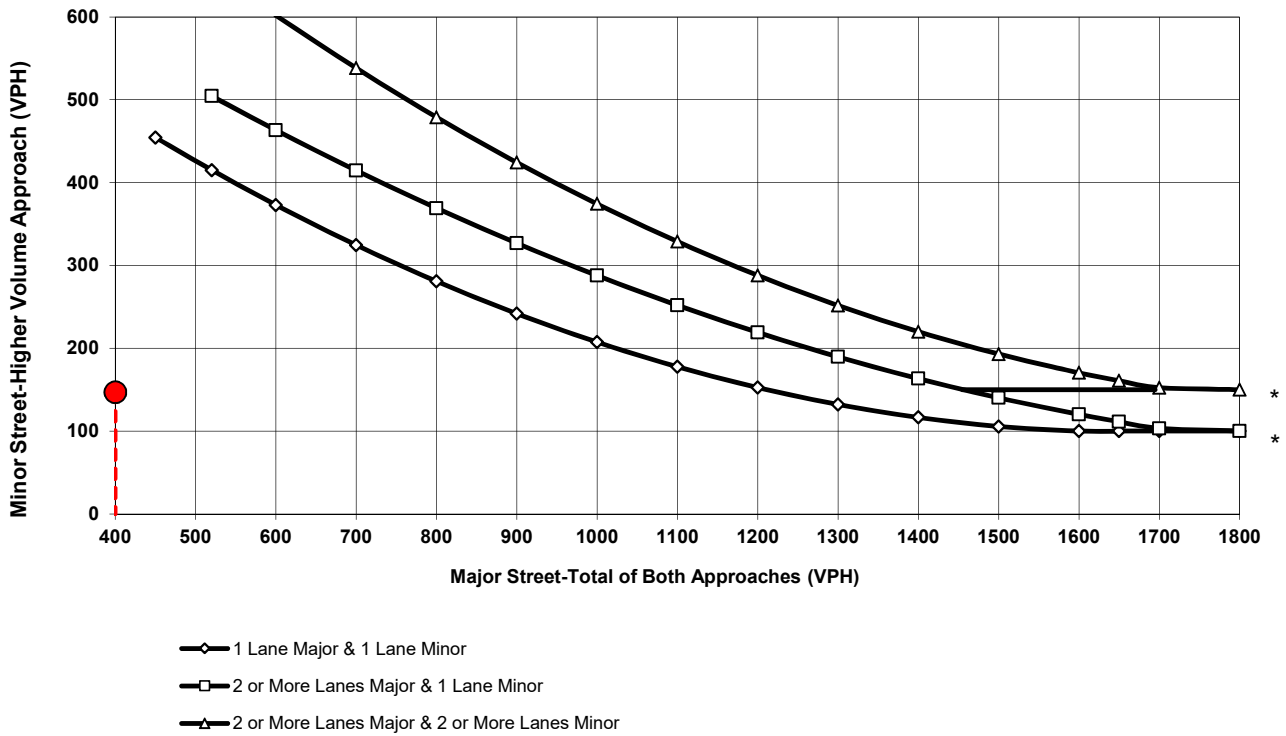
Higher Volume Approach (VPH): **147**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road (EW)**

Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **448**

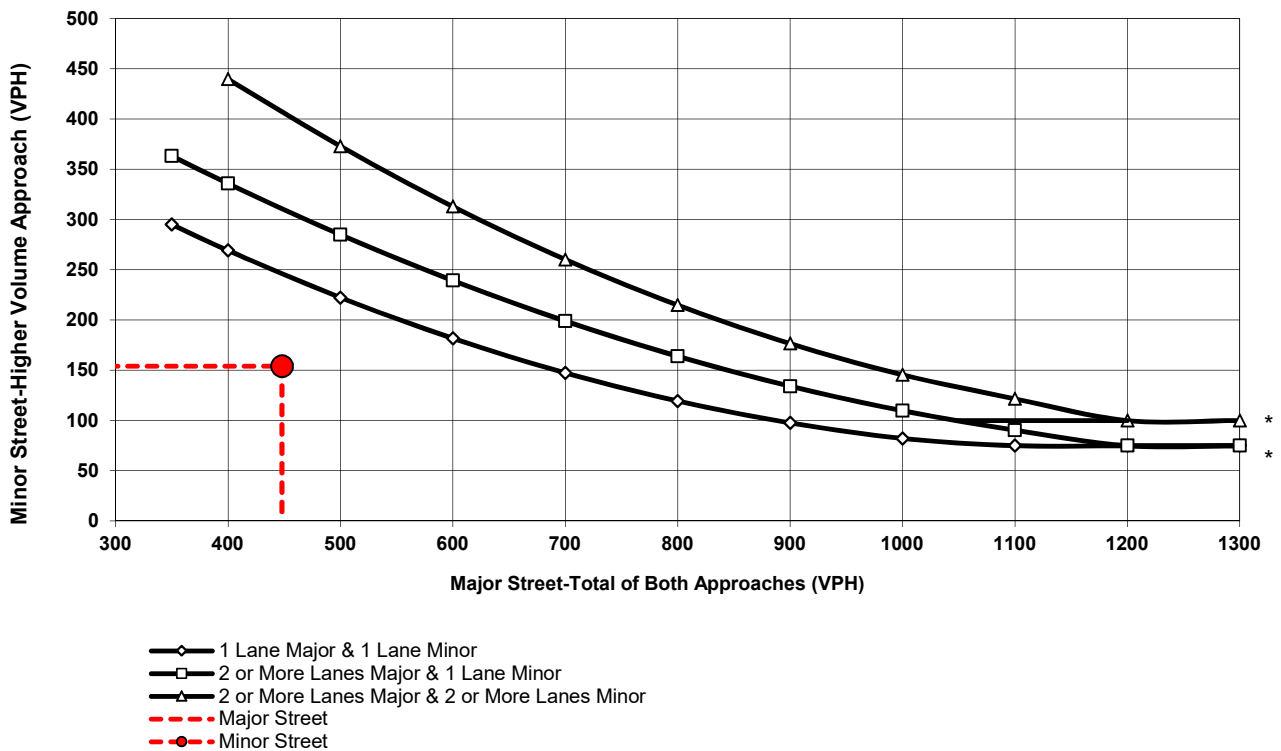
Higher Volume Approach (VPH): **154**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **PM**

Major Street: **Dos Palmas Road**

Minor Street: **Mesa Linda Road**

Total of Both Approaches (VPH): **291**

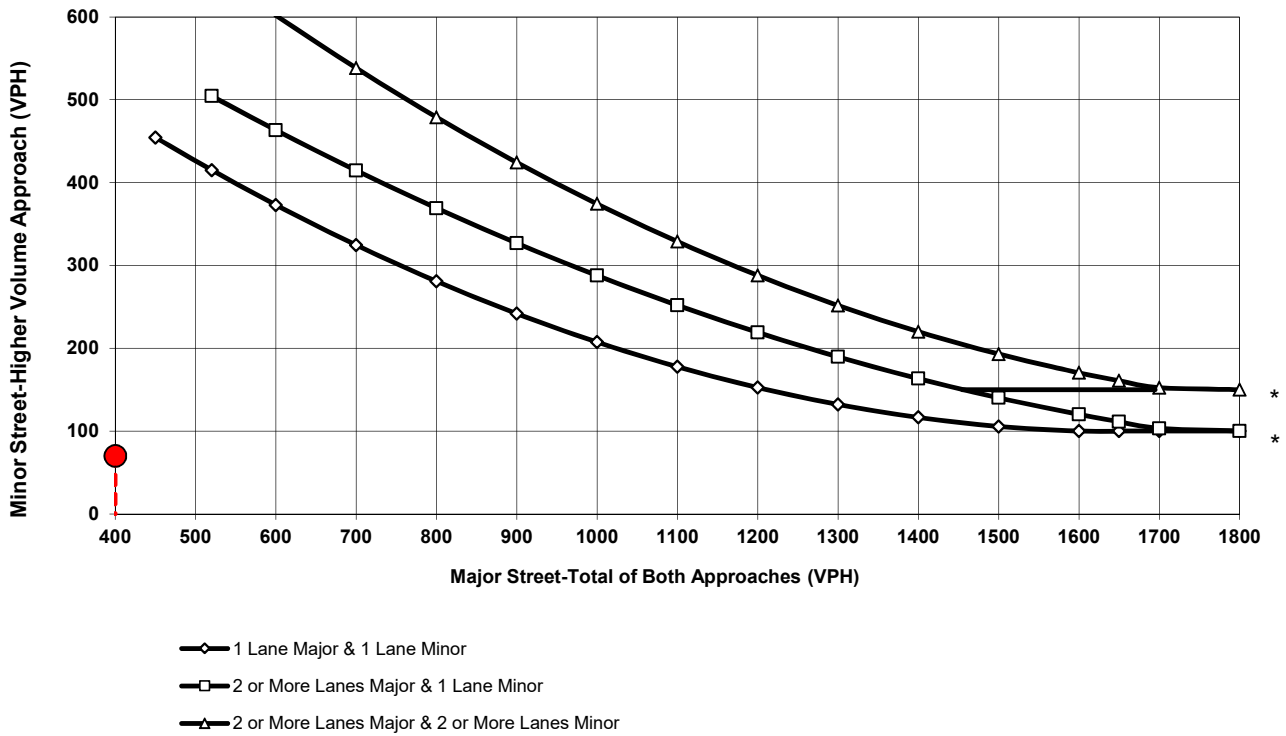
Higher Volume Approach (VPH): **70**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Cobalt Road

Total of Both Approaches (VPH): **493**

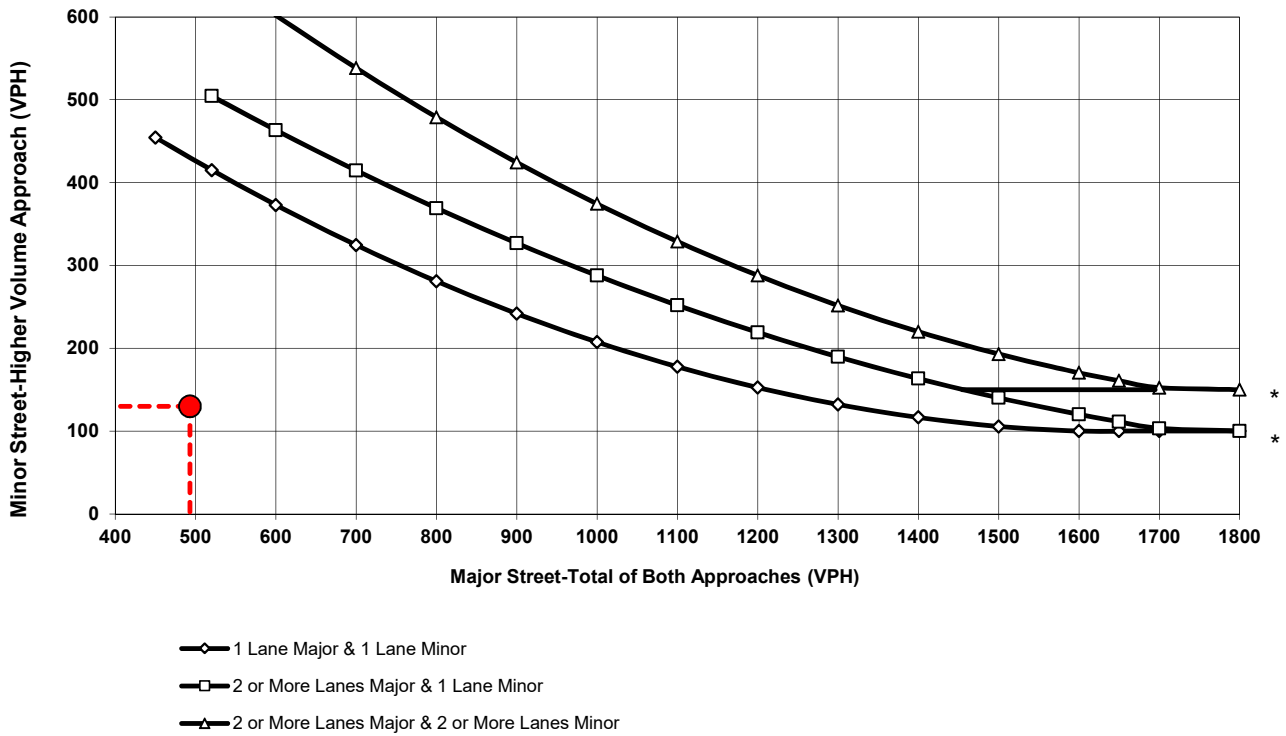
Higher Volume Approach (VPH): **130**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
PM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **744**

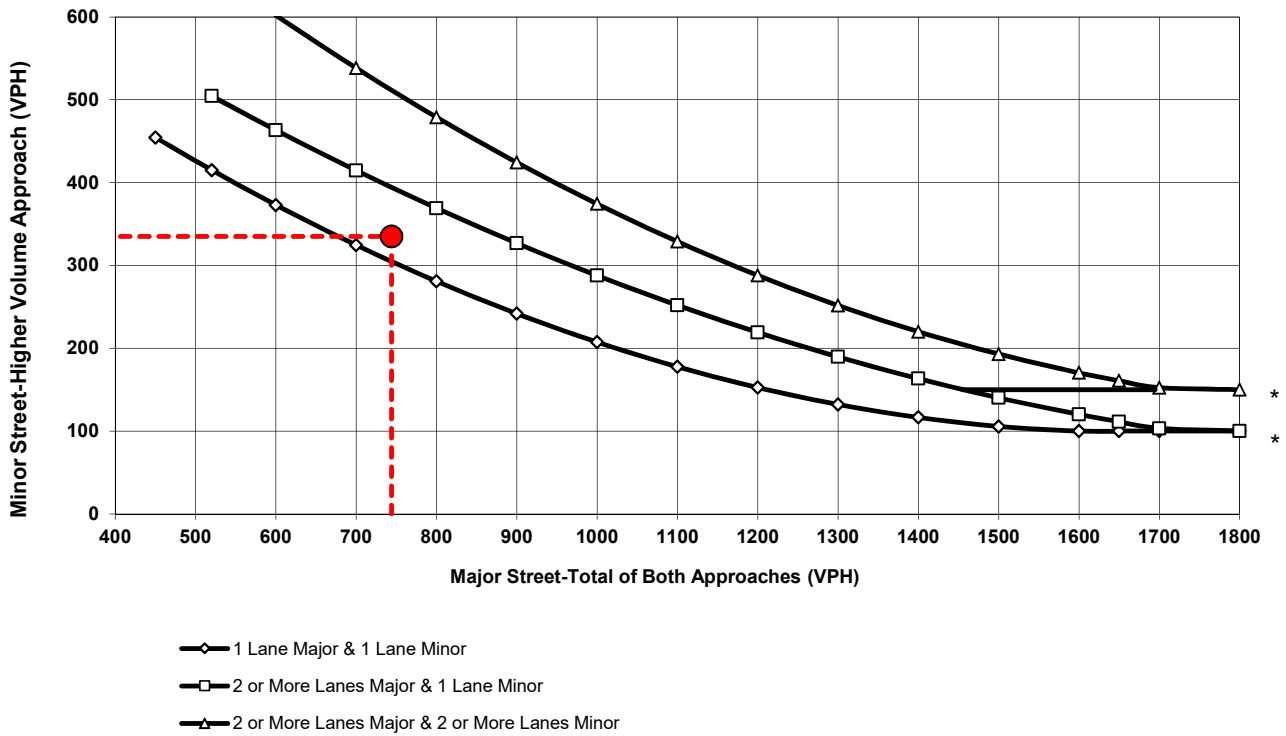
Higher Volume Approach (VPH): **335**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
AM Peak Hour Volume Warrant
Topaz Road/Luna Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Mesa Linda Road**

Minor Street: **Luna Road**

Total of Both Approaches (VPH): **673**

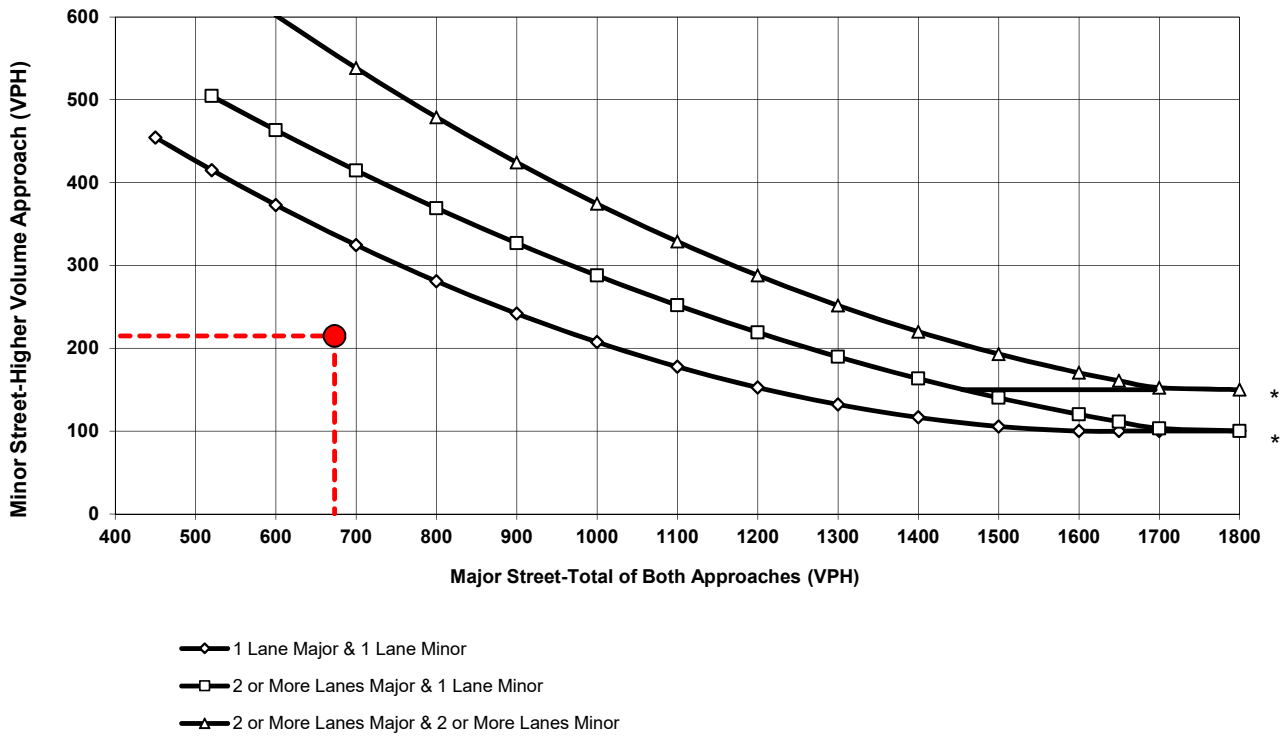
Higher Volume Approach (VPH): **215**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **AM**

Major Street: **La Mesa Road (EW)**

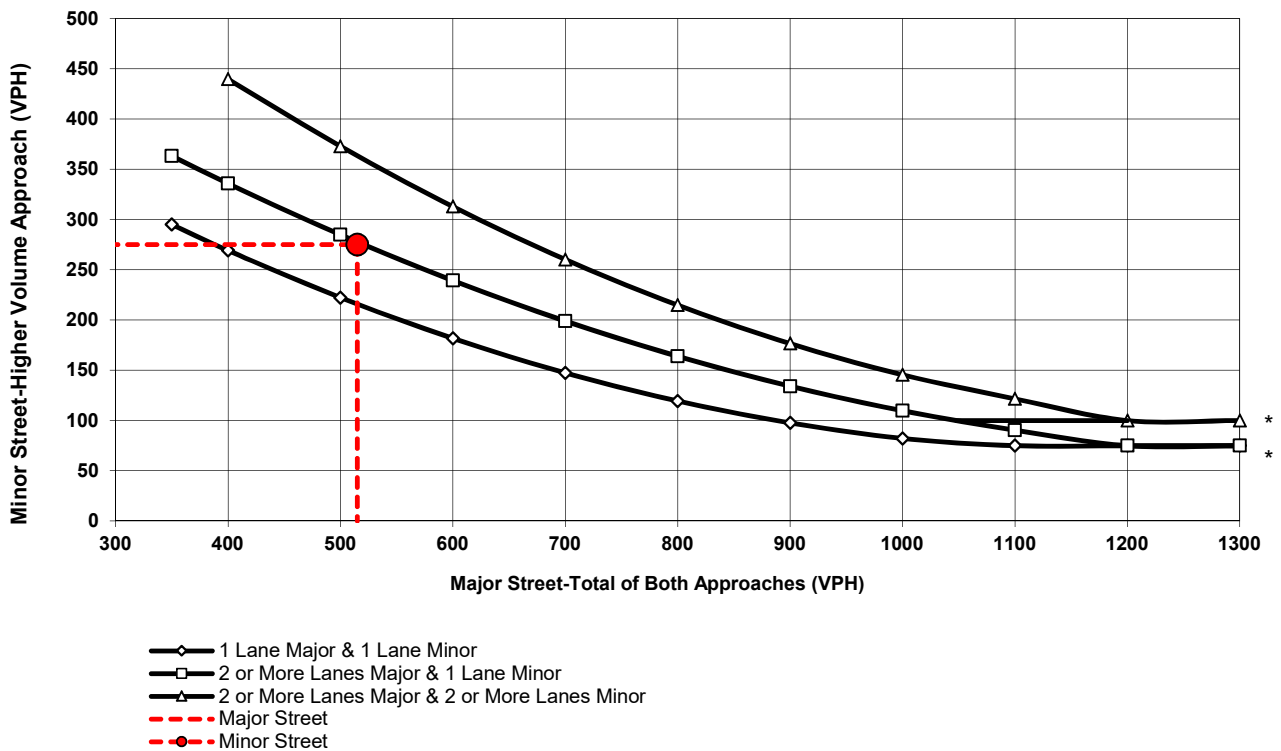
Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **515**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **275**
Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Dos Palmas Road**

Minor Street: **Mesa Linda Road**

Total of Both Approaches (VPH): **476**

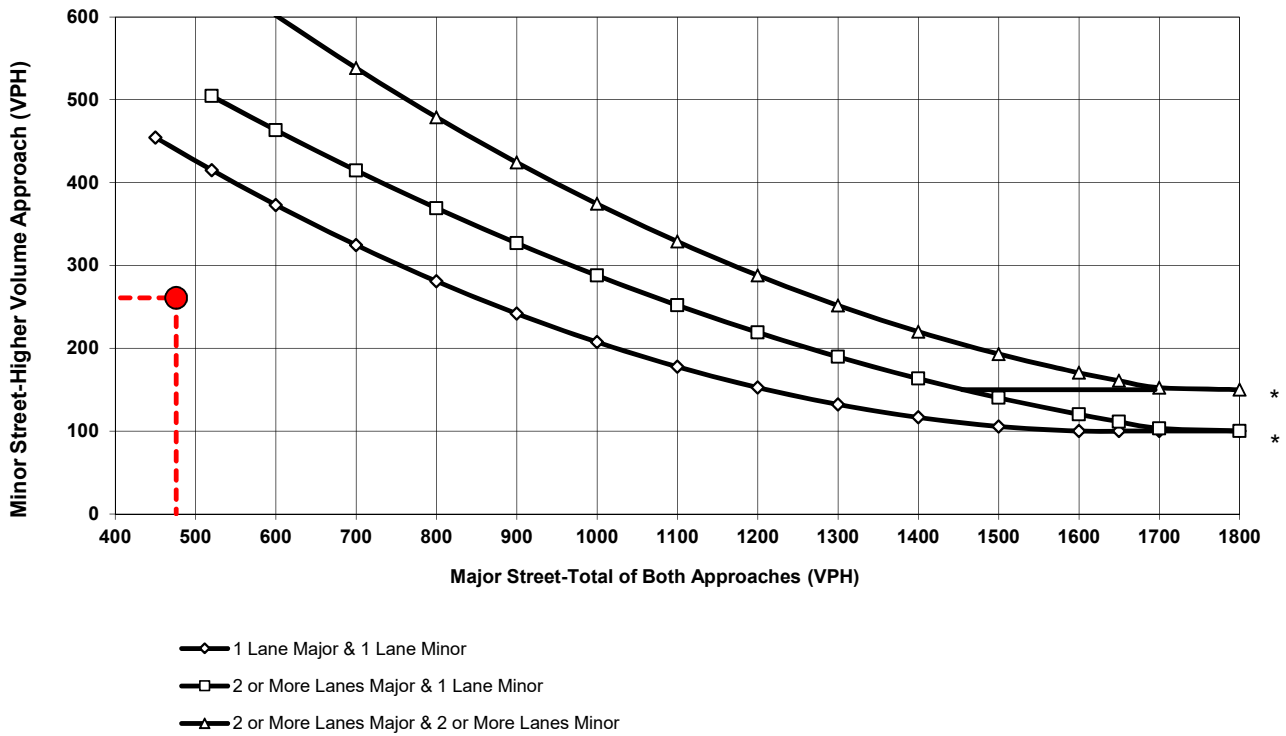
Higher Volume Approach (VPH): **261**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

OPENING YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Cobalt Road**

Total of Both Approaches (VPH): **711**

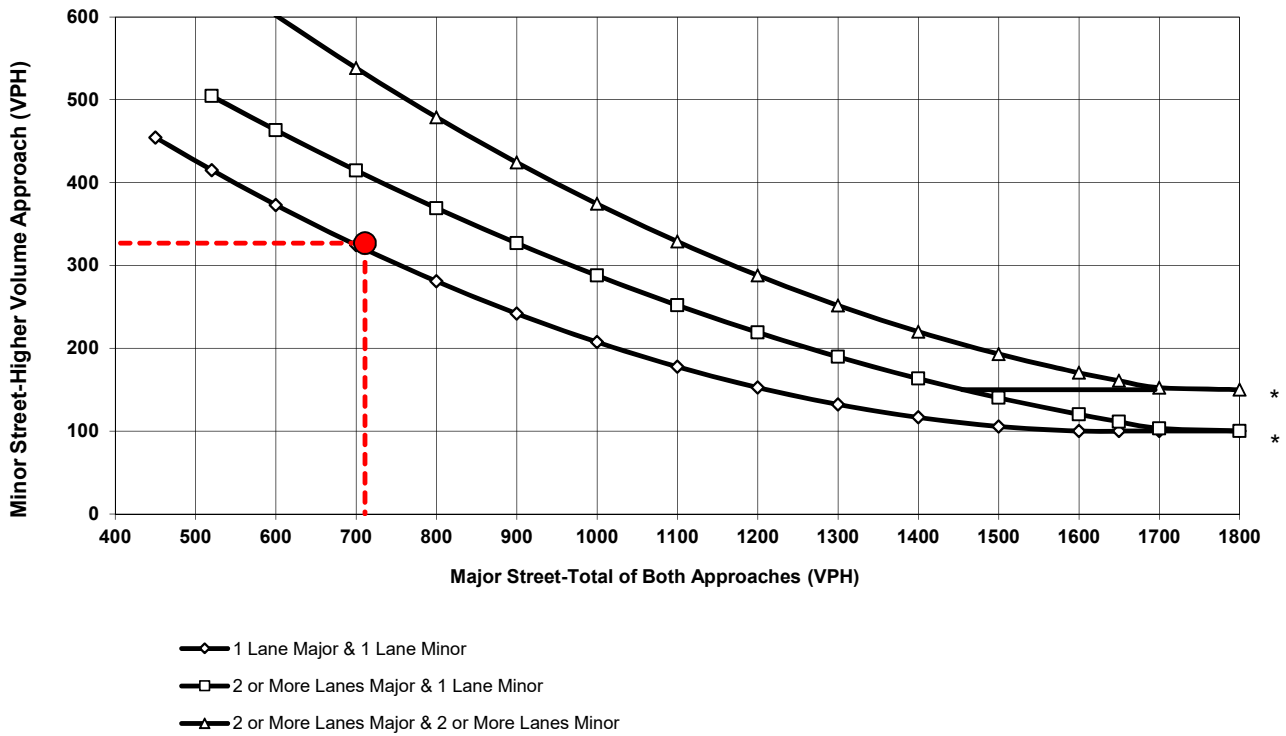
Higher Volume Approach (VPH): **327**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year Without Project Conditions
AM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

OPENING YEAR PLUS PROJECT CONDITIONS

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Topaz Road

Total of Both Approaches (VPH): **455**

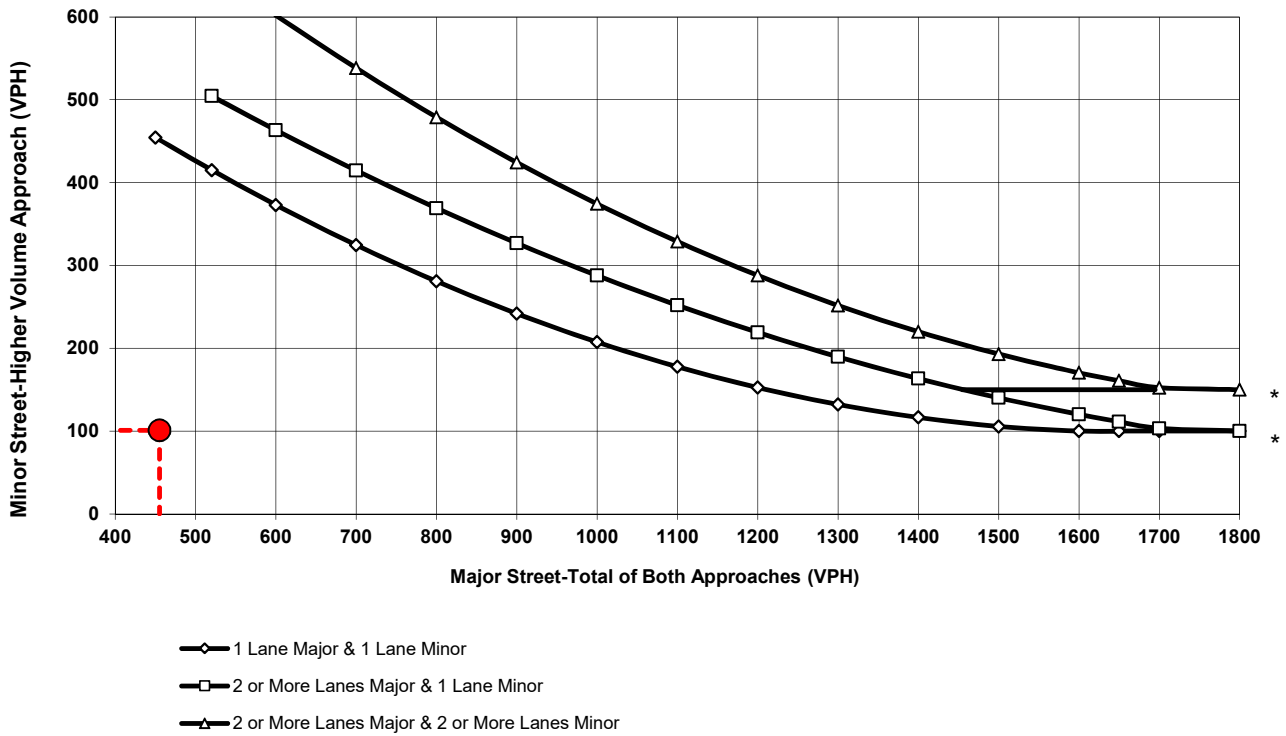
Higher Volume Approach (VPH): **101**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/Luna Road**

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road**

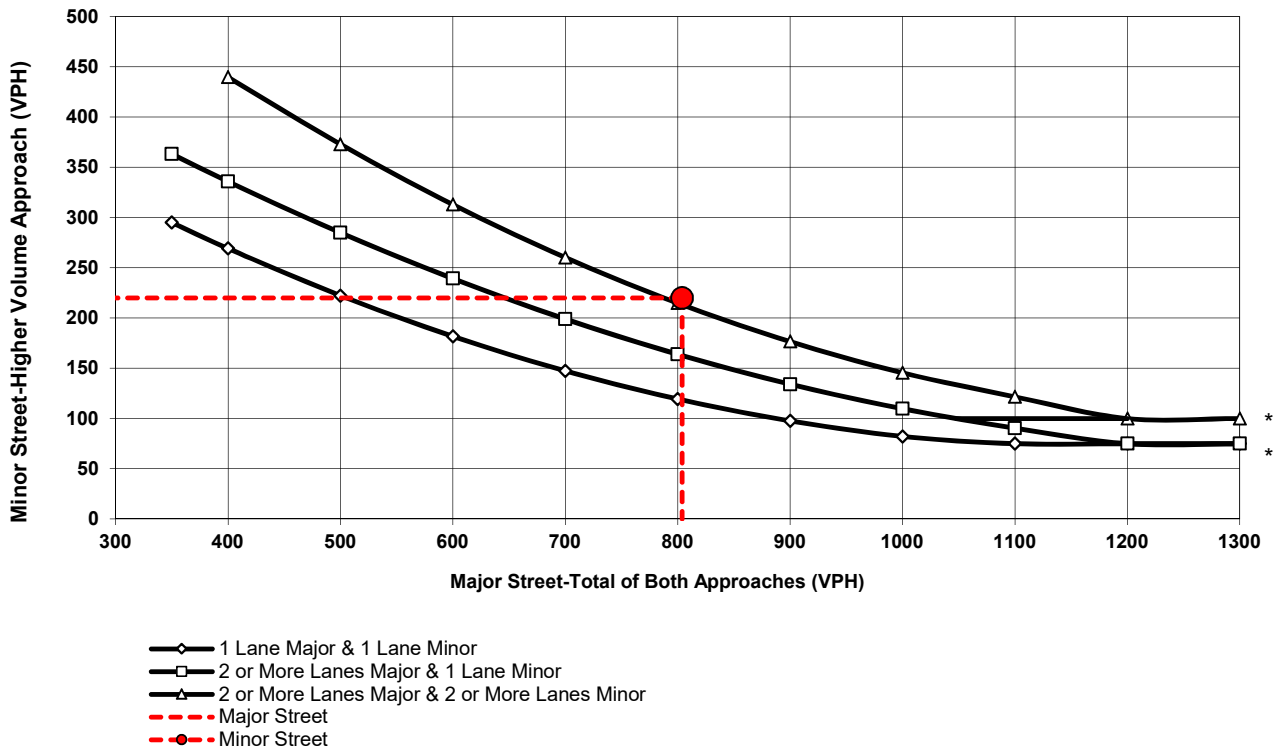
Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **804**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **220**
Number of Approach Lanes: **2**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/La Mesa Road**

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **508**

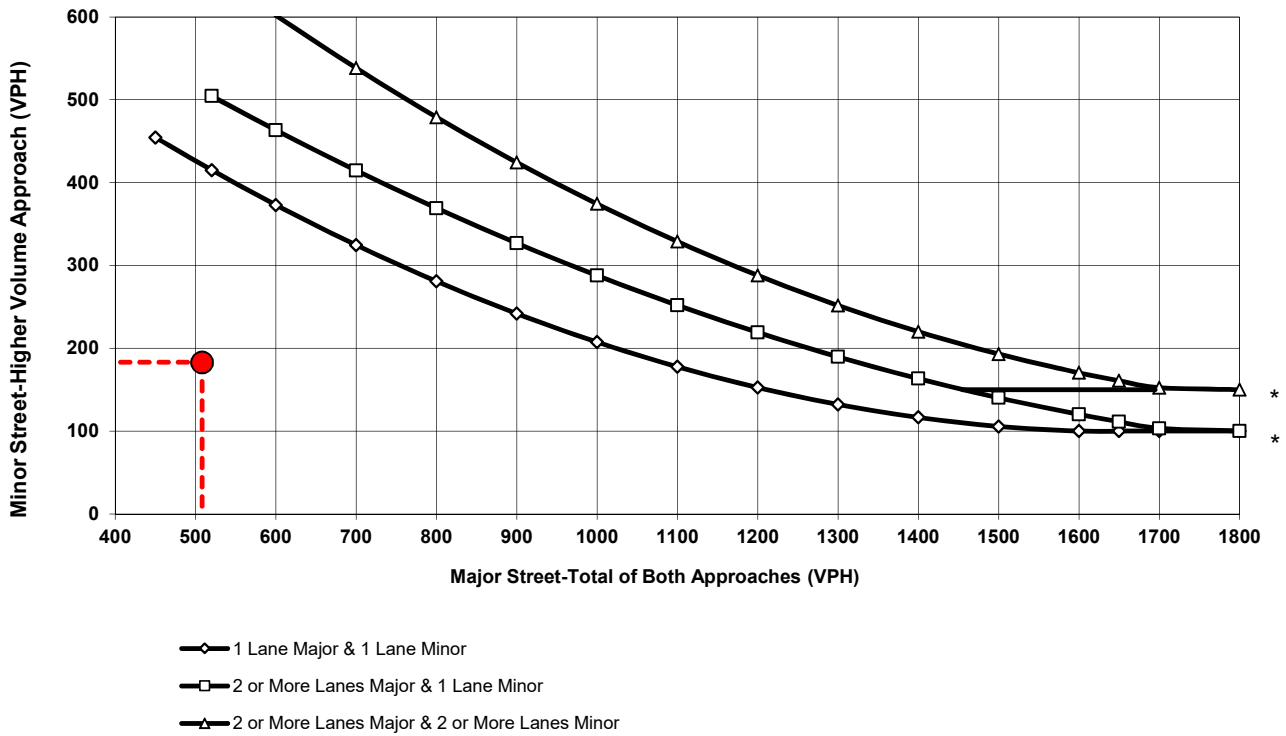
Higher Volume Approach (VPH): **183**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road (EW)**

Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **508**

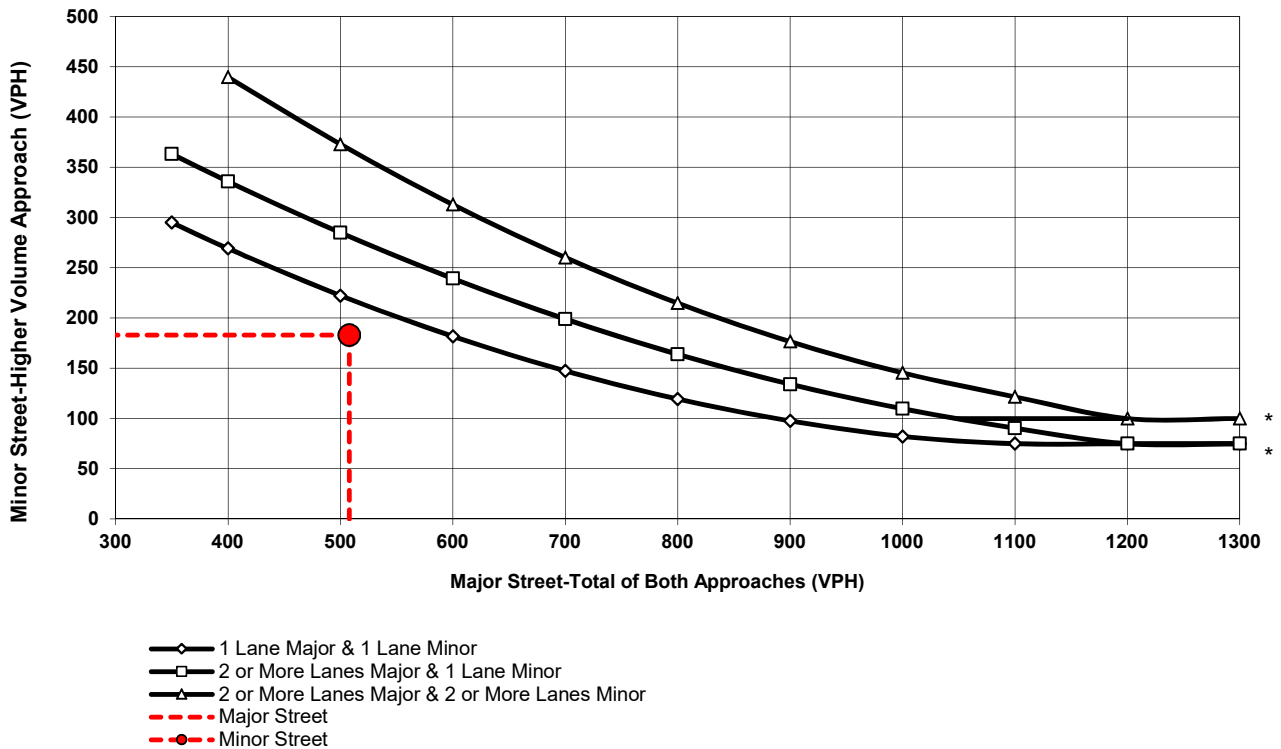
Higher Volume Approach (VPH): **183**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Dos Palmas Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **350**

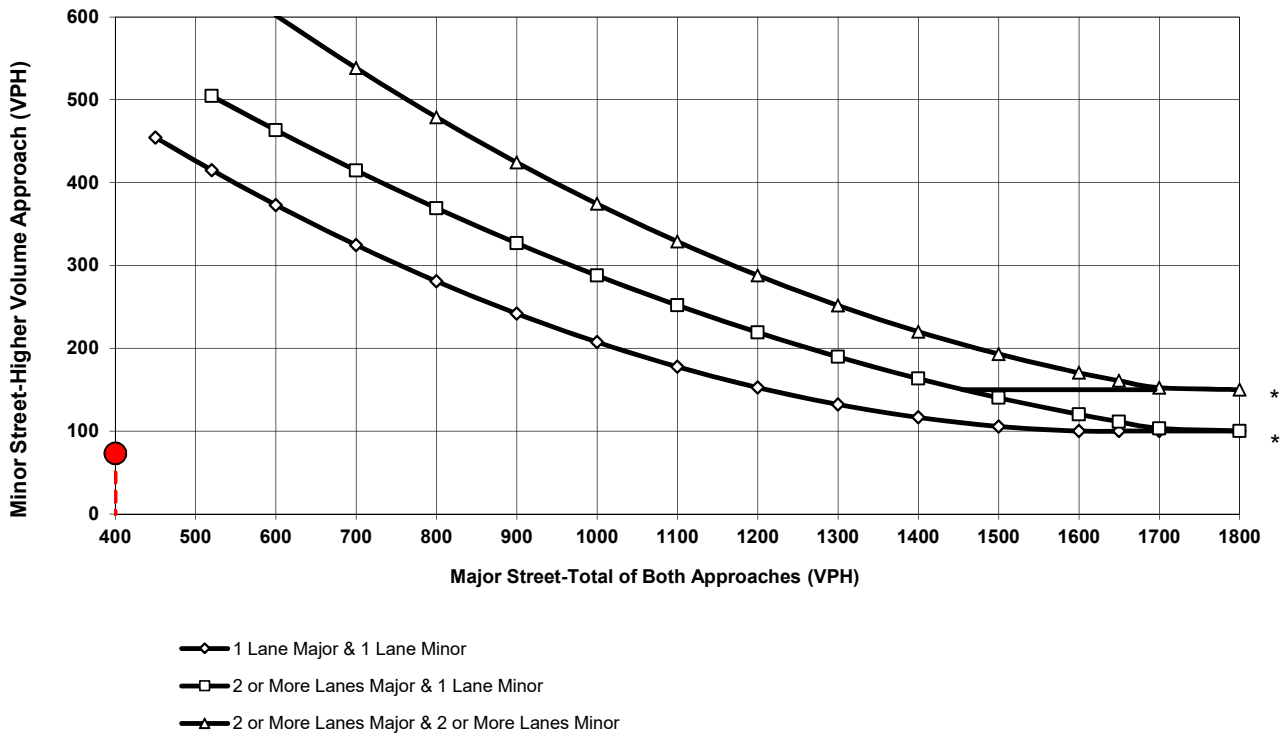
Higher Volume Approach (VPH): **73**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Cobalt Road

Total of Both Approaches (VPH): **564**

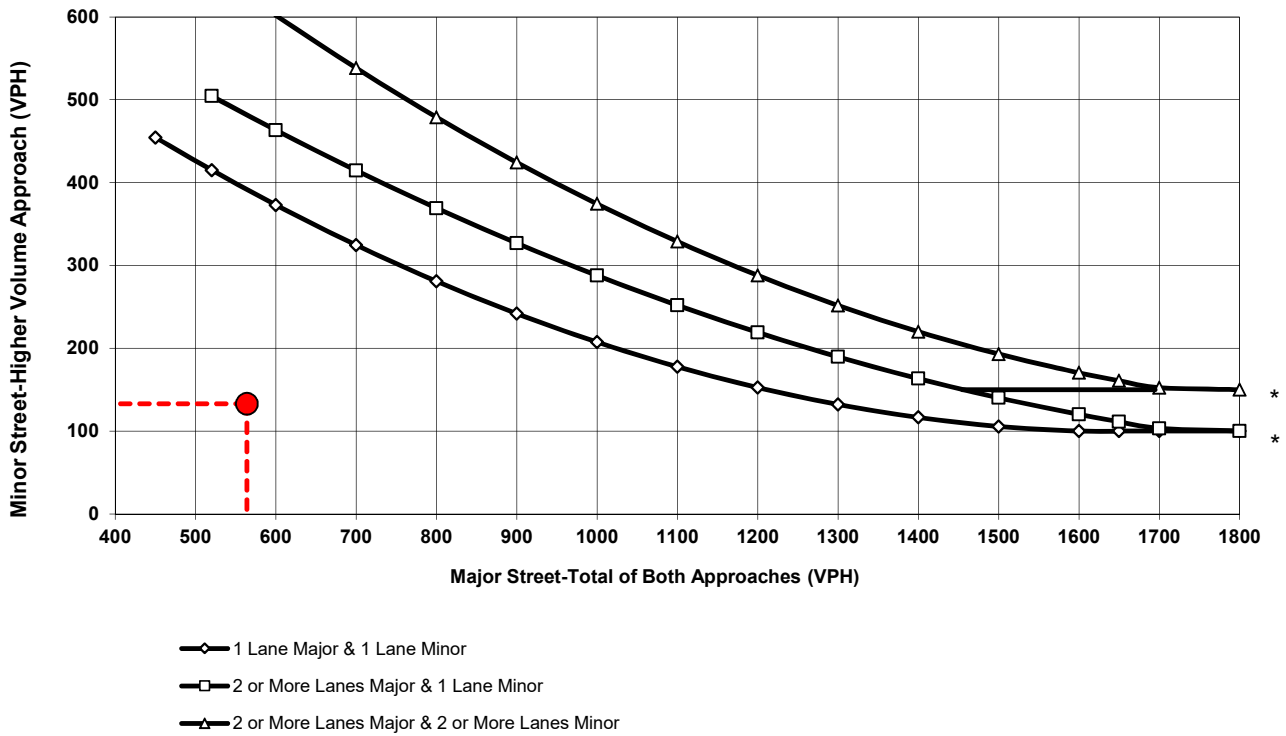
Higher Volume Approach (VPH): **133**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
PM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **803**

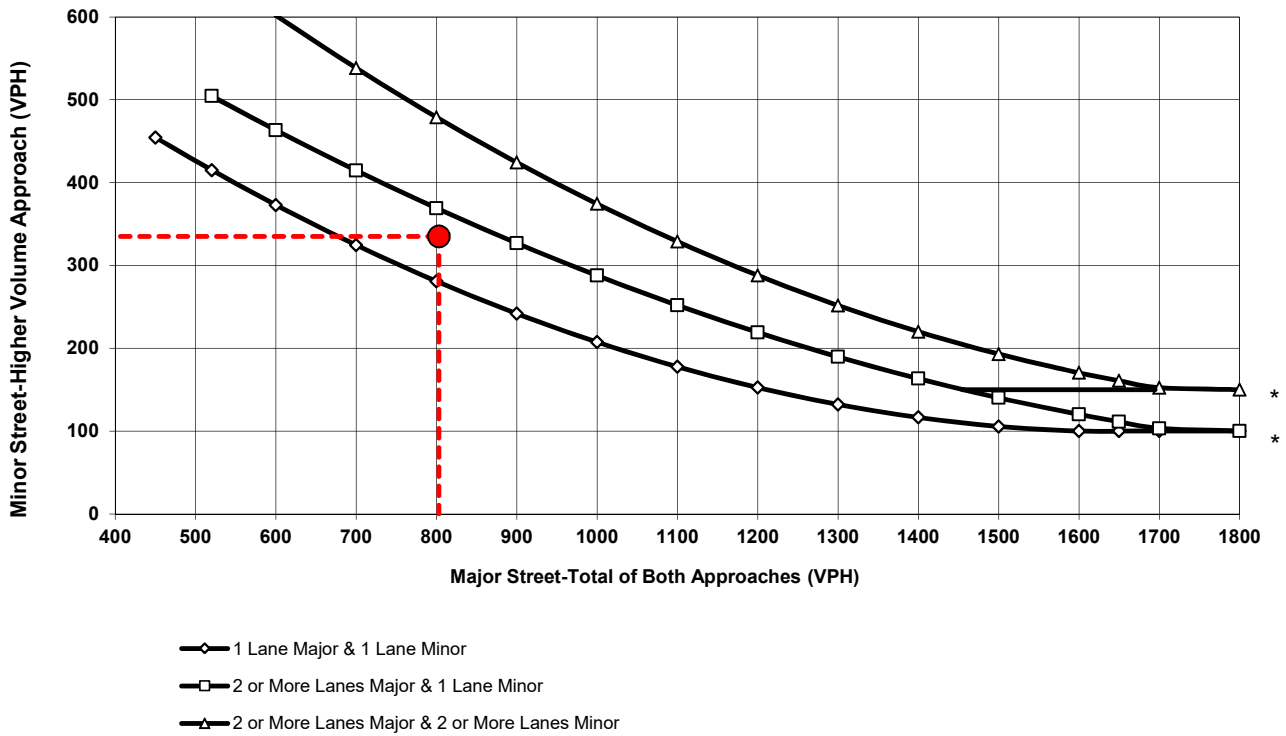
Higher Volume Approach (VPH): **335**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
AM Peak Hour Volume Warrant
Topaz Road/Luna Road**

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Mesa Linda Road**

Minor Street: **Luna Road**

Total of Both Approaches (VPH): **712**

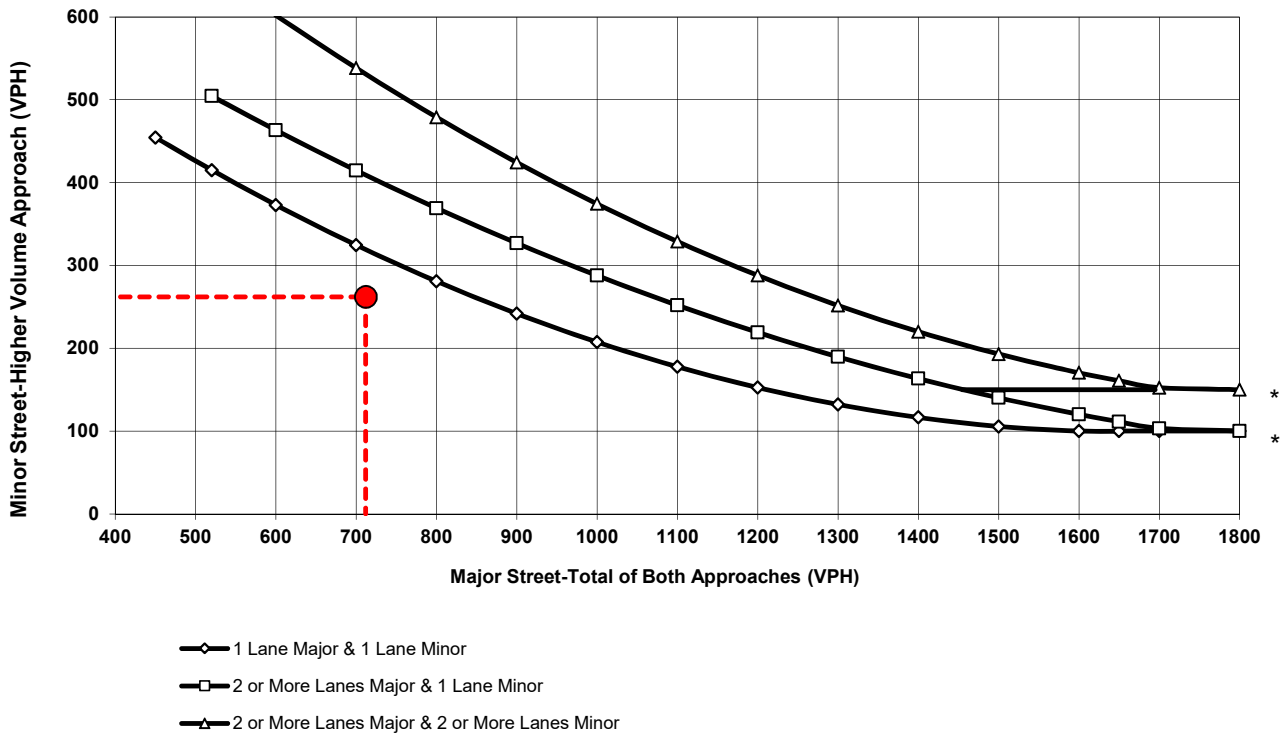
Higher Volume Approach (VPH): **262**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **AM**

Major Street: **La Mesa Road (EW)**

Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **517**

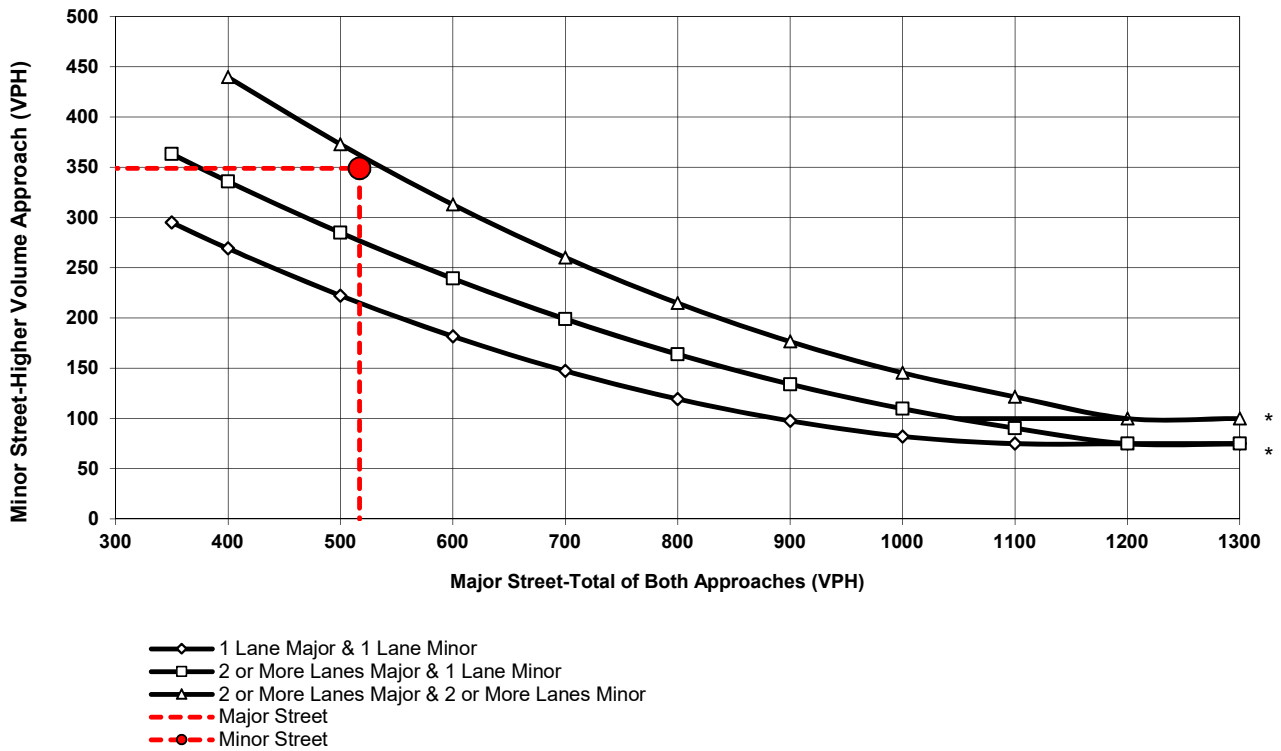
Higher Volume Approach (VPH): **349**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

OPENING YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Dos Palmas Road**

Minor Street: **Mesa Linda Road**

Total of Both Approaches (VPH): **519**

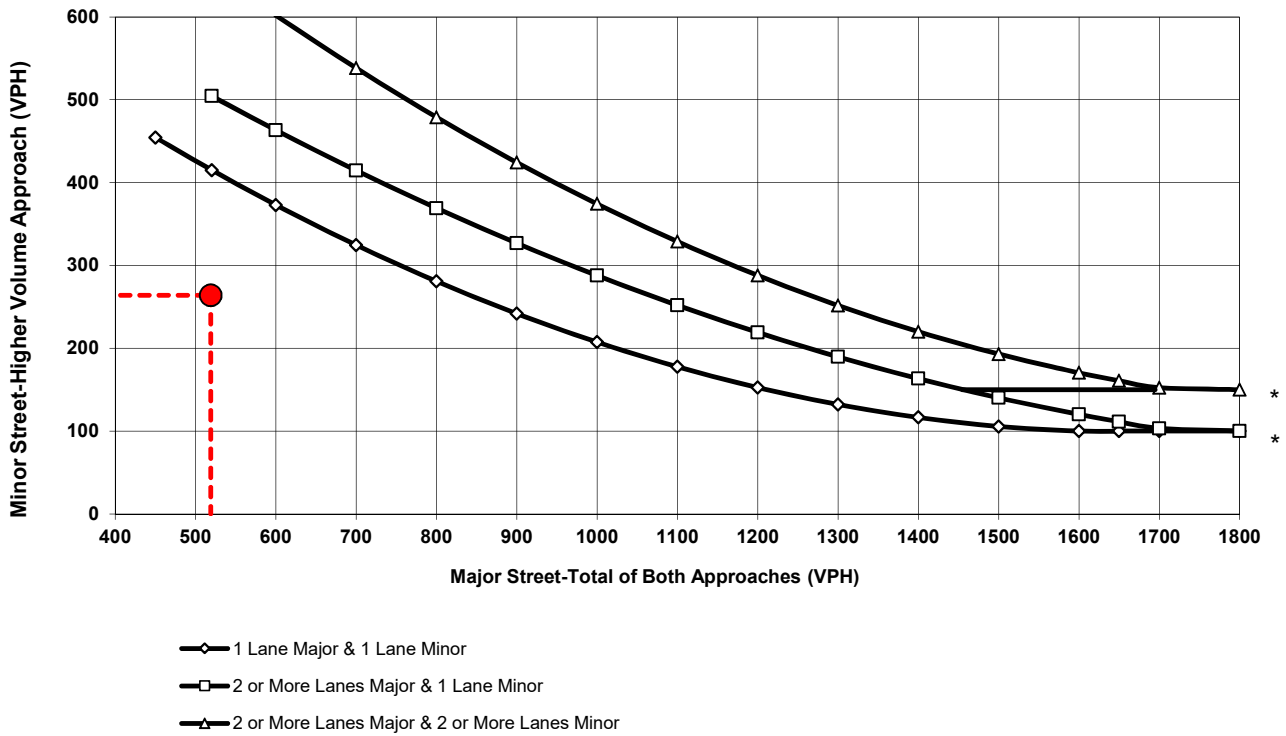
Higher Volume Approach (VPH): **264**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Opening Year With Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

Interim Year Without Project
Peak Hour Signal Warrants

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Topaz Road

Total of Both Approaches (VPH): **381**

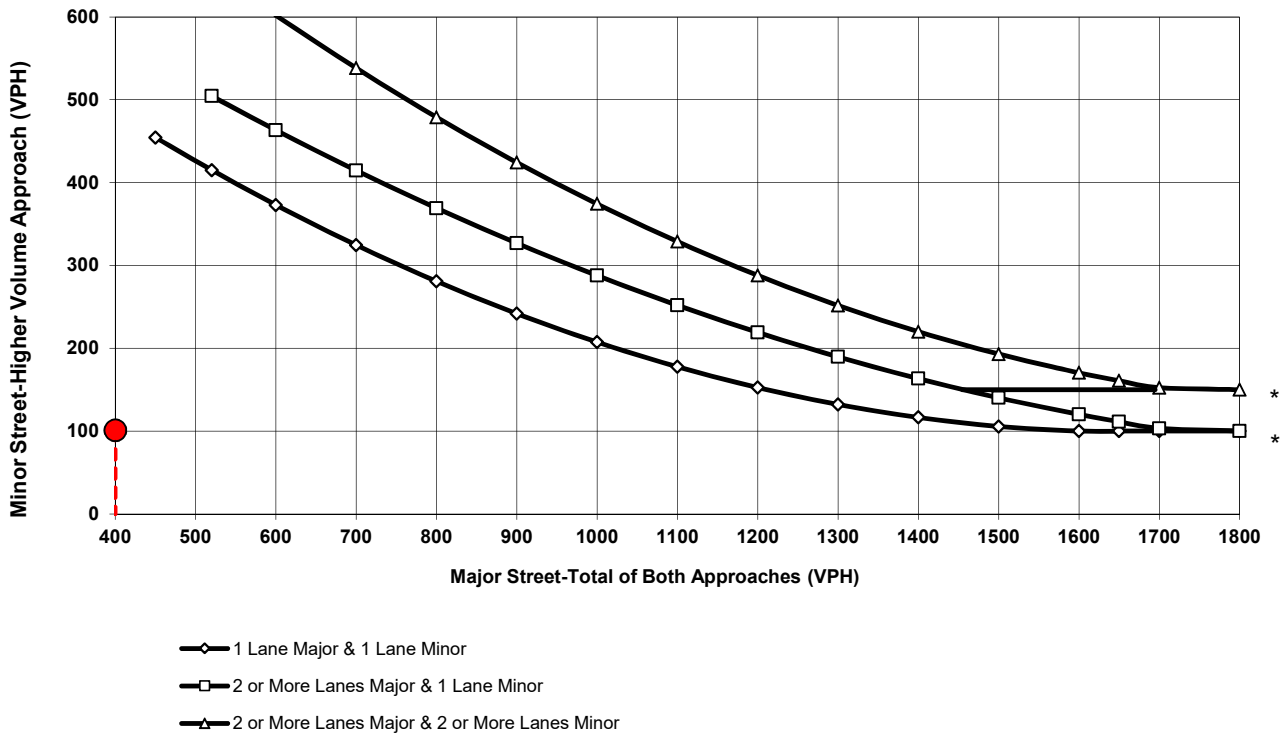
Higher Volume Approach (VPH): **101**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/Luna Road**

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road**

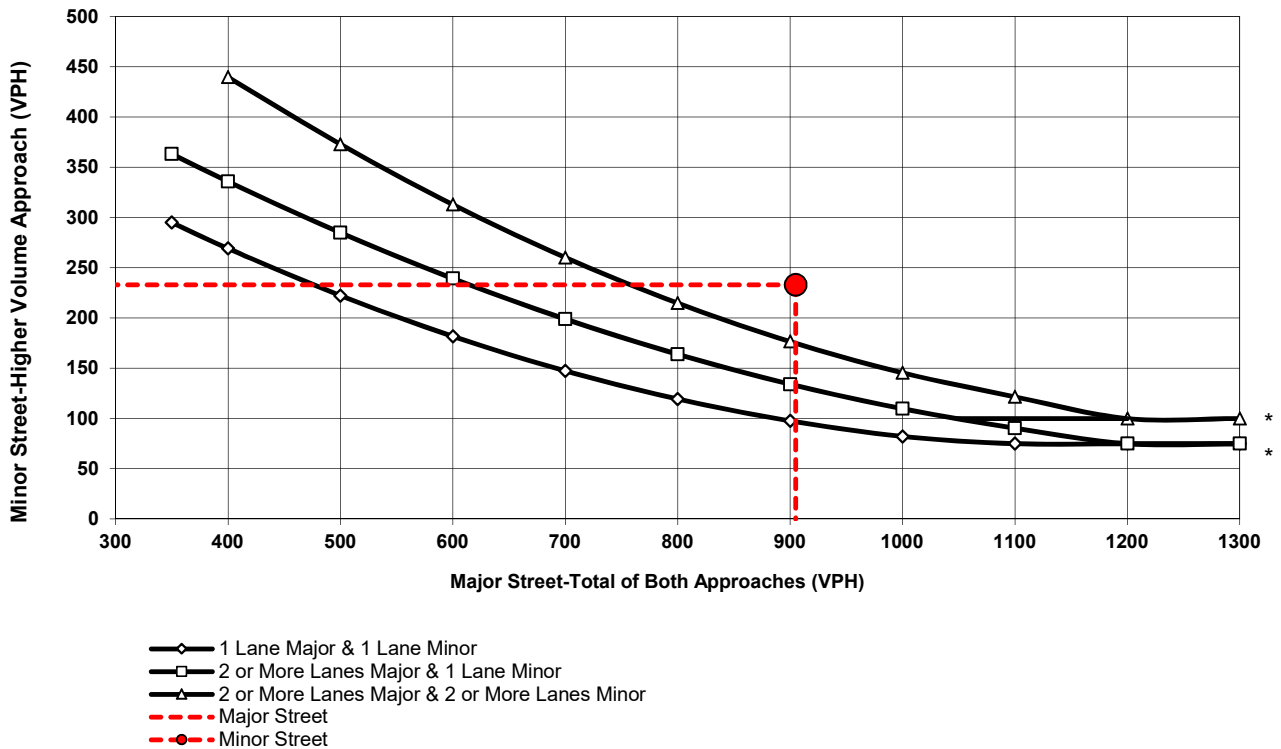
Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **905**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **233**
Number of Approach Lanes: **2**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/La Mesa Road**

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **445**

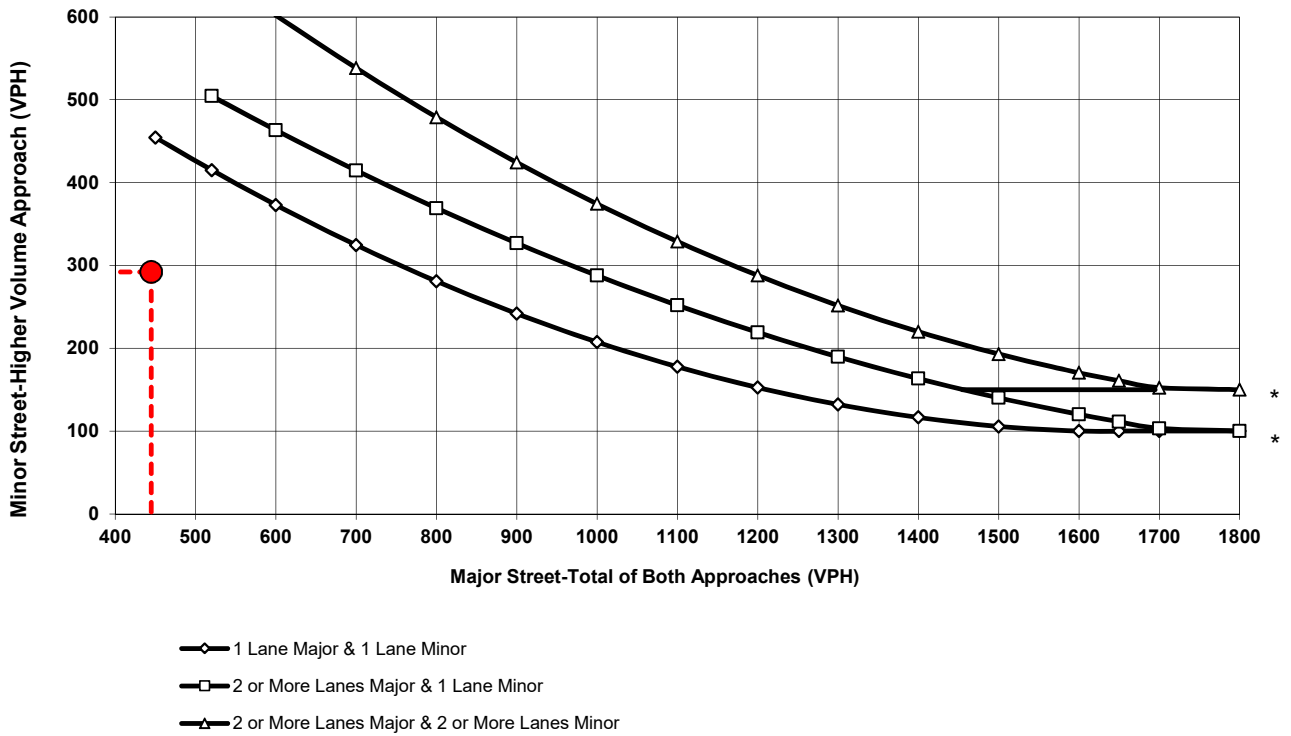
Higher Volume Approach (VPH): **292**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road (EW)**

Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **595**

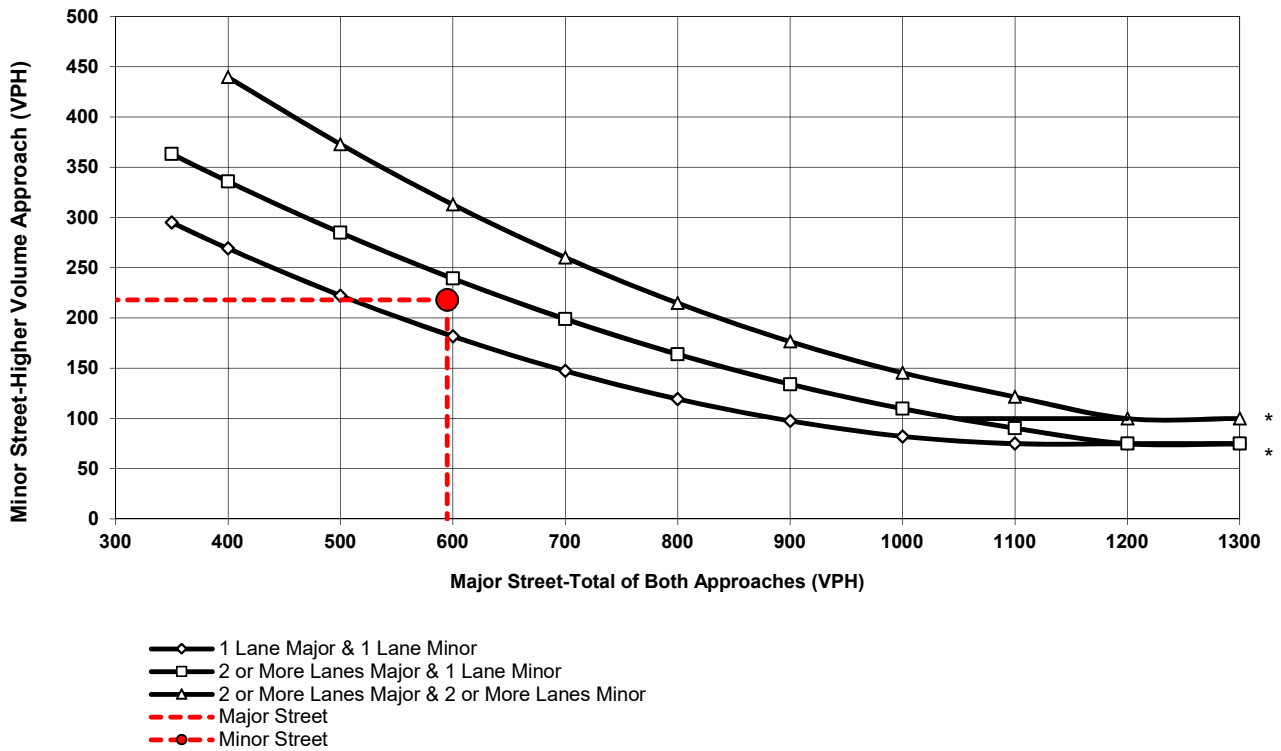
Higher Volume Approach (VPH): **218**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Dos Palmas Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **429**

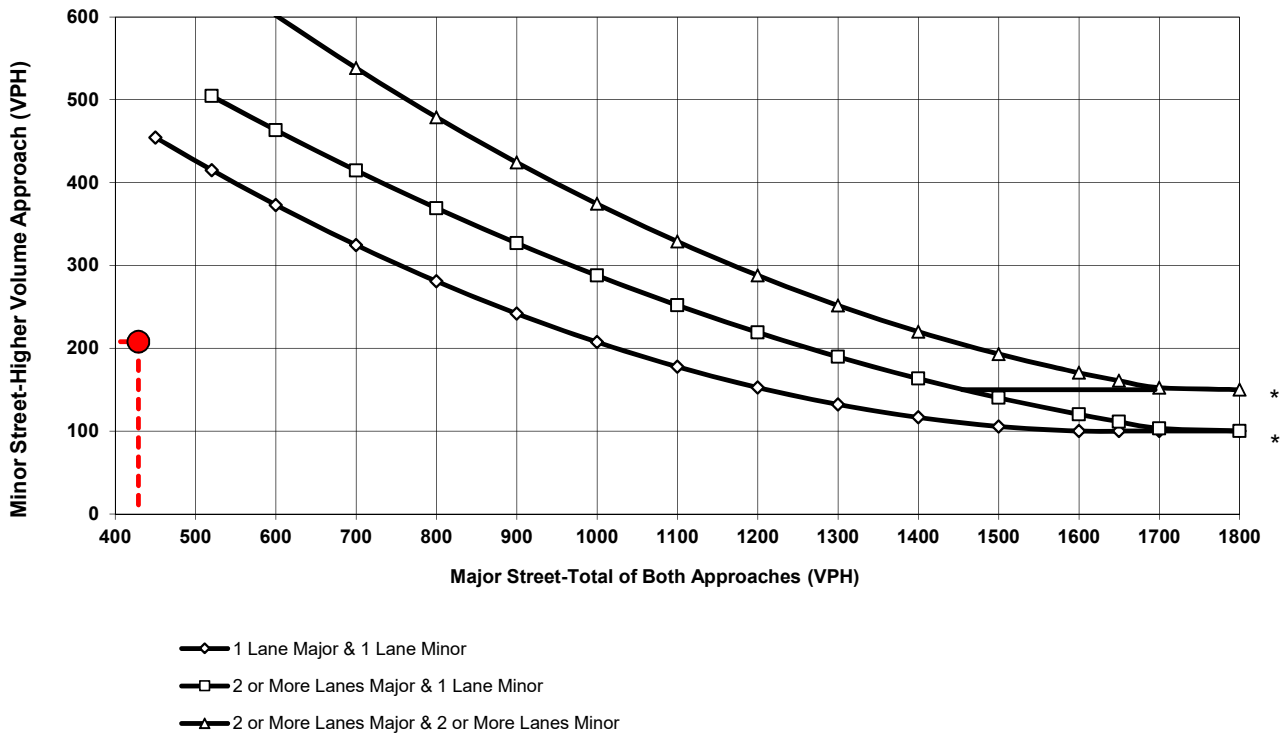
Higher Volume Approach (VPH): **208**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Cobalt Road

Total of Both Approaches (VPH): **496**

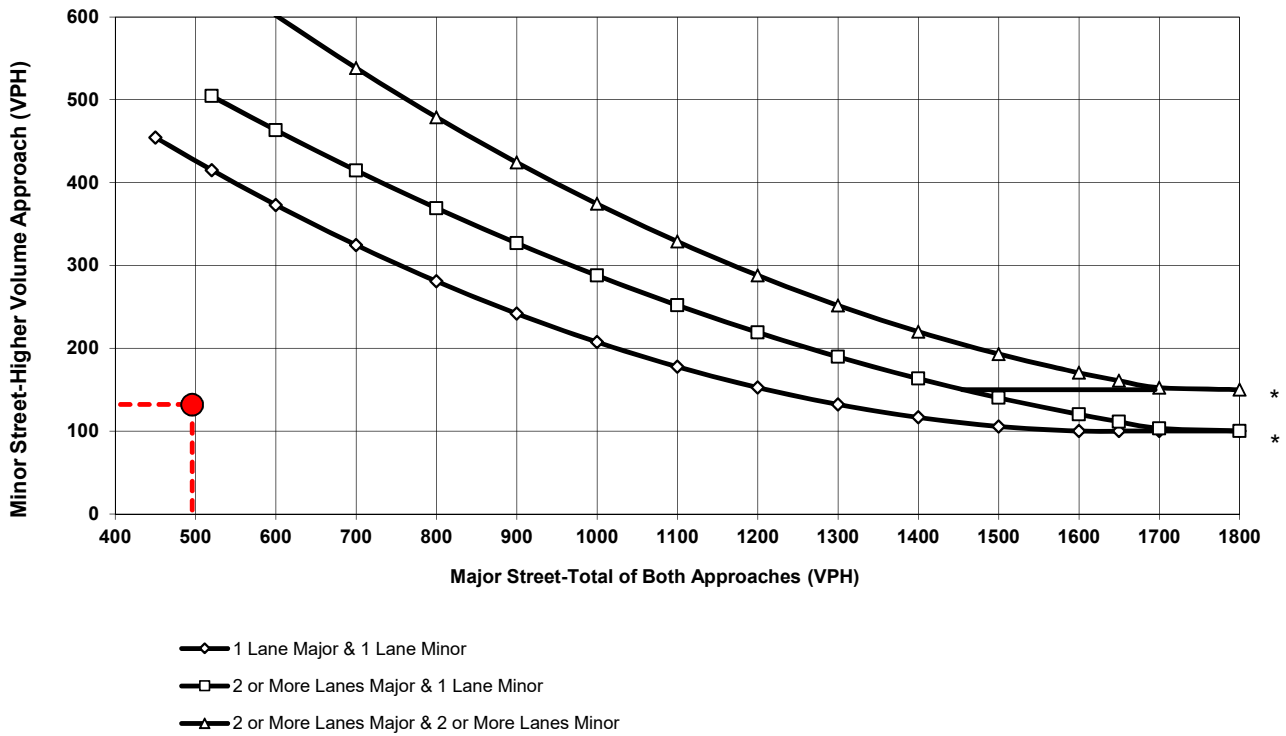
Higher Volume Approach (VPH): **132**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
PM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **789**

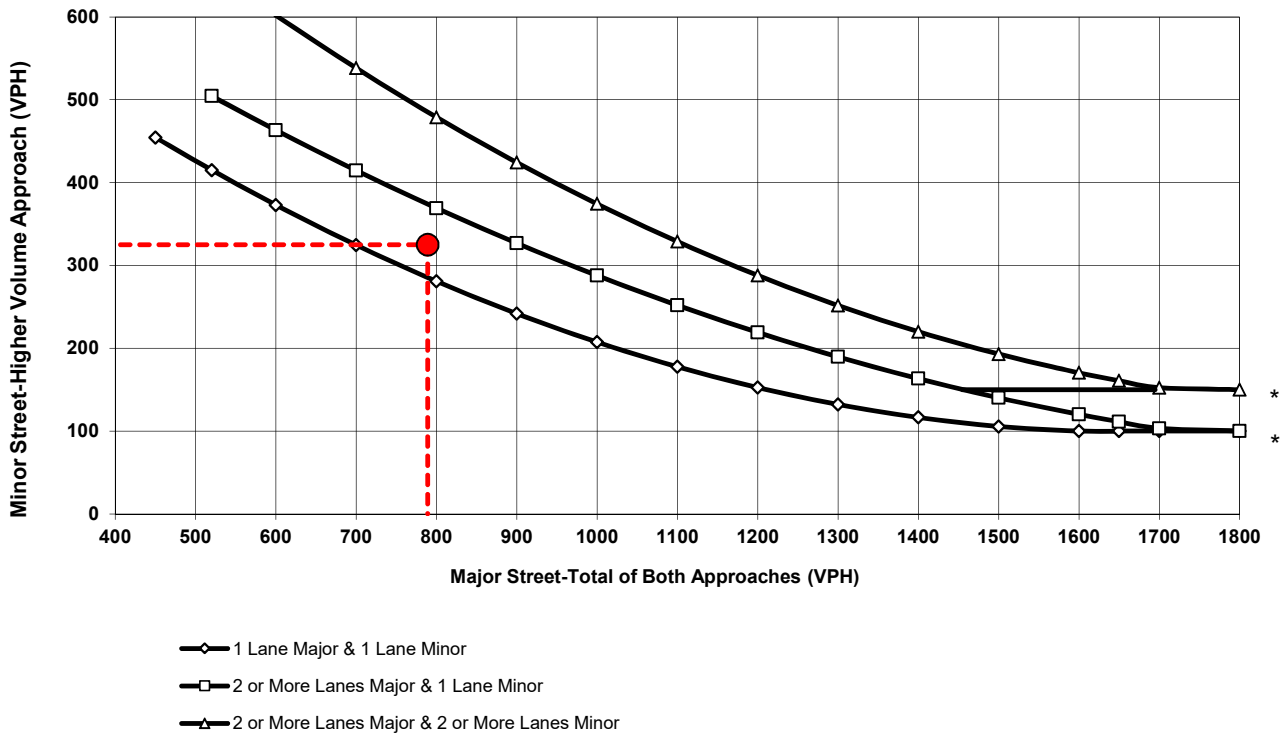
Higher Volume Approach (VPH): **325**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
AM Peak Hour Volume Warrant
Topaz Road/Luna Road**

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Mesa Linda Road**

Minor Street: **Luna Road**

Total of Both Approaches (VPH): **752**

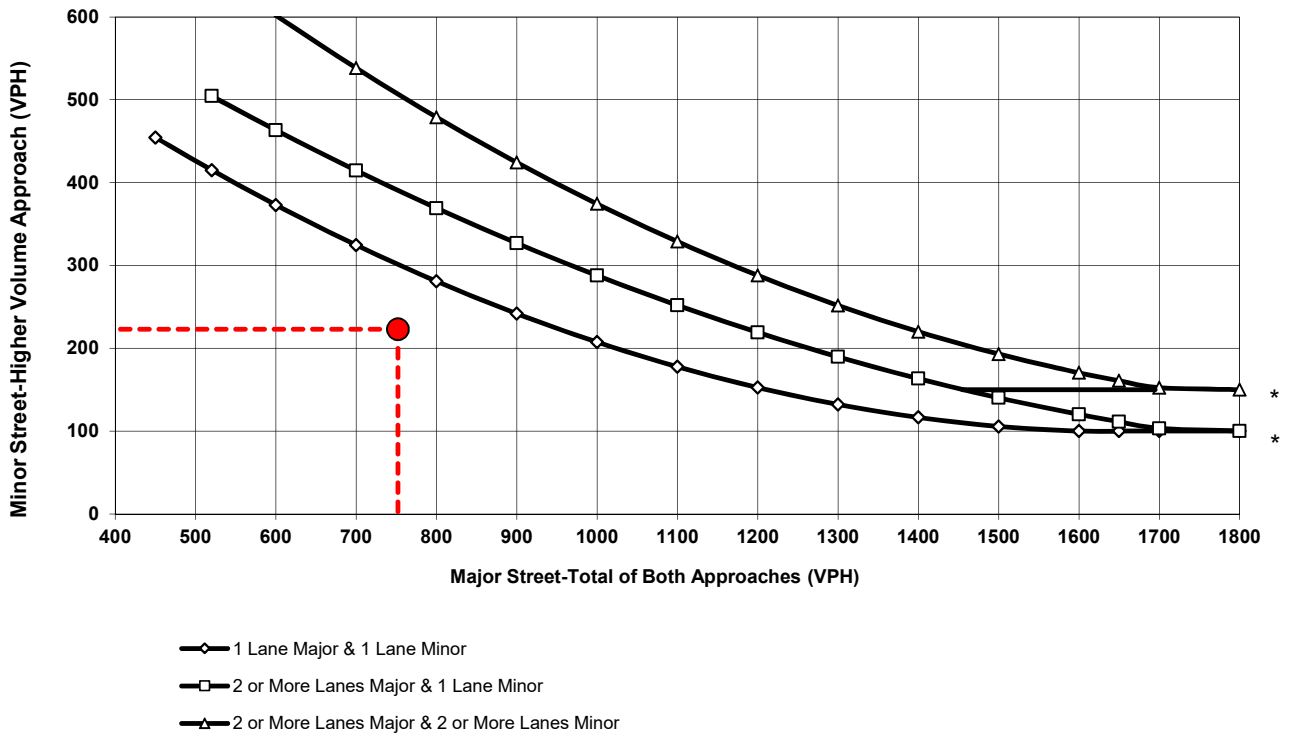
Higher Volume Approach (VPH): **223**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **AM**

Major Street: **La Mesa Road (EW)**

Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **629**

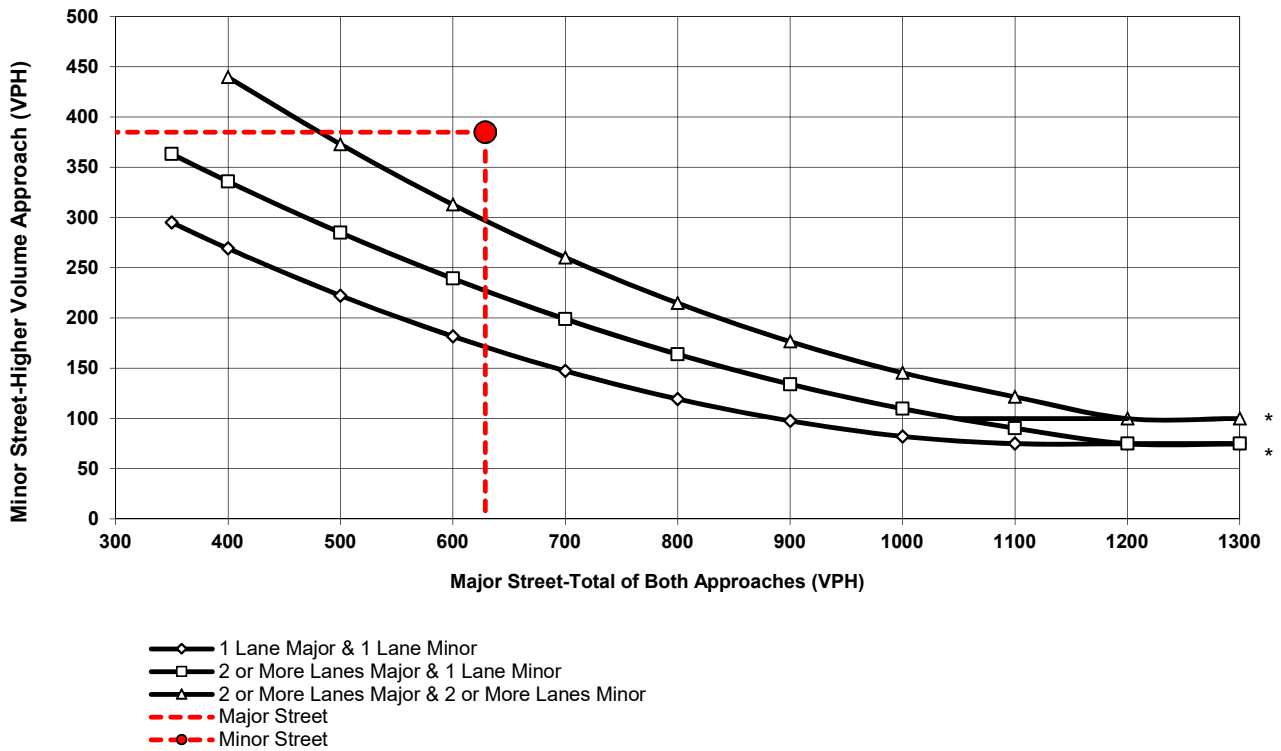
Higher Volume Approach (VPH): **385**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

INTERIM YEAR WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Dos Palmas Road**

Minor Street: **Mesa Linda Road**

Total of Both Approaches (VPH): **536**

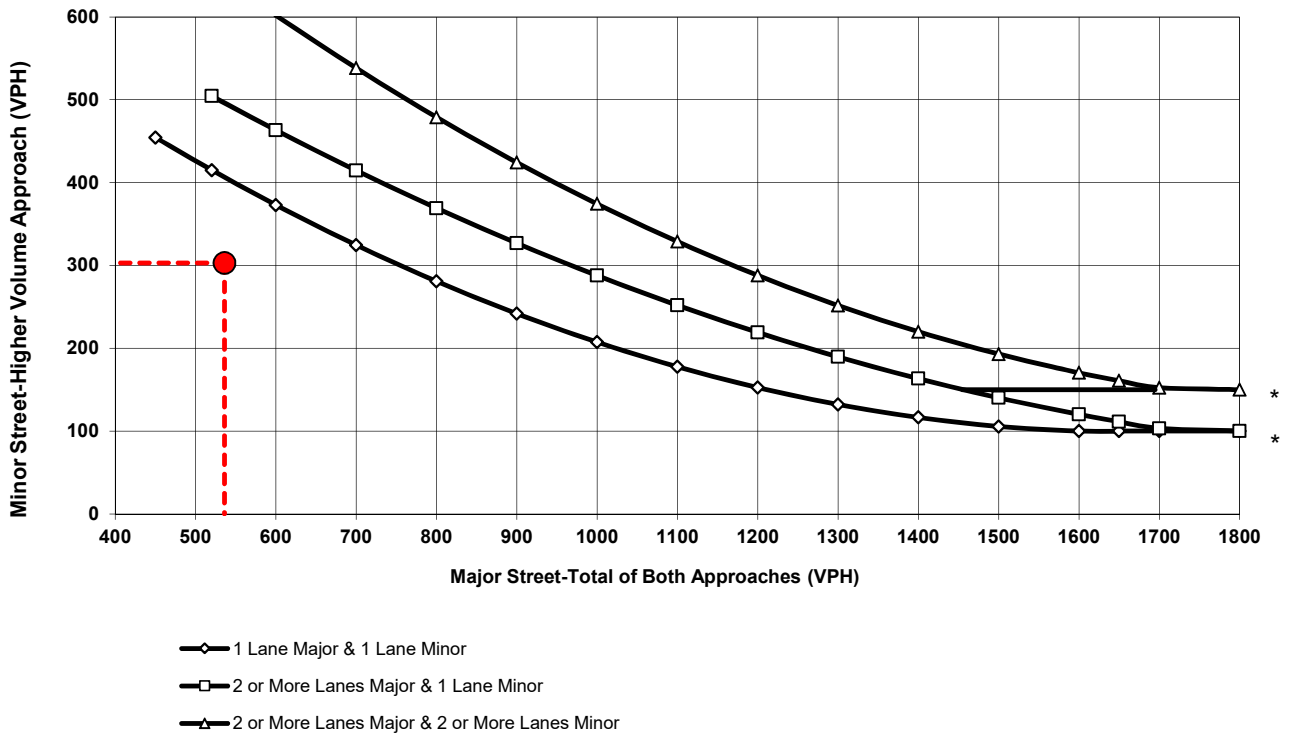
Higher Volume Approach (VPH): **303**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year Without Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

INTERIM YEAR WITH PROJECT CONDITIONS

INTERIM YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Topaz Road

Total of Both Approaches (VPH): **460**

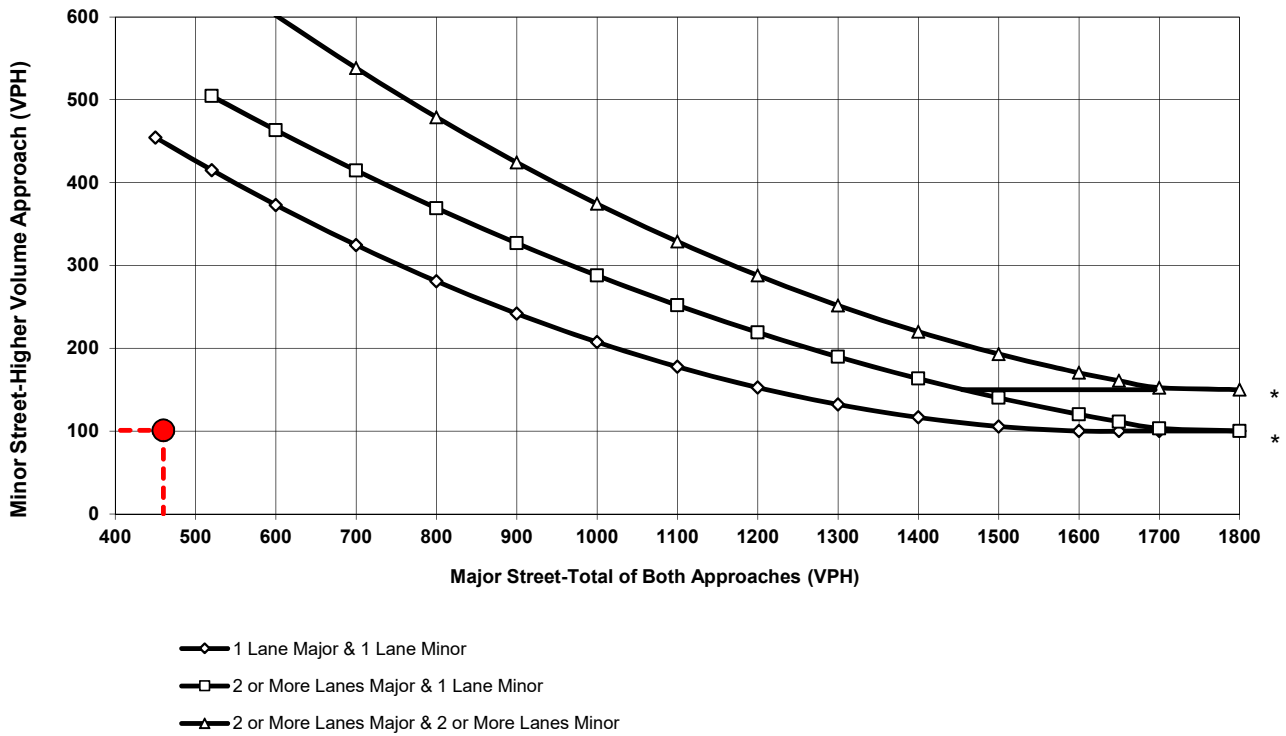
Higher Volume Approach (VPH): **101**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year With Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/Luna Road**

INTERIM YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **553**

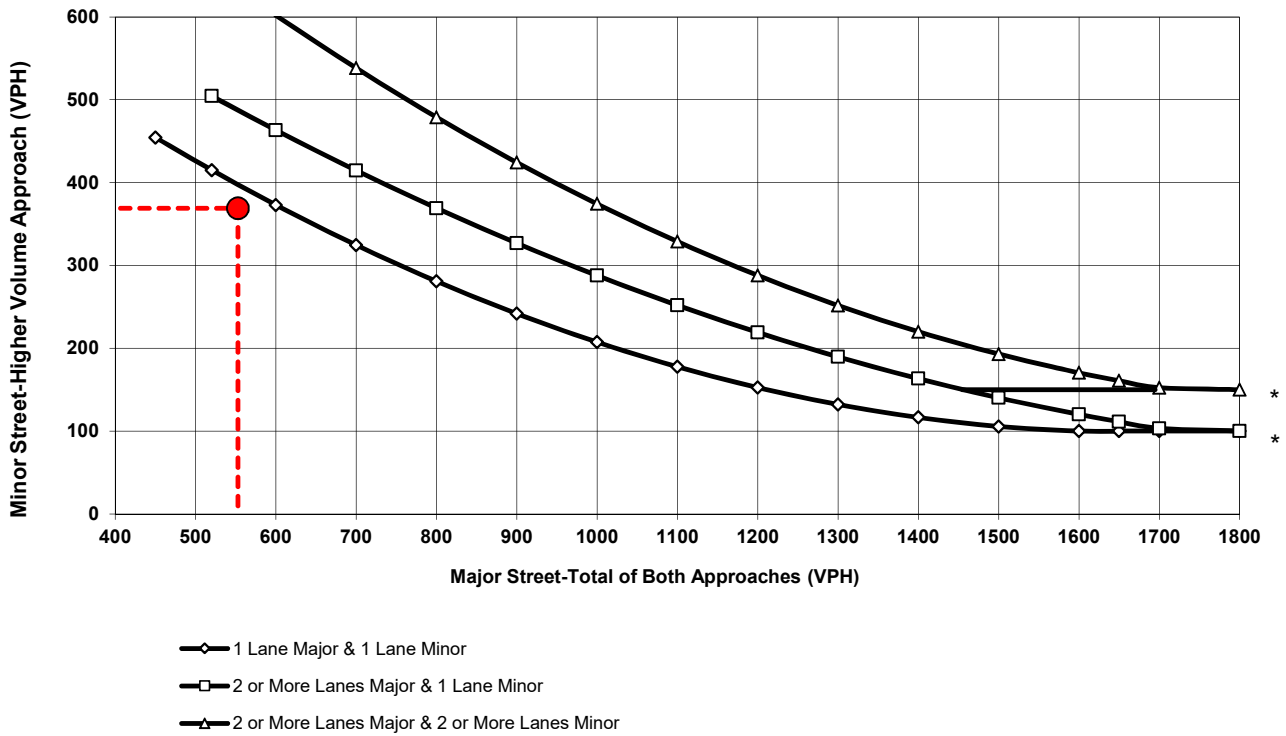
Higher Volume Approach (VPH): **369**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year With Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

INTERIM YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road (EW)**

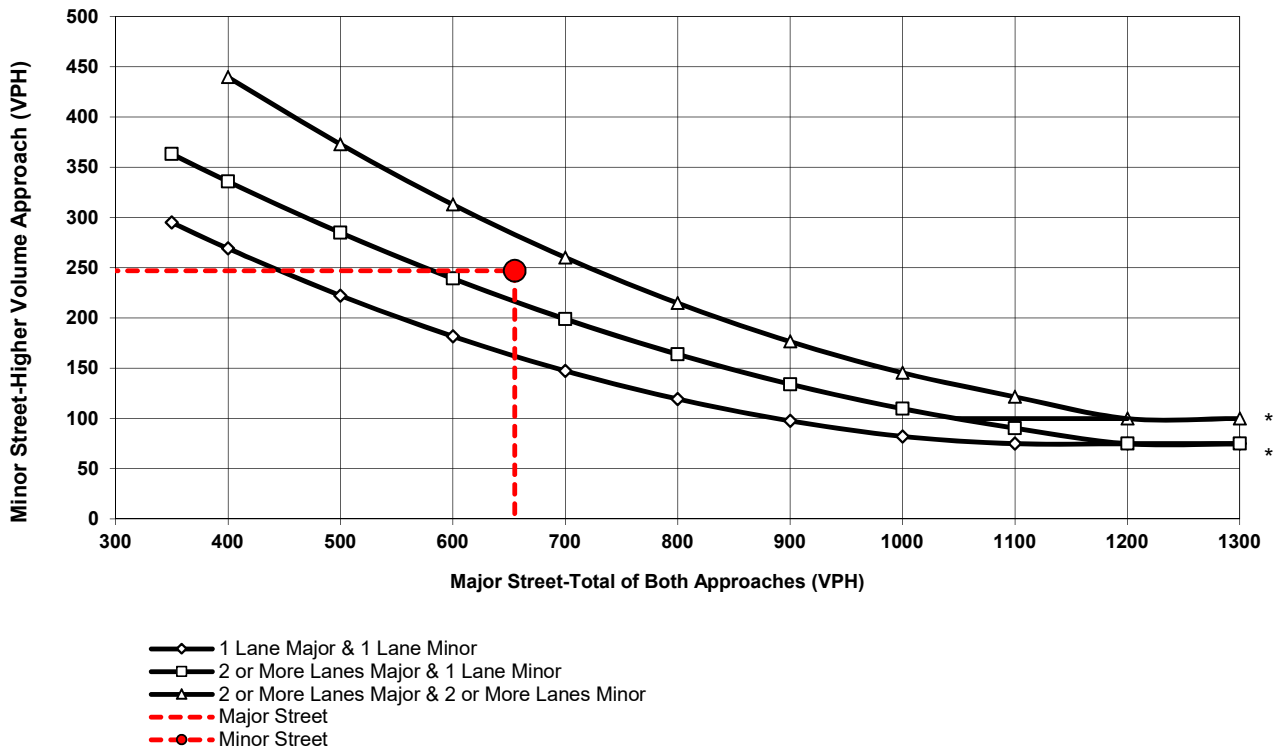
Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **655**
Number of Approach Lanes: **2**

Higher Volume Approach (VPH): **247**
Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year With Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

INTERIM YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Dos Palmas Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **488**

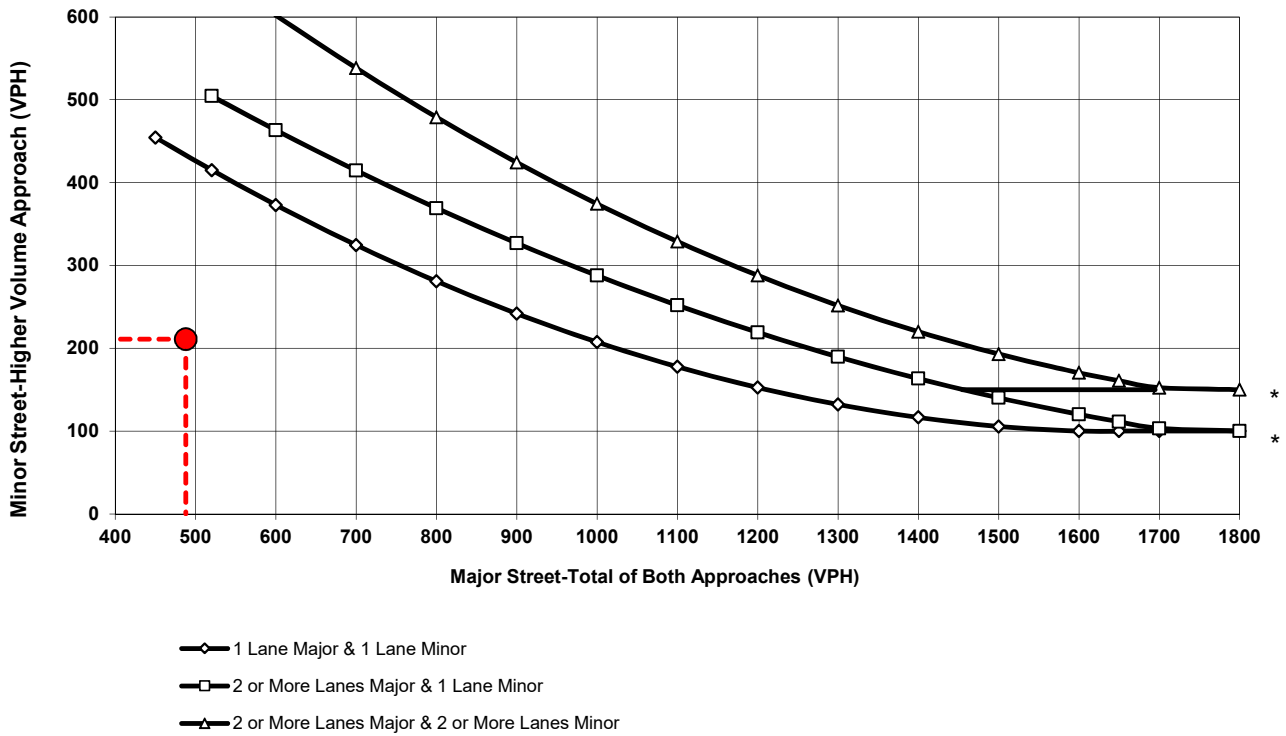
Higher Volume Approach (VPH): **211**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year With Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

INTERIM YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Cobalt Road

Total of Both Approaches (VPH): **567**

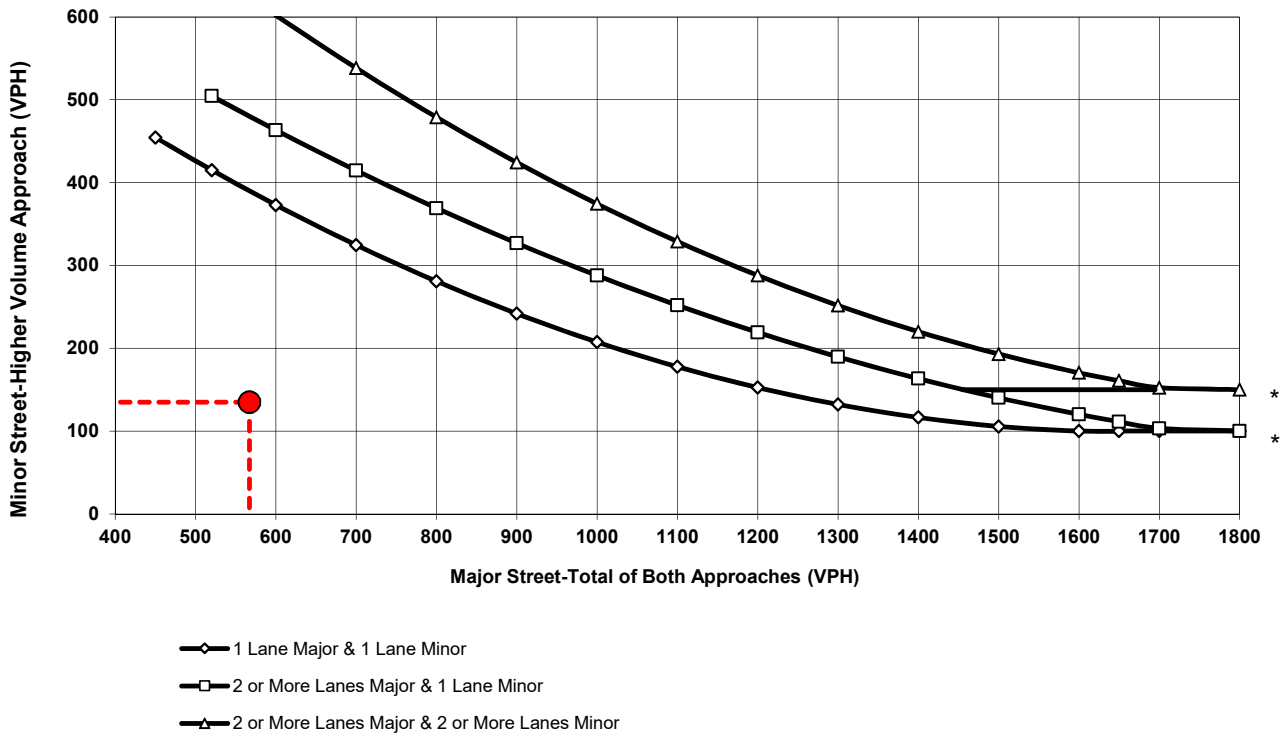
Higher Volume Approach (VPH): **135**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year With Project Conditions
PM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

INTERIM YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **798**

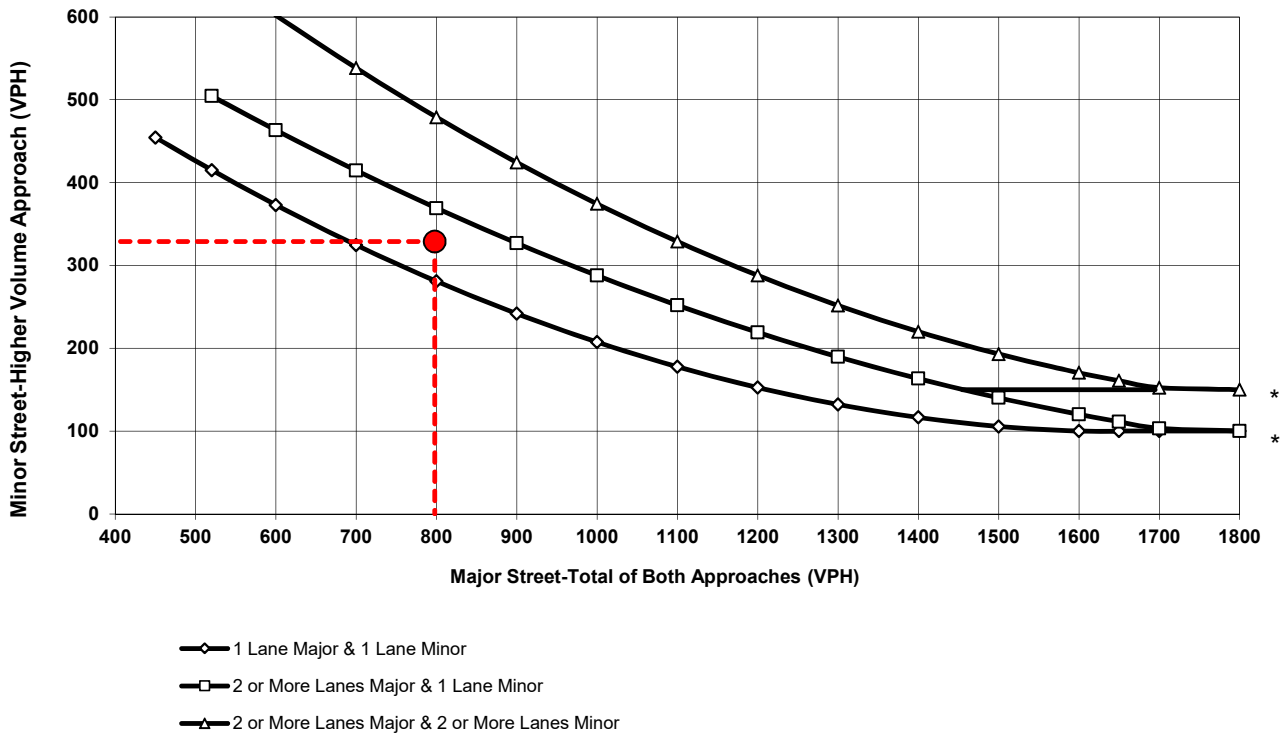
Higher Volume Approach (VPH): **329**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year With Project Conditions
AM Peak Hour Volume Warrant
Topaz Road/Luna Road**

INTERIM YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Mesa Linda Road**

Minor Street: **Luna Road**

Total of Both Approaches (VPH): **791**

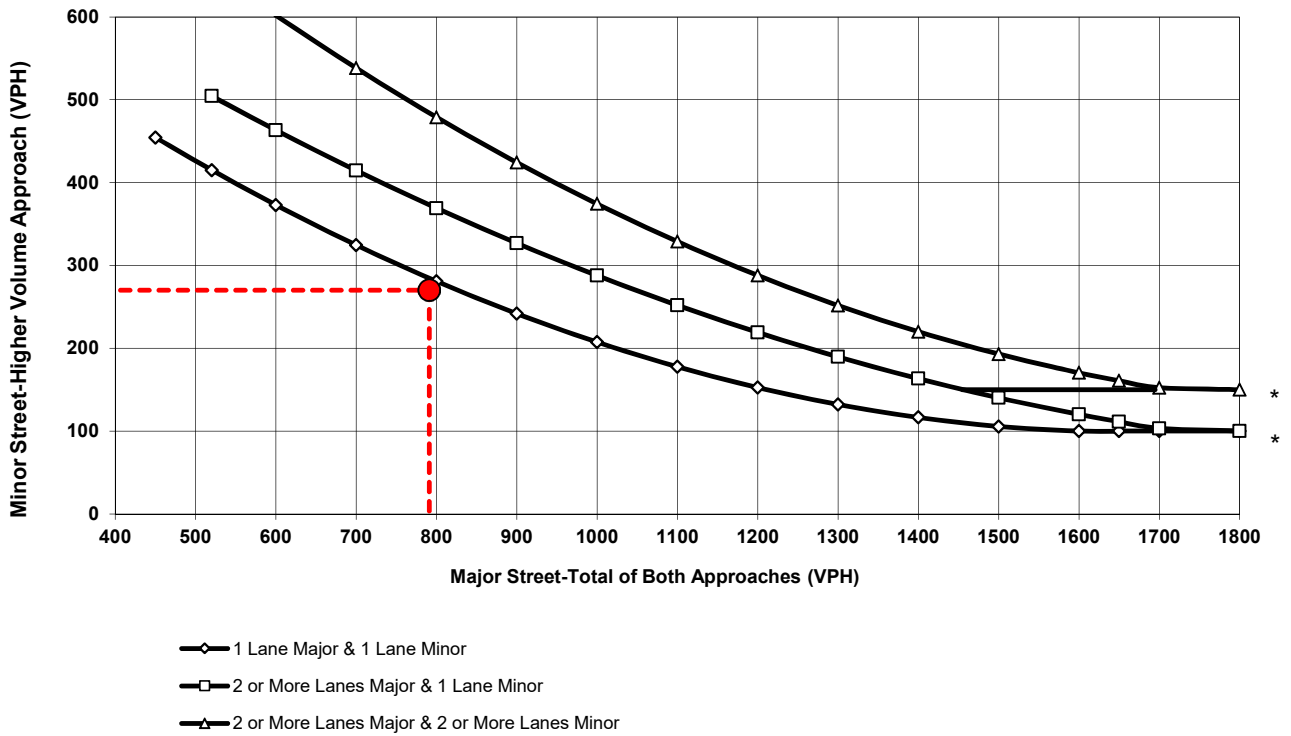
Higher Volume Approach (VPH): **270**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year With Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

INTERIM YEAR WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Dos Palmas Road**

Minor Street: **Mesa Linda Road**

Total of Both Approaches (VPH): **579**

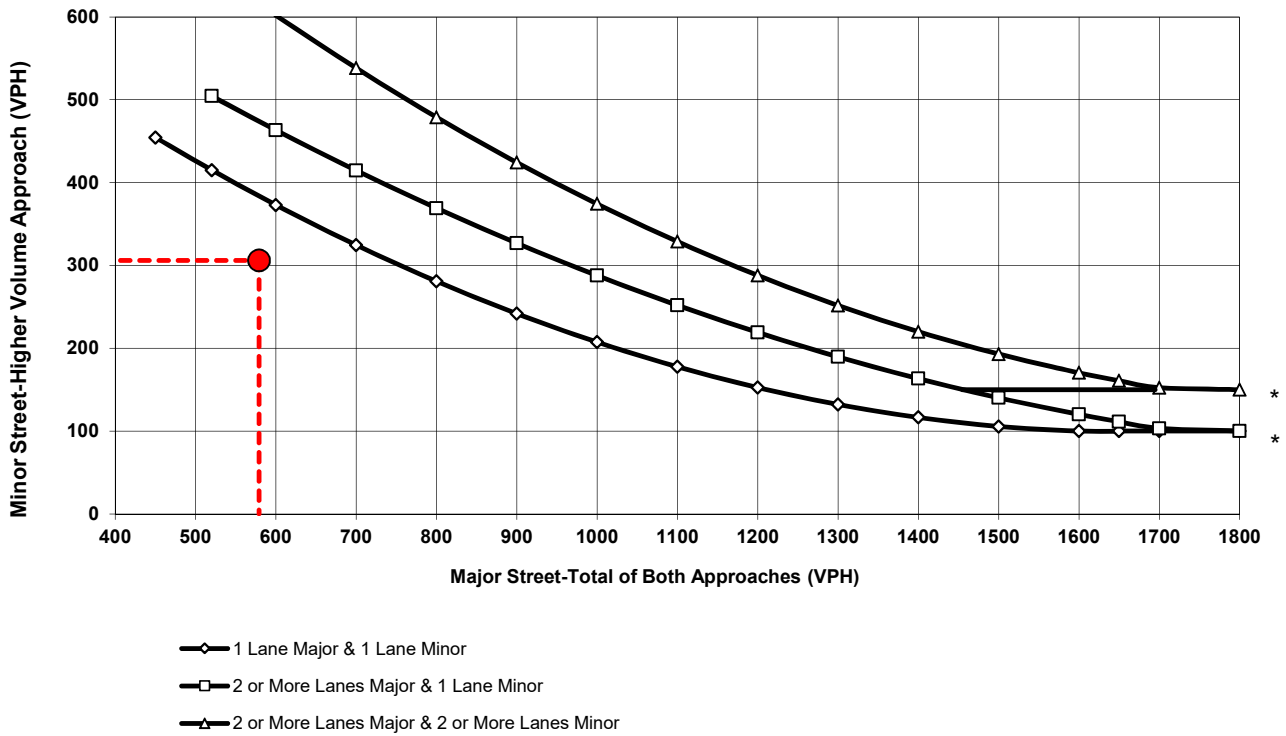
Higher Volume Approach (VPH): **306**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**Interim Year With Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

General Plan Without Project
Peak Hour Signal Warrants

GENERAL PLAN WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Topaz Road

Total of Both Approaches (VPH): **400**

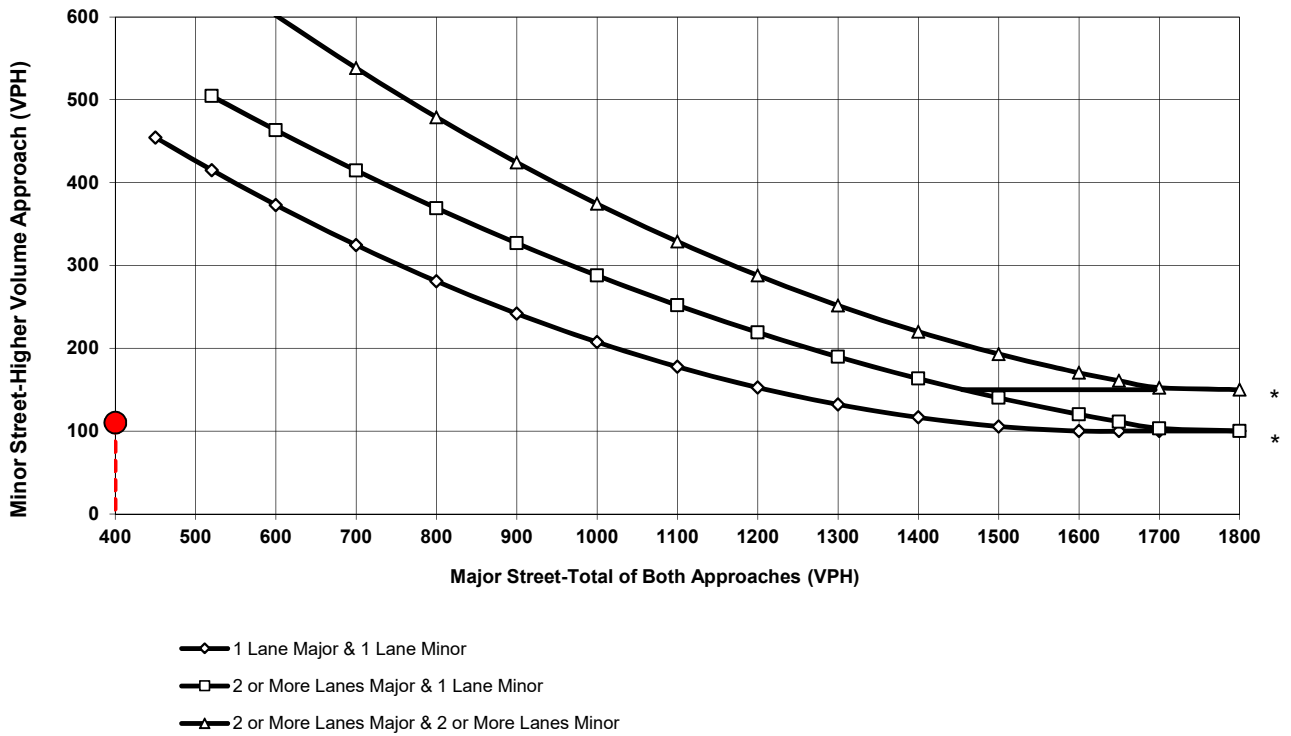
Higher Volume Approach (VPH): **110**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan Without Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/Luna Road**

GENERAL PLAN WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Mesa Linda Road

Minor Street: Luna Road

Total of Both Approaches (VPH): **630**

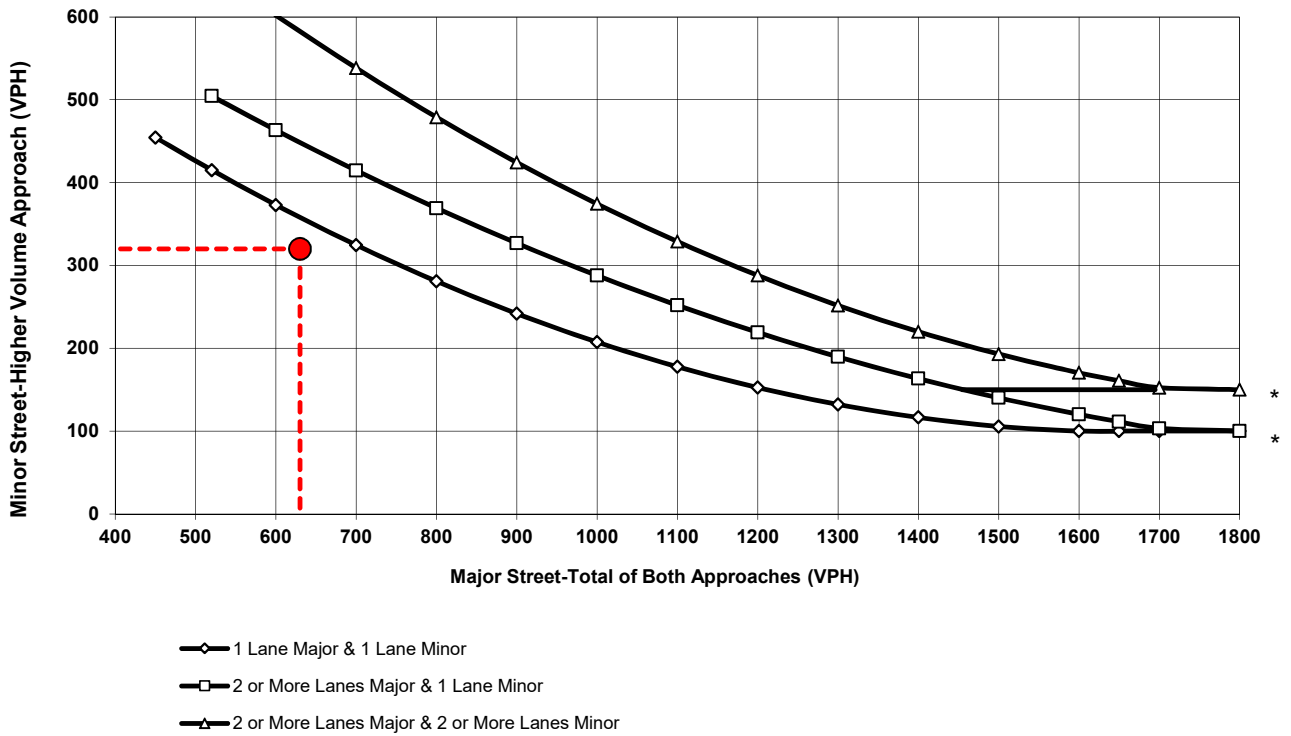
Higher Volume Approach (VPH): **320**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan Without Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

GENERAL PLAN WITHOUT PROJECT PEAK HOUR VOLUME WARRANT RURAL CONDITIONS

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)

Peak Hour: **PM**

Major Street: **La Mesa Road (EW)**

Minor Street: **Mesa Linda Avenue (NS)**

Total of Both Approaches (VPH): **740**

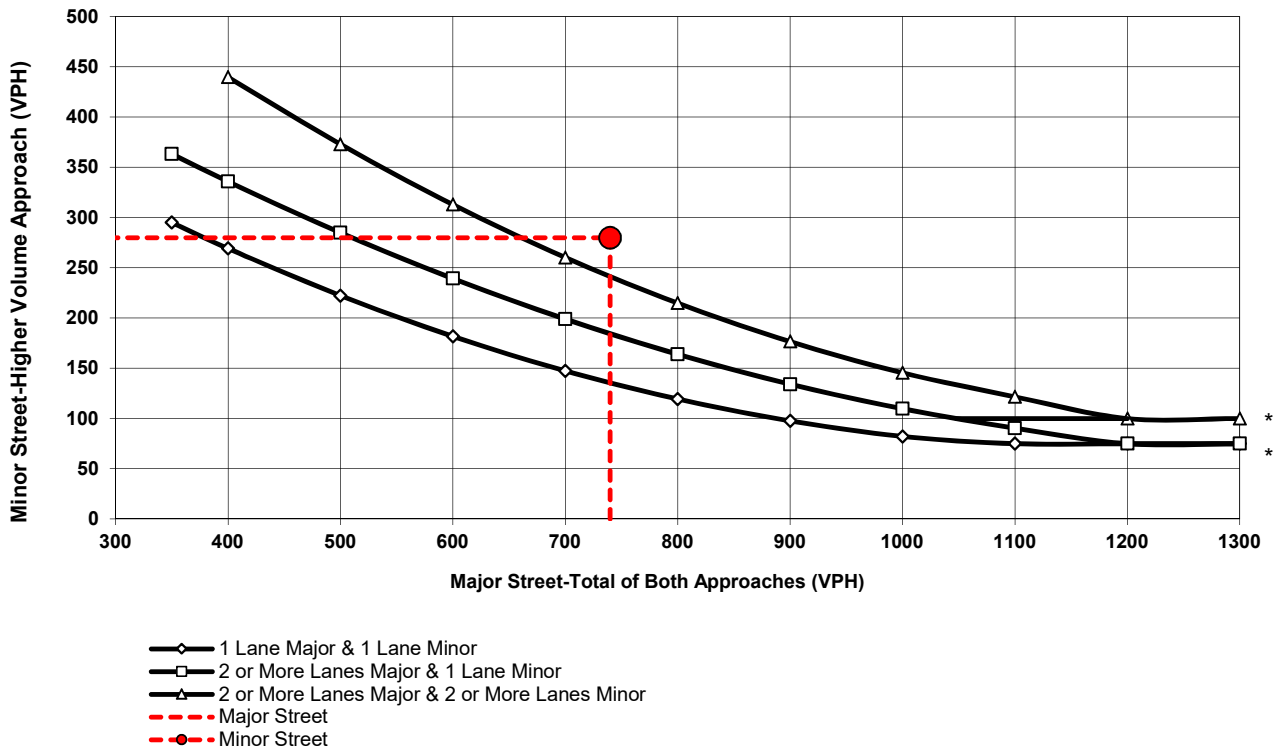
Higher Volume Approach (VPH): **280**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT SATISFIED

Figure 4C-4. Peak Hour Warrant (Rural)



* Note:

100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 75 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan Without Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Avenue/La Mesa Road**

GENERAL PLAN WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Dos Palmas Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **560**

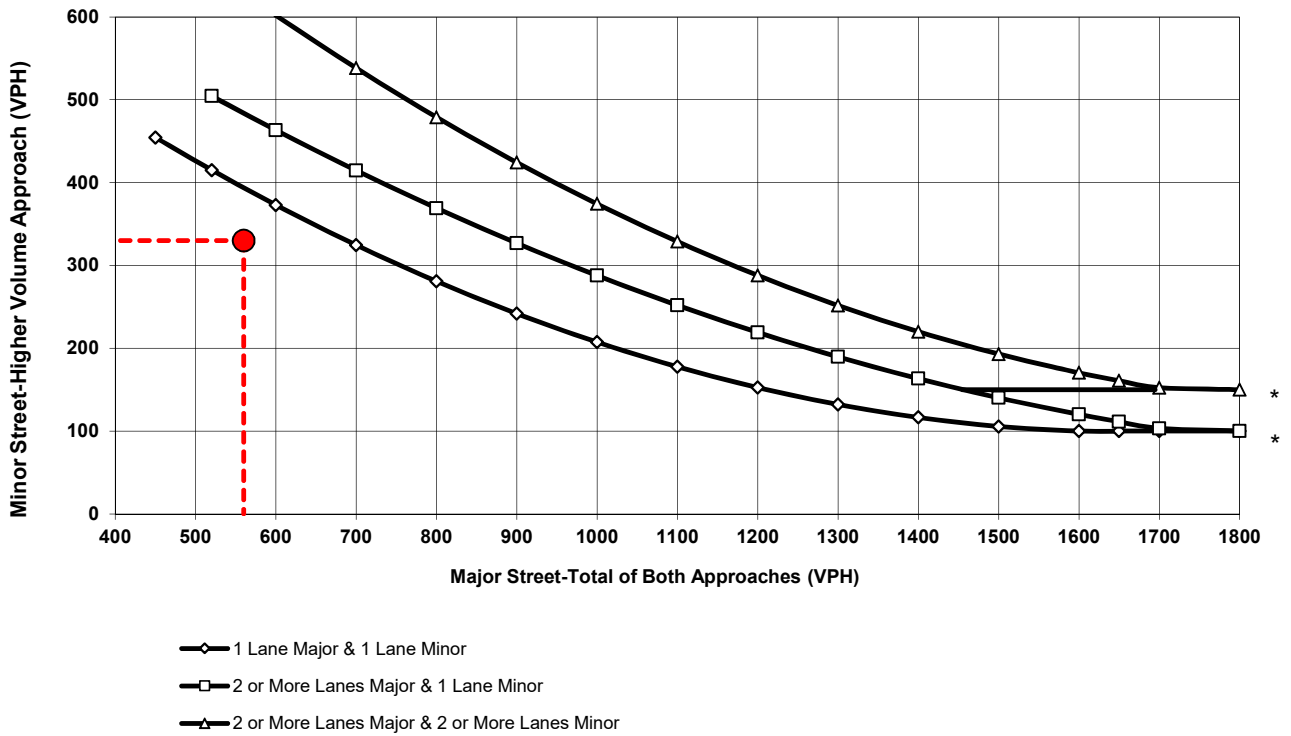
Higher Volume Approach (VPH): **330**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan Without Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

GENERAL PLAN WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Cobalt Road

Total of Both Approaches (VPH): **520**

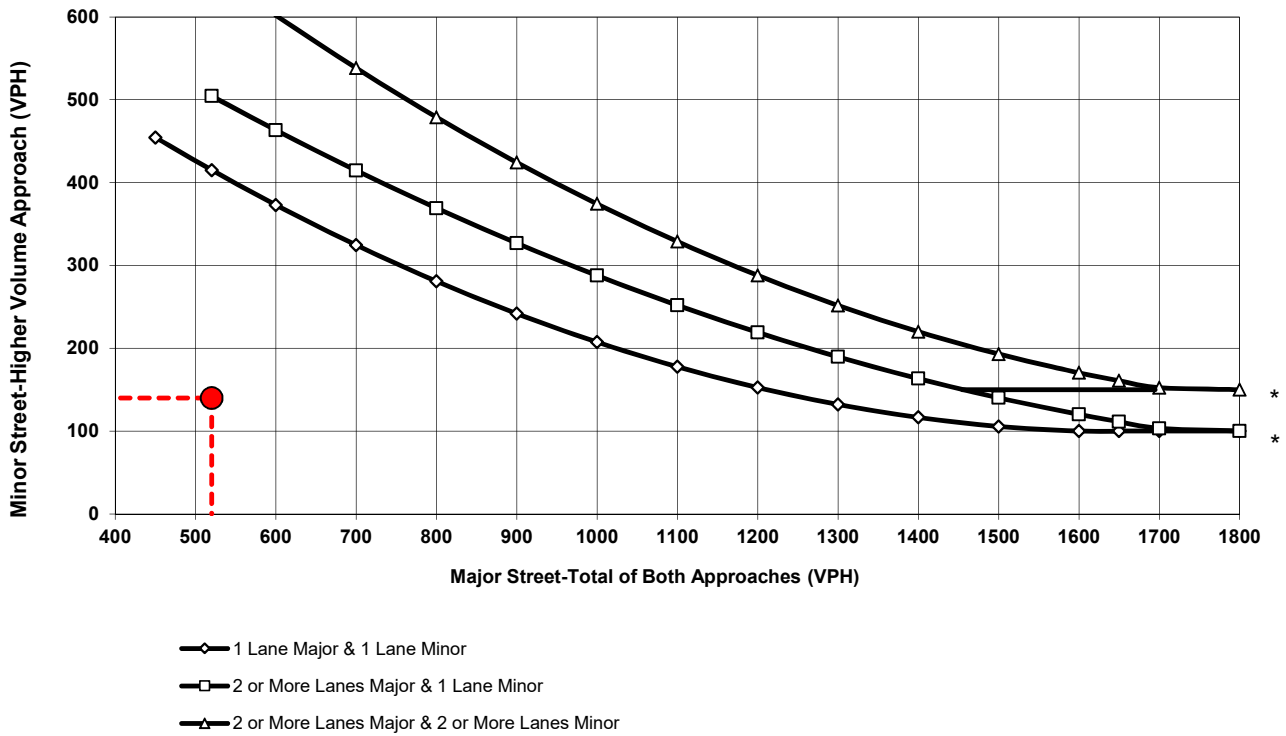
Higher Volume Approach (VPH): **140**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan Without Project Conditions
PM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

GENERAL PLAN WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **770**

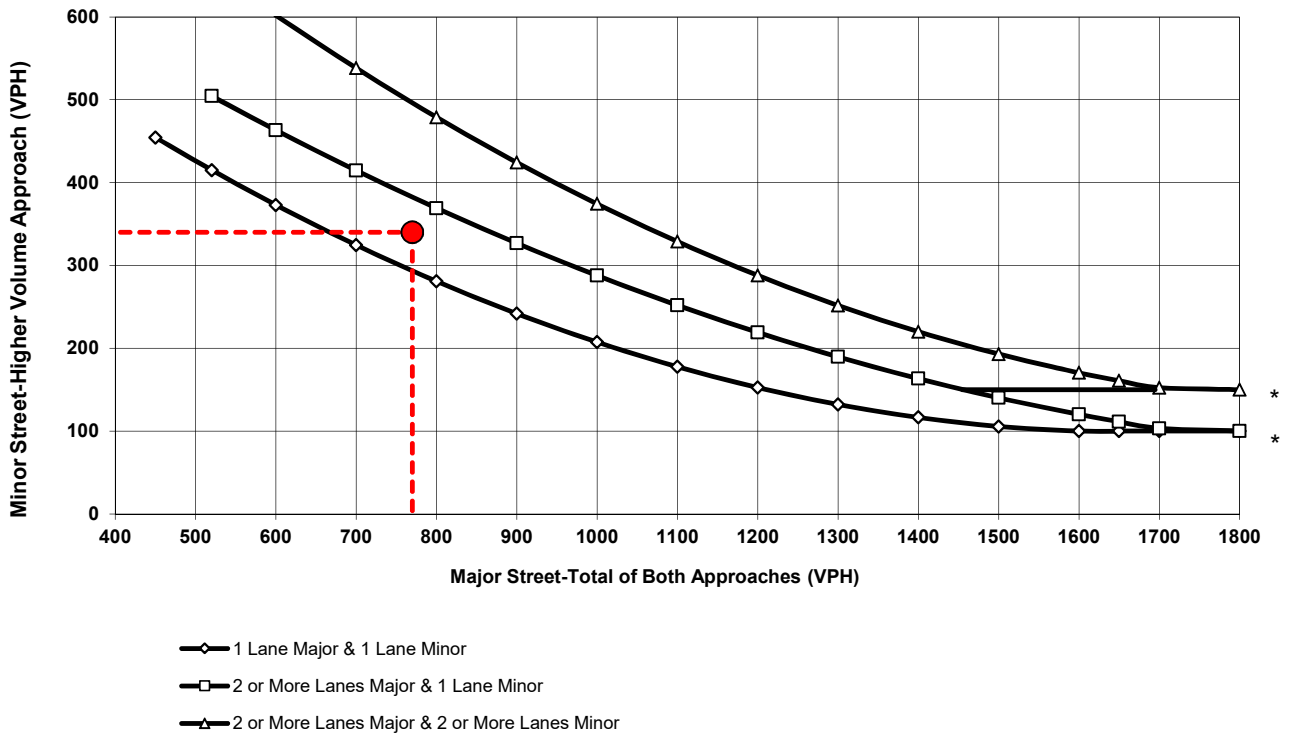
Higher Volume Approach (VPH): **340**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan Without Project Conditions
AM Peak Hour Volume Warrant
Topaz Road/Luna Road**

GENERAL PLAN WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Mesa Linda Road**

Minor Street: **Luna Road**

Total of Both Approaches (VPH): **850**

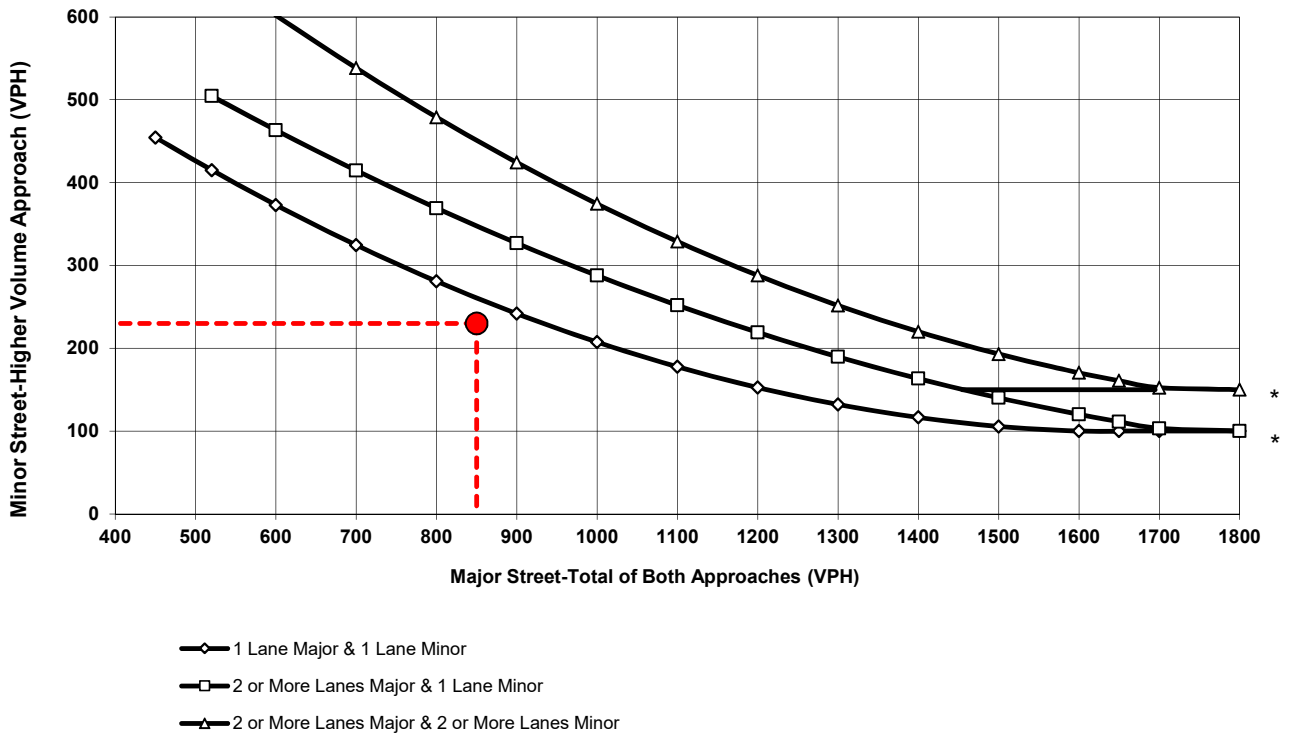
Higher Volume Approach (VPH): **230**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan Without Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

GENERAL PLAN WITHOUT PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Dos Palmas Road**

Minor Street: **Mesa Linda Road**

Total of Both Approaches (VPH): **610**

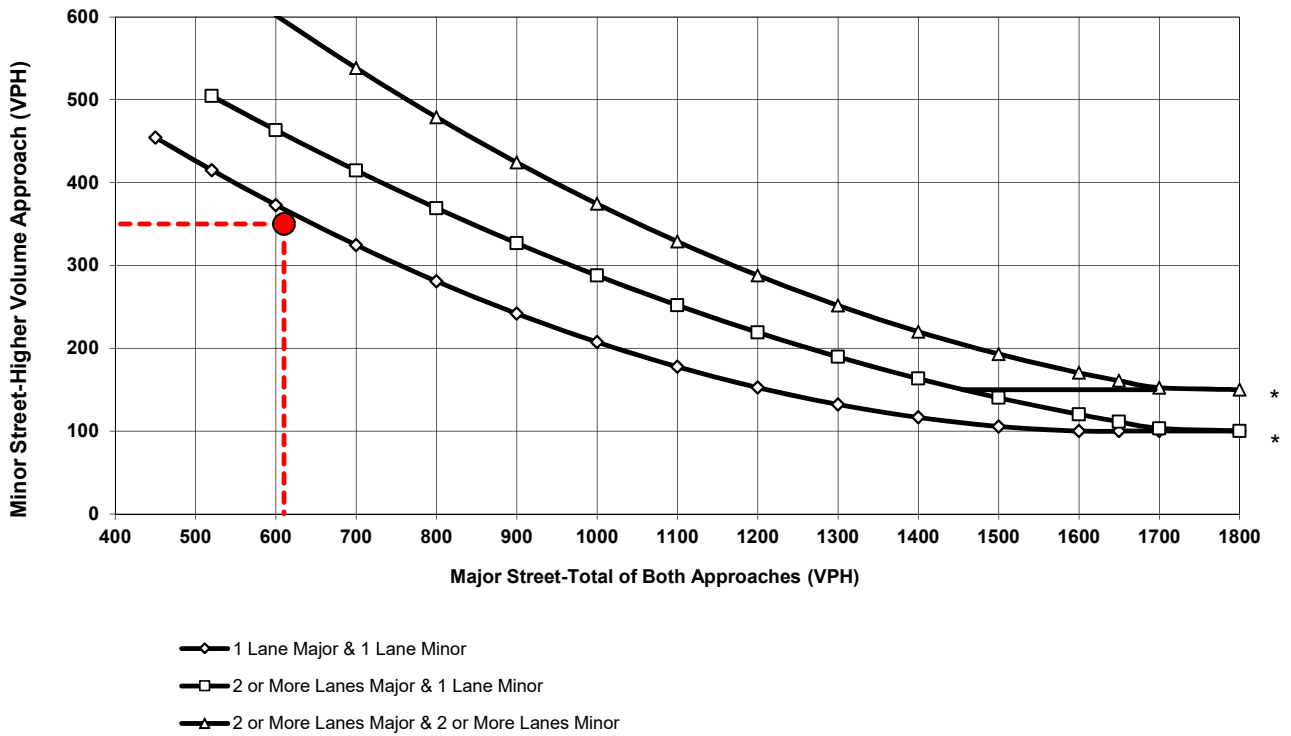
Higher Volume Approach (VPH): **350**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan Without Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

General Plan With Project Phase 1&2
Peak Hour Signal Warrants

GENERAL PLAN WITH PROJECT CONDITIONS

GENERAL PLAN WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Topaz Road

Total of Both Approaches (VPH): **479**

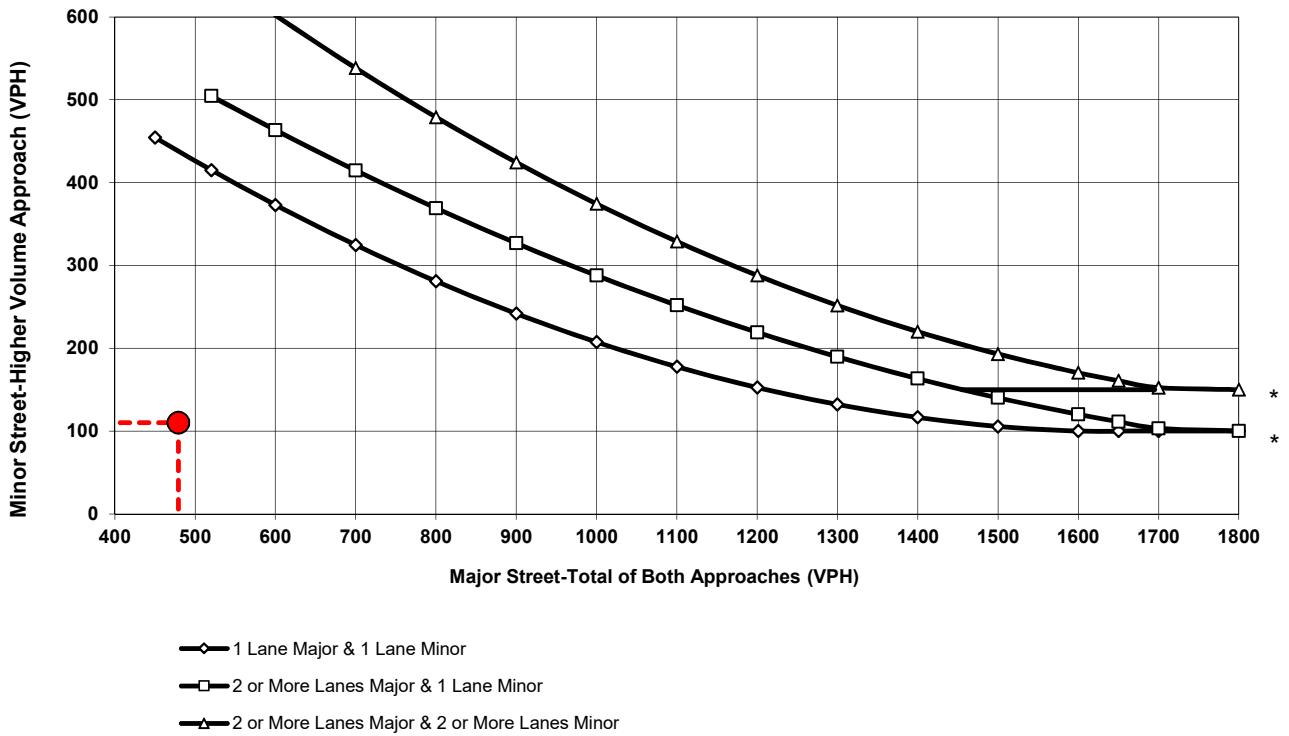
Higher Volume Approach (VPH): **110**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan With Project Conditions
PM Peak Hour Volume Warrant
Topaz Road/Luna Road**

GENERAL PLAN WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Mesa Linda Road

Minor Street: Luna Road

Total of Both Approaches (VPH): **678**

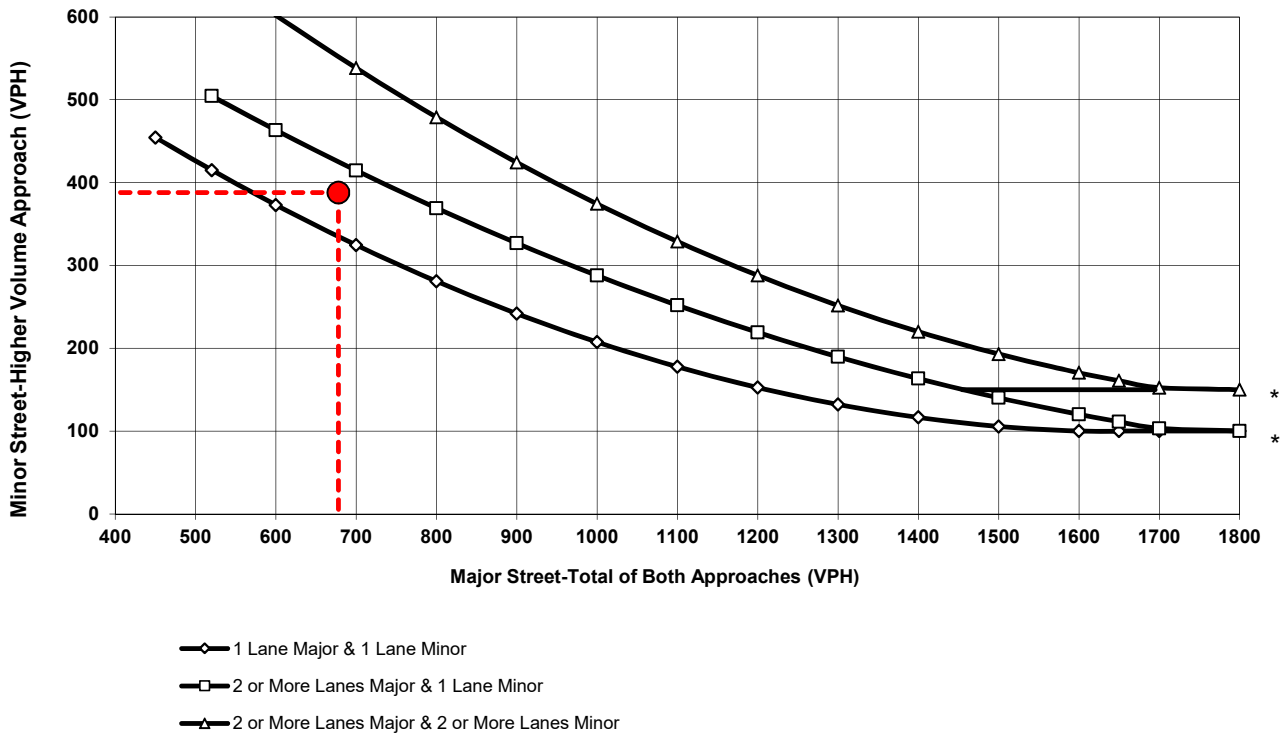
Higher Volume Approach (VPH): **388**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan With Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

GENERAL PLAN WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Dos Palmas Road

Minor Street: Mesa Linda Road

Total of Both Approaches (VPH): **619**

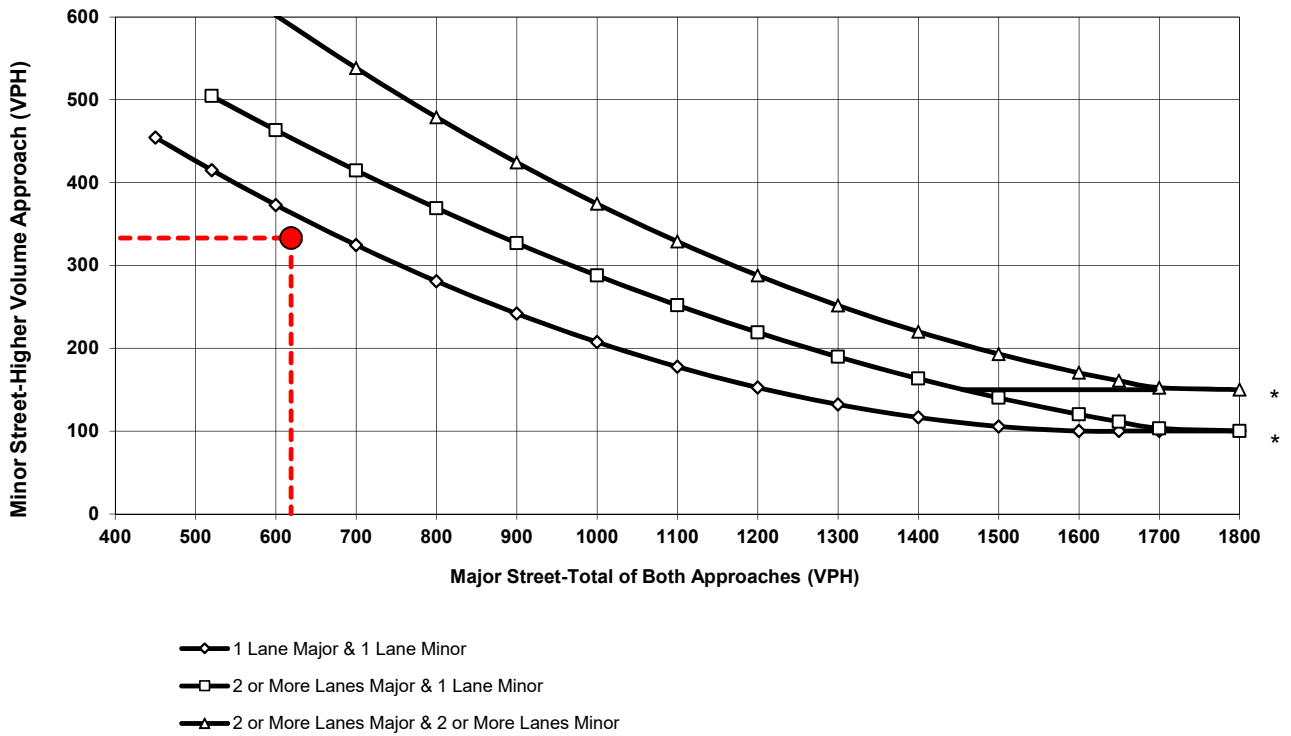
Higher Volume Approach (VPH): **333**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan With Project Conditions
PM Peak Hour Volume Warrant
Mesa Linda Road/Dos Palmas Road**

GENERAL PLAN WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: PM

Major Street: Luna Road

Minor Street: Cobalt Road

Total of Both Approaches (VPH): **591**

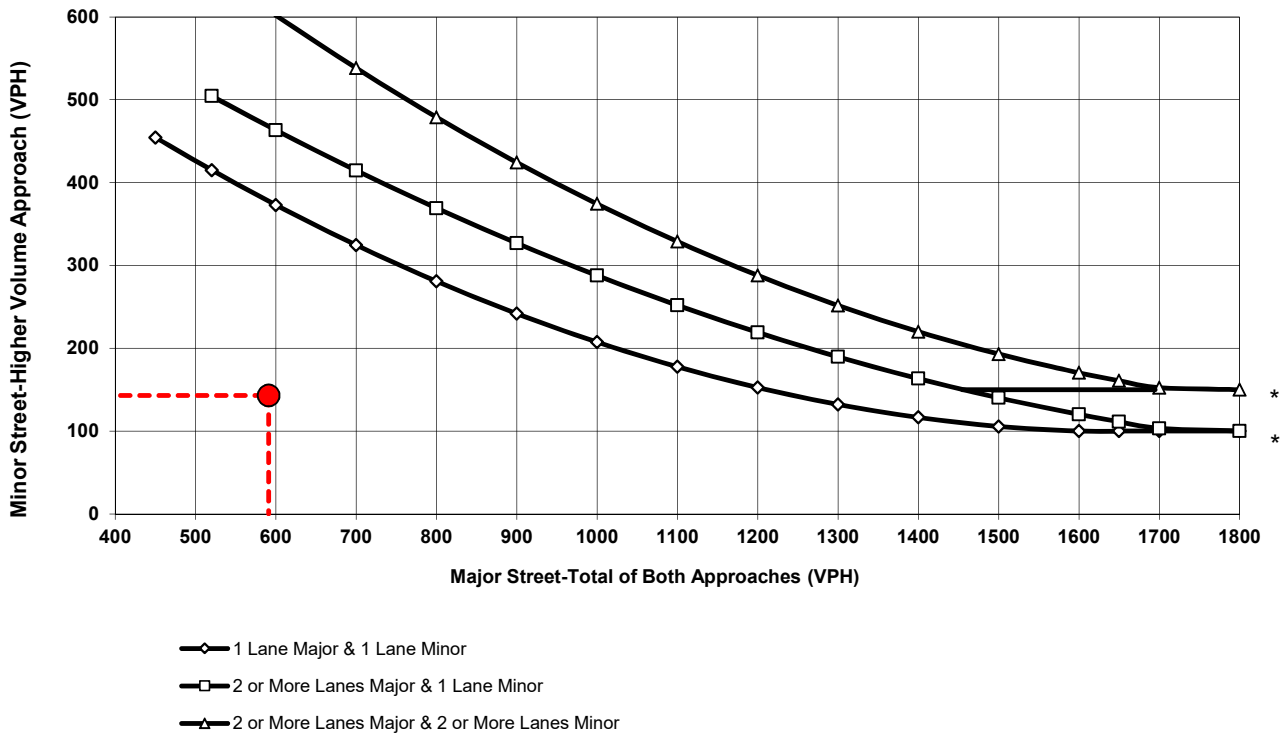
Higher Volume Approach (VPH): **143**

Number of Approach Lanes: **1**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan With Project Conditions
PM Peak Hour Volume Warrant
Cobalt Road/Luna Road**

GENERAL PLAN WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Luna Road**

Minor Street: **Topaz Road**

Total of Both Approaches (VPH): **829**

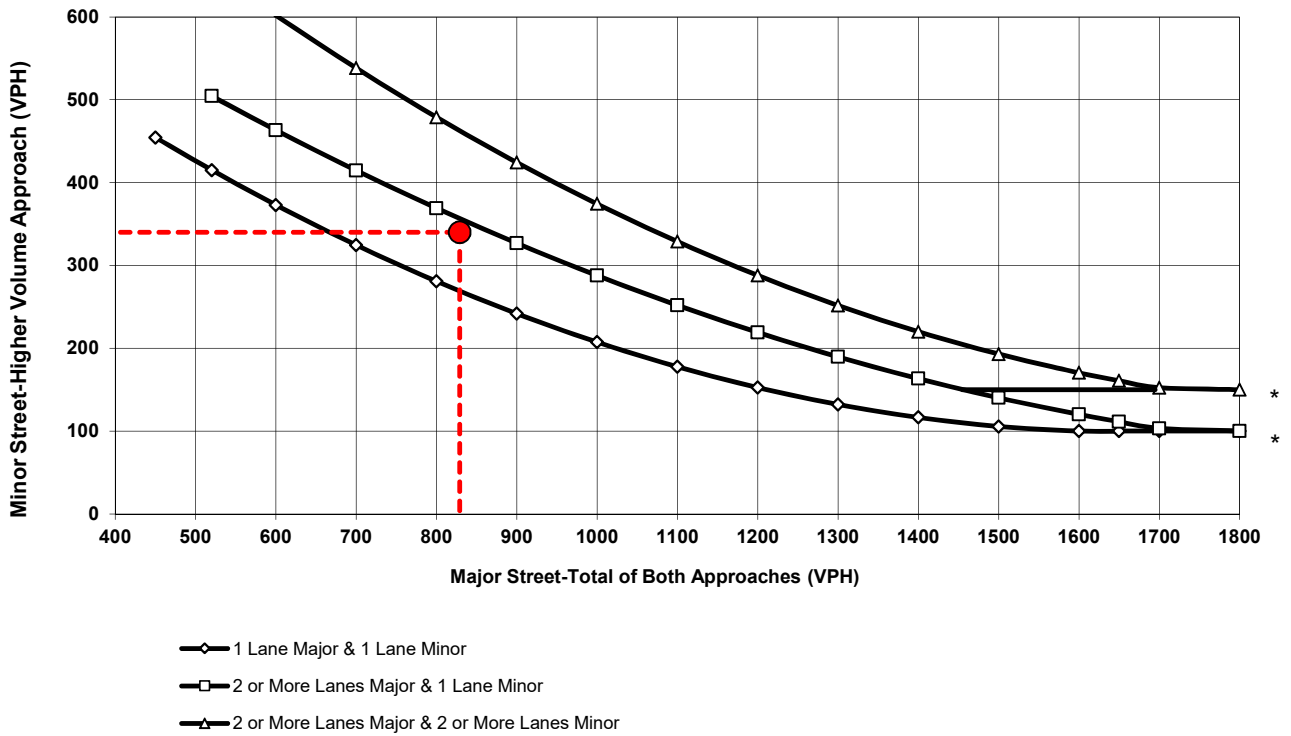
Higher Volume Approach (VPH): **340**

Number of Approach Lanes: **2**

Number of Approach Lanes: **1**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan With Project Conditions
AM Peak Hour Volume Warrant
Topaz Road/Luna Road**

GENERAL PLAN WITH PROJECT PEAK HOUR VOLUME WARRANT URBAN CONDITIONS

Peak Hour: **AM**

Major Street: **Mesa Linda Road**

Minor Street: **Luna Road**

Total of Both Approaches (VPH): **889**

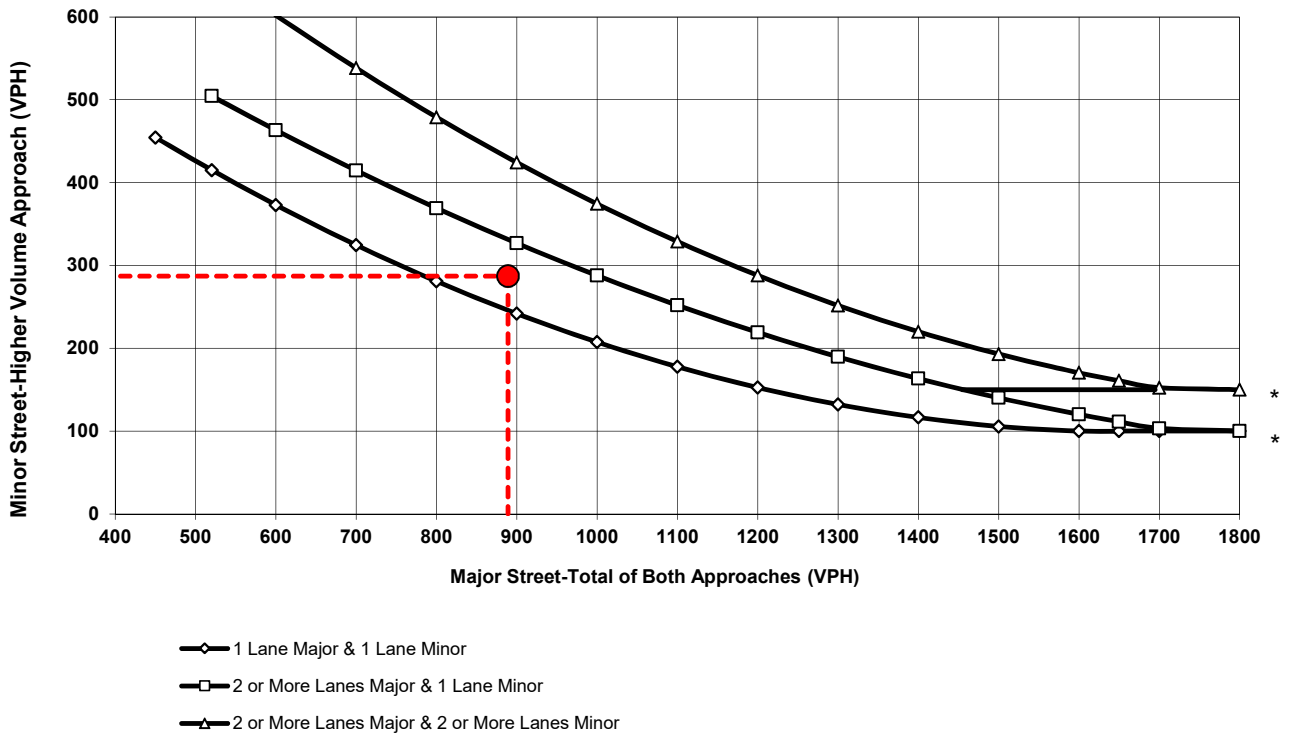
Higher Volume Approach (VPH): **287**

Number of Approach Lanes: **2**

Number of Approach Lanes: **2**

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:

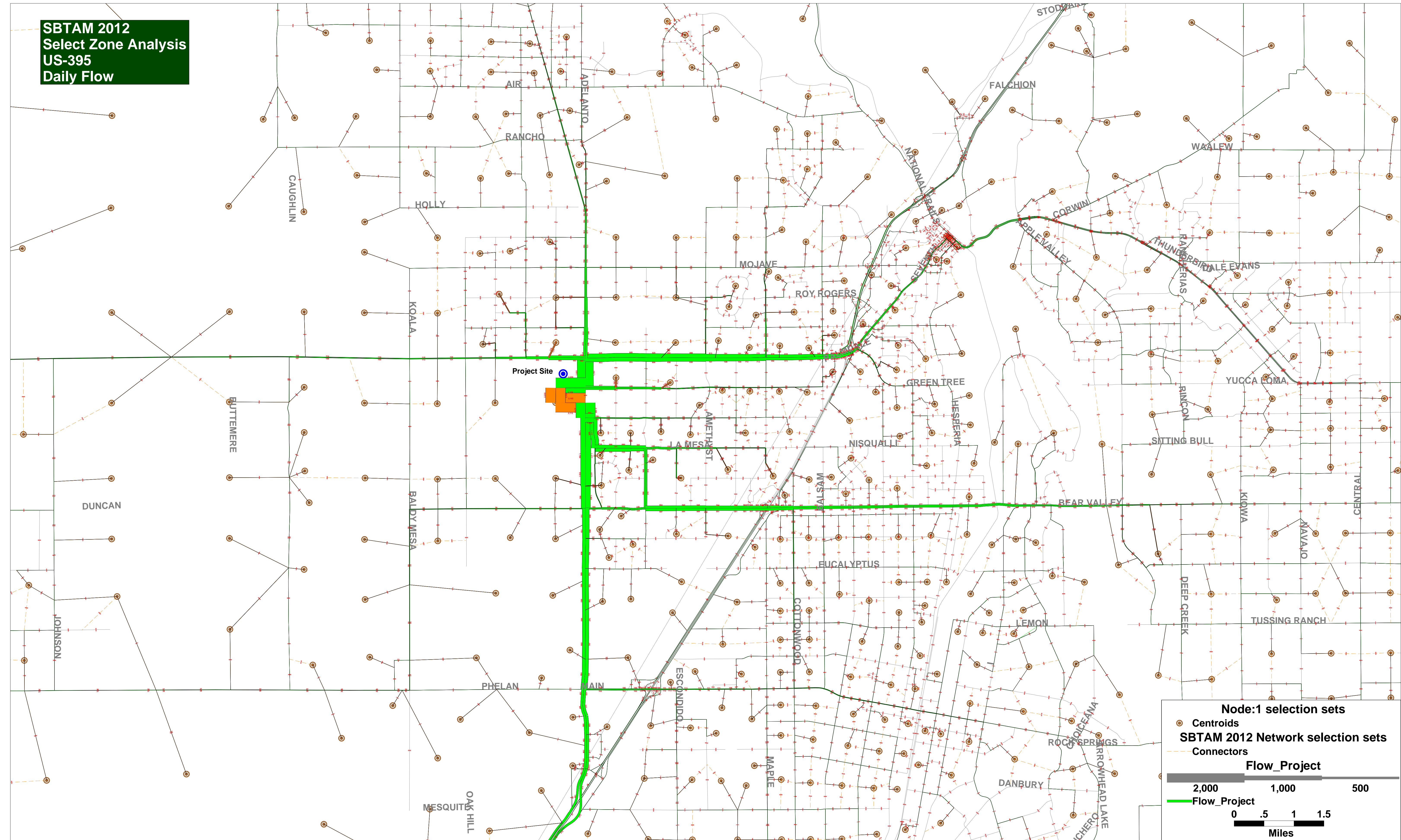
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: MUTCD 2014 California Supplement Including Revision 3 (March 9, 2018)

**General Plan With Project Conditions
AM Peak Hour Volume Warrant
Mesa Linda Road/Luna Road**

Appendix F
SANBAG Model Output and Model Post Processing Worksheets

**SBTAM 2012
Select Zone Analysis
US-395
Daily Flow**



Node:1 selection sets

- Centroids

SBTAM 2012 Network selection sets

- Connectors

Flow_Project

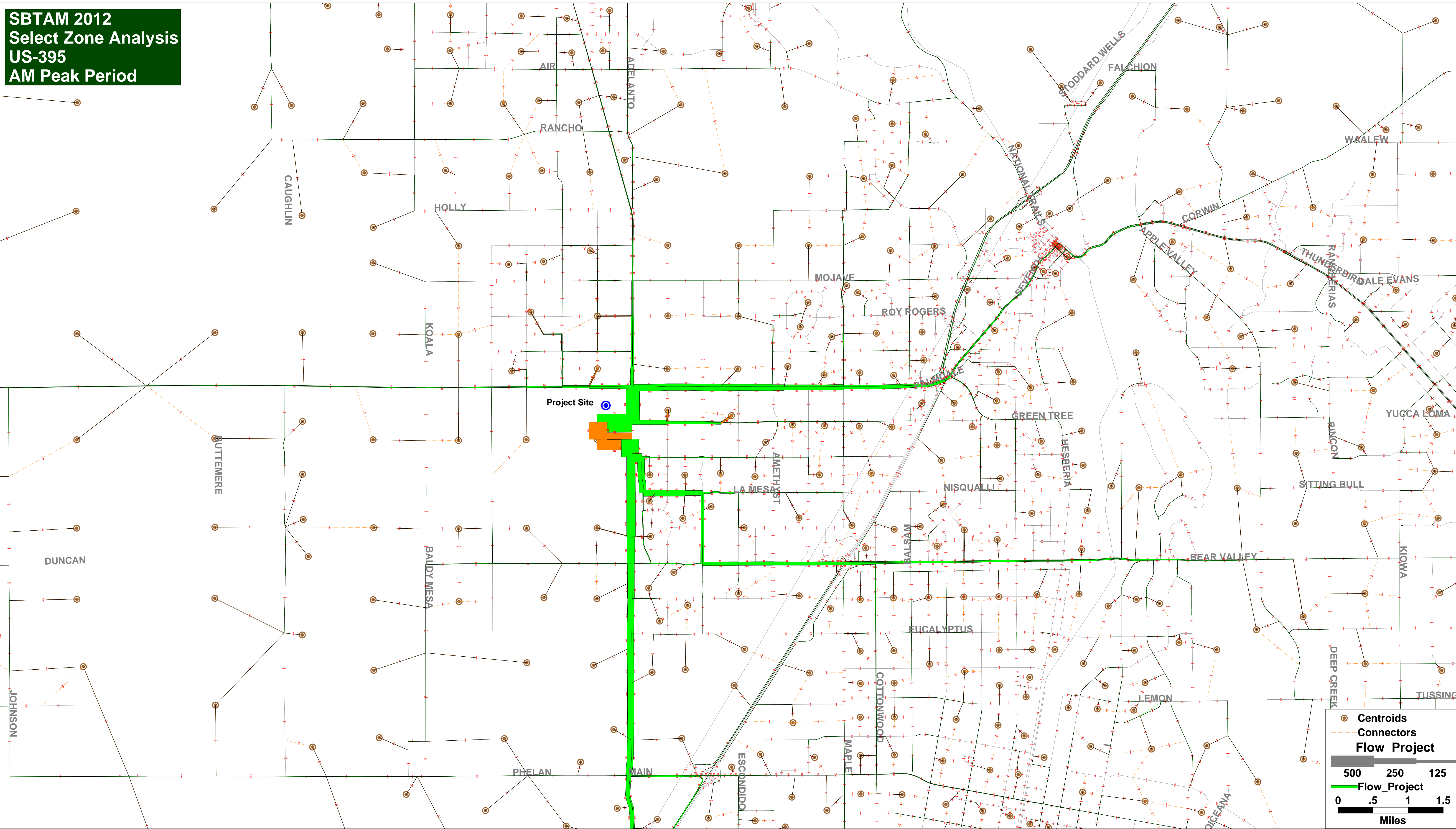
2,000 1,000 500

— Flow_Project

0 .5 1 1.5

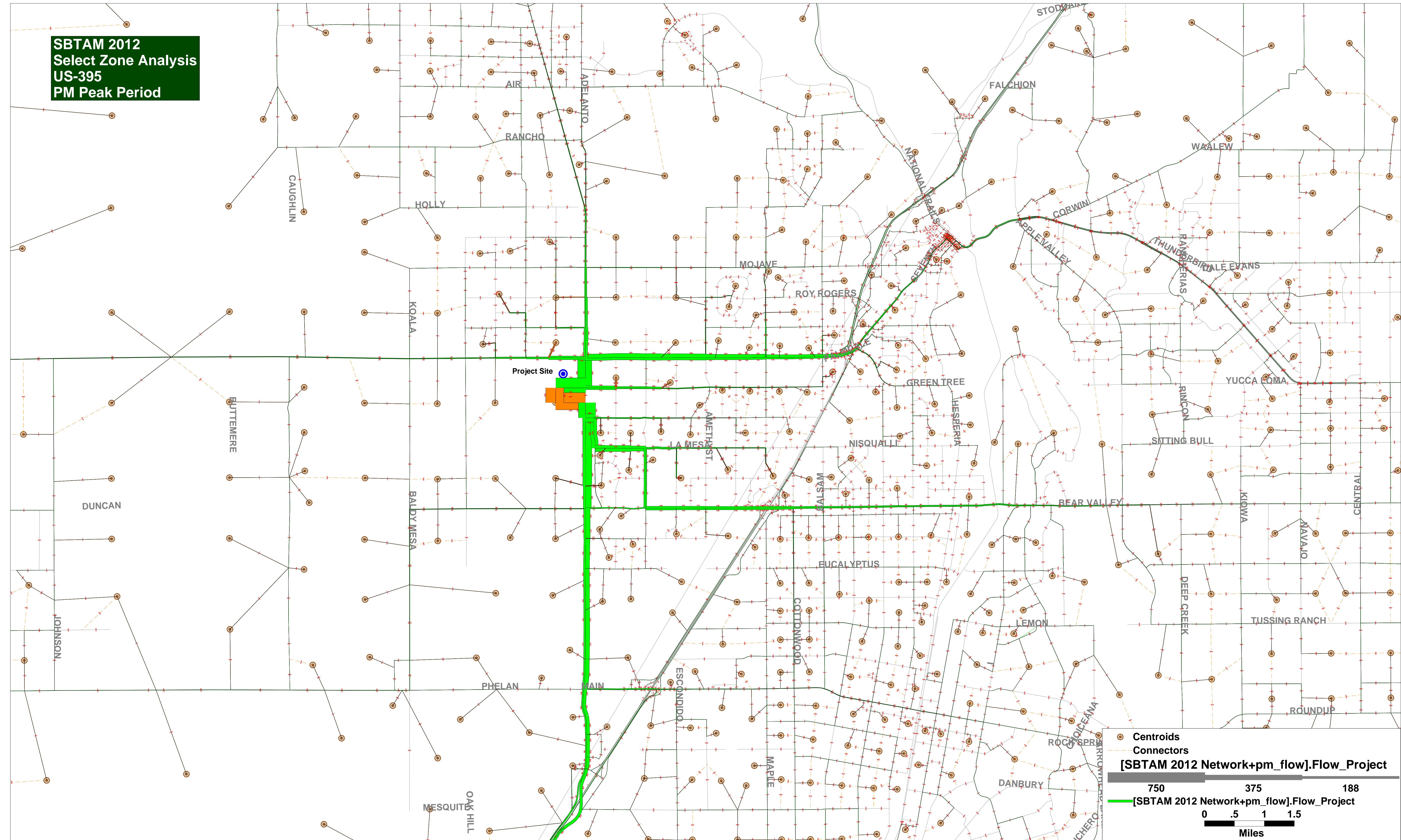
Miles

SBTAM 2012
Select Zone Analysis
US-395
AM Peak Period



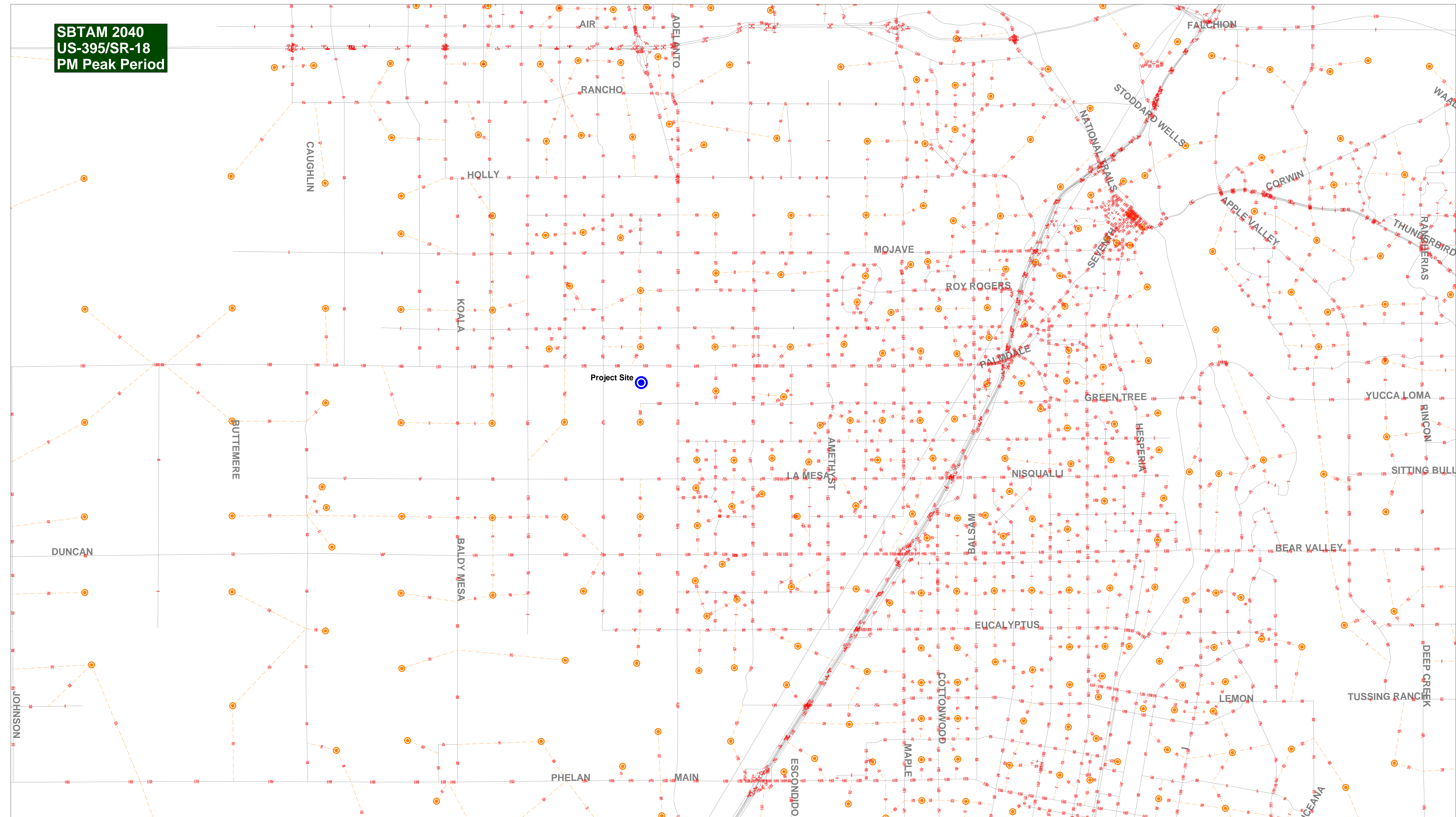
○ Centroids
--- Connectors
Flow_Project
500 250 125
0 .5 1 1.5
Miles

**SBTAM 2012
Select Zone Analysis
US-395
PM Peak Period**

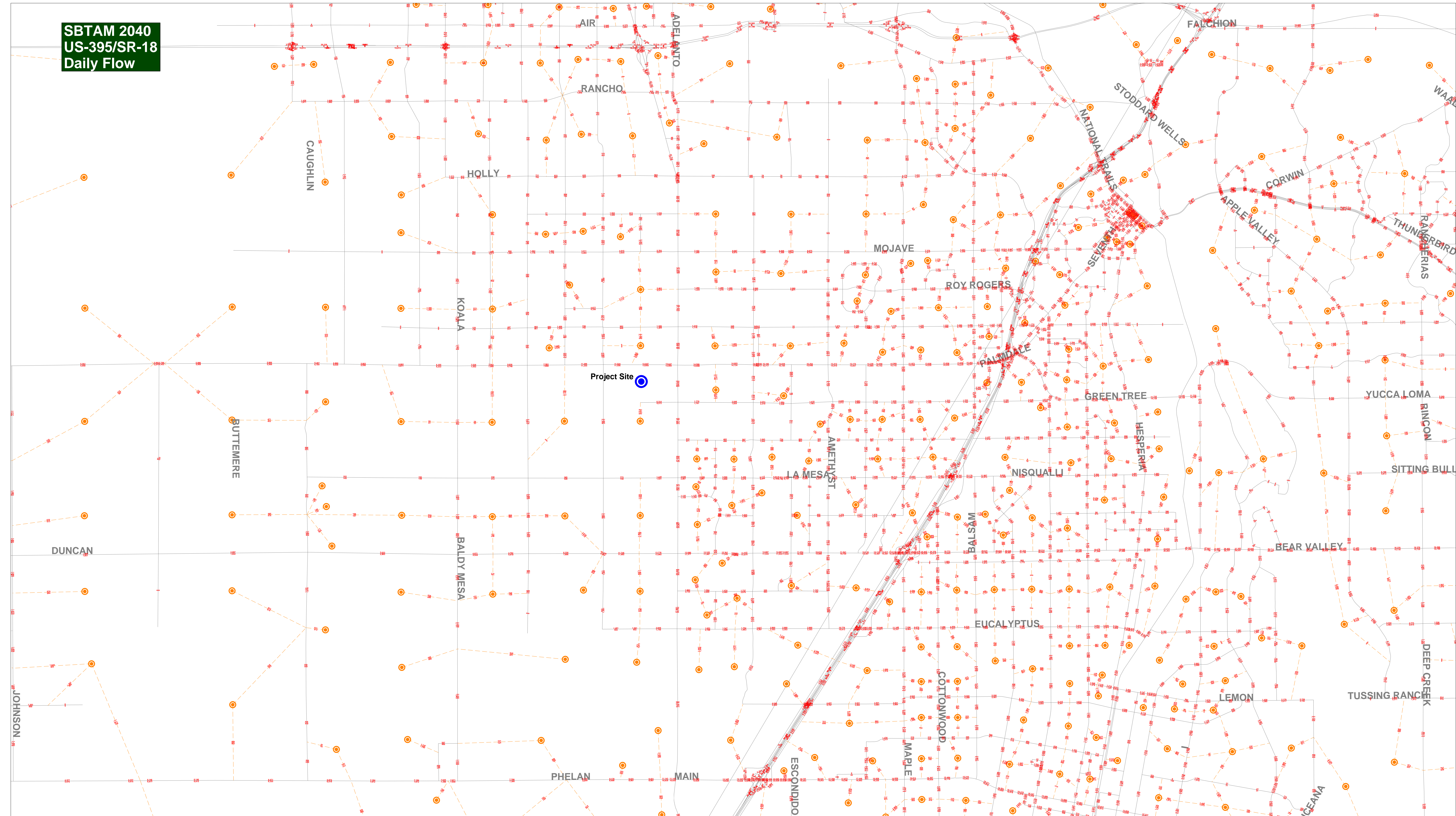


● Centroids
--- Connectors
[SBTAM 2012 Network+pm_flow].Flow_Project
 750
 375
 188
--- [SBTAM 2012 Network+pm_flow].Flow_Project
 0 .5 1 1.5
 Miles

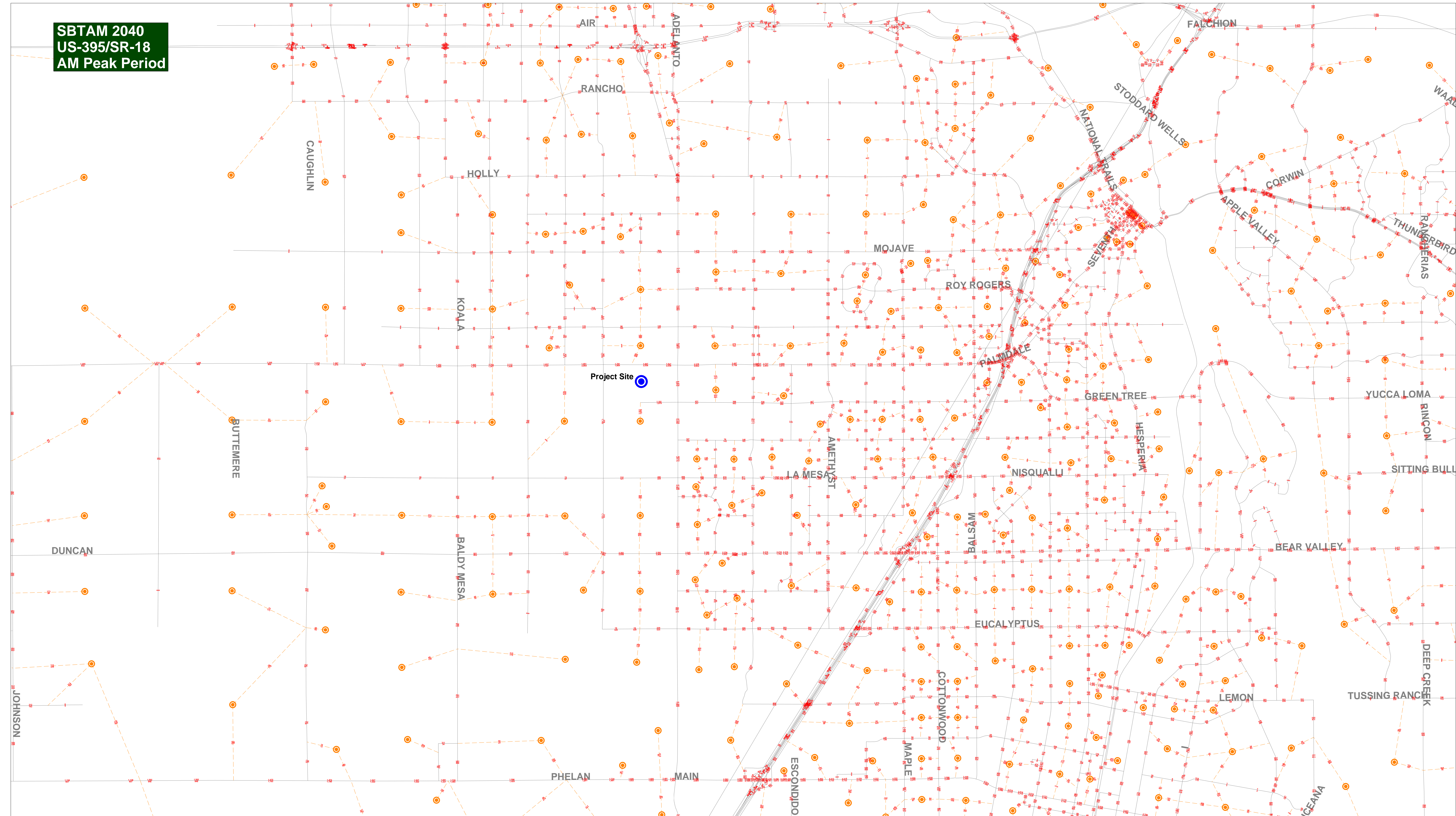
SBTAM 2040
US-395/SR-18
PM Peak Period



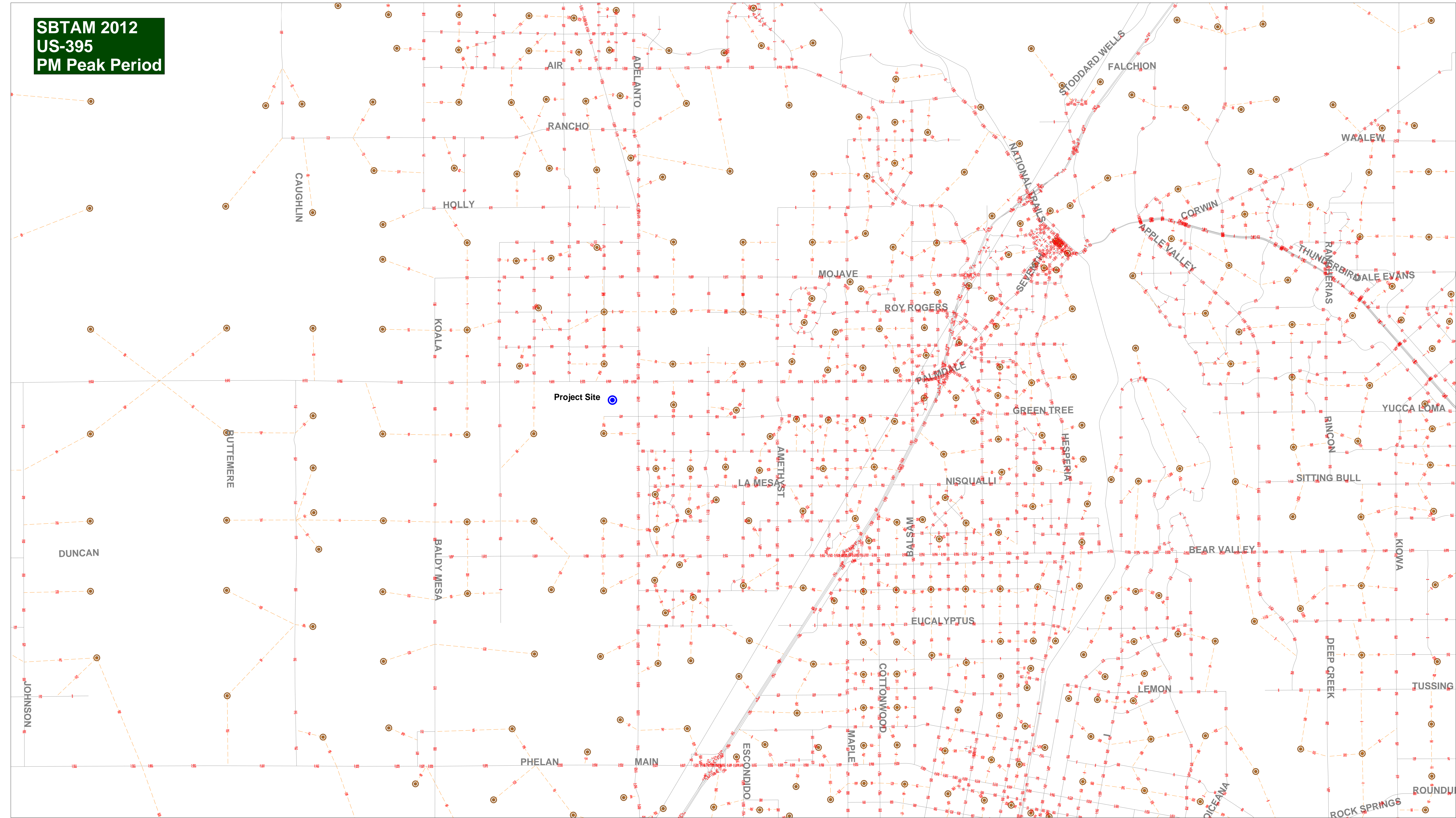
**SBTAM 2040
US-395/SR-18
Daily Flow**



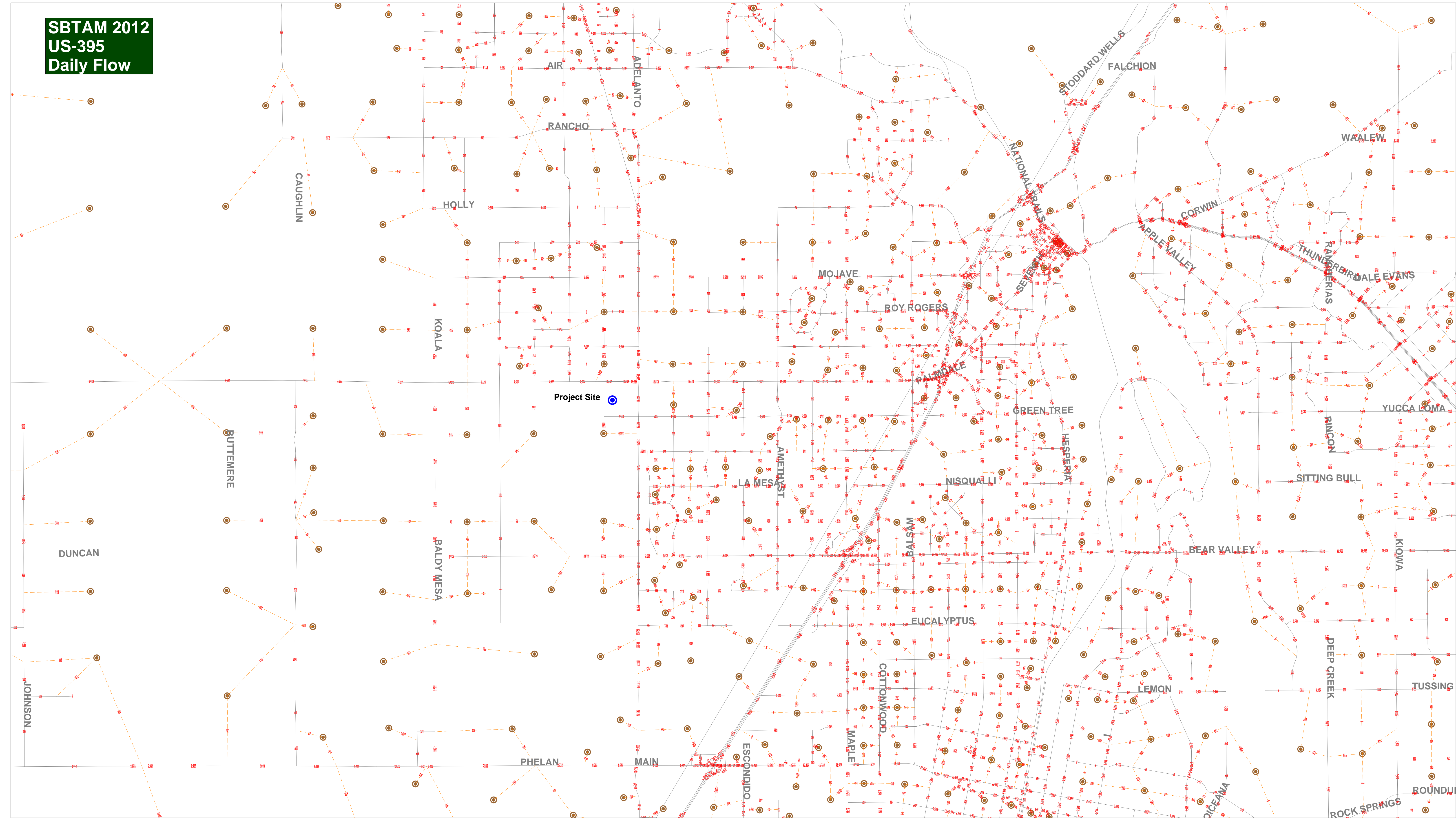
SBTAM 2040
US-395/SR-18
AM Peak Period



**SBTAM 2012
US-395
PM Peak Period**



**SBTAM 2012
US-395
Daily Flow**



**SBTAM 2012
US-395
AM Peak Period**

