EXHIBIT I

Supplemental Traffic Study

Appendix EE
Supplemental Traffic Report

MEMORANDUM

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Date: August 14, 2017

Subject: Supplemental Traffic Study and Response to Comments for River West Eaton Trail Extension Project

INTRODUCTION

The purpose of this technical memorandum is to present updated and additional analysis performed for the proposed River West Eaton Trail Extension Project as a supplement to the March, 2016 Traffic Study. The updated and additional analysis is a result of comments received during the public review of the project's Environmental Document.

The updated and additional analysis were performed using year 2017 traffic counts instead of year 2014 traffic counts used in the previous study and additional analysis was conducted at two intersection location and one roadway segment location which was not included in the previous study. In addition, this memorandum includes analysis for an additional alternative. The additional alternative is Alternative 5B which provides access to the River West Eaton Trail via Spano Park. **Figure 1** illustrates the location of the access for Alternative 5B. The additional analysis locations are as follows:

Intersections

- Palm Avenue and Nees Avenue; and
- Del Mar Avenue and Audubon Drive.

Roadway Segment

- Palm Avenue south of Nees Avenue.

The following sections of this technical memorandum discuss the updated and additional analysis for the proposed Project and evaluates if the changes to the Project results in a significant impact.

Figure 1
Alternative 5B (Spano Park Access)

TRIP GENERATION

As discussed in the March 2016 Traffic Study, no ITE trip generation rates currently exists specific to walking trails. For purposes of developing trip generation for the proposed project and evaluate traffic impacts, the proposed project parking supply (Perrin Avenue parking) was used as the basis of developing trip generation assumption for the project. The trip generation for Alternative 5B utilizes the same method as the other project alternatives.

Table 1 summarizes the trip generation for the proposed Project including the new proposed Alternative 5B. As shown in Table 1, Alternative 5B is projected to generate 240 vehicles per day with 45 vehicles during the AM peak hour and 55 vehicles during the PM peak hour.

Table 1
Trip Generation Estimate

Land Use	Qty.	Total Trips Generated								
		Daily			AM			PM		
		Total	In	Out	Total	In	Out	Total	In	Out
Proposed Project (Perrin Avenue Access)	53 spaces	318	159	159	60	40	20	73	53	20
Alternative 1 (Riverview Drive Access)	40 spaces	240	120	120	45	30	15	55	40	15
Alternative 5 (Palm & Nees Access)	40 spaces	240	120	120	45	30	15	55	40	15
Alternative 5B (Spano Park Access)	40 spaces	240	120	120	45	30	15	55	40	15

Note: Proposed Project assumed daily trip generation estimates based on site parking capacity of 53 spaces and assumed 3 times parking turnover during the day. Alternative 1 and Alternative 5 assumed daily trip generation estimates based on site parking capacity of 40 spaces and assumed 3 times parking turnover during the day and also assumes that the 53-space Perrin Avenue parking is constructed.

TRIP DISTRIBUTION

The trip distribution for the Proposed Project and Project Alternatives 1 and 5 are the same as discussed in the March 2016 Traffic Study. Since Alternative 5B is in the generally in the same location as Alternative 5, the trip distribution for Alternatives 5 and 5B are the same. The general trip distribution is 20% utilizing Audubon Drive, 40% utilizing Nees Avenue and 40% utilizing Palm Avenue.

EXISTING AND YEAR 2025 TRAFFIC VOLUMES

Existing Traffic Volumes

As indicated in the introduction of this technical memorandum, new traffic counts were obtained for the study roadway segments and intersections. Roadway segment traffic counts were collected for 24-hours for three days; Wednesday, 7/5/2017, Thursday, 7/6/2017 and Friday, 7/7/2017. Intersection traffic counts were conducted during the AM period of 7 a.m. to 9 a.m. and the PM period of 4 p.m. to 6 p.m. on Thursday, 7/6/2017. Based on the traffic counts, existing (year 2017) average daily traffic (ADT) volume ranges from 158 vehicles per day to 32,423 vehicles per day. Traffic count worksheets are provided in **Attachment A**.

Year 2025 Traffic Volumes

The future year traffic volumes were forecast using the same method discussed in the March 2016 Traffic Study. Year 2025 traffic volumes were developed by applying annual traffic growth factors to existing traffic volumes. In consultation with Fresno Council of Governments (COG) staff, future traffic projections were developed using Fresno COG Year 2010 and 2035 traffic model forecasts within the Project study area. Year 2025 base condition average daily traffic (ADT) volumes range from 210 vehicles per day to 42,798 vehicles per day.

VEHICLE MILES TRAVELLED

Vehicle miles travelled (VMT) for the Project and Project Alternatives 1, 5 and 5B were calculated and are summarized in **Table 2**. As shown in **Table 2**, the proposed Project with the Perrin Parking only is anticipated to generate 2,639 vehicle miles travelled which is the least when compared to Project Alternatives 1, 5, and 5B which generates approximately 3,794 to 3,887 vehicle miles travelled. This is primarily attributed to the assumption that the Perrin Parking is built in addition to the parking proposed for Alternative 1, 5 and 5B.

Table 2
Vehicle Miles Travelled (VMT) Analysis Results

Project Alternatives	ADT	Trip Length (miles)	VMT	VMT Total
Proposed Project (Perrin Avenue Access)	318	8.3	2,639	2,639
Alternative 1 (Riverview Drive Access)	318	8.3	2,639	3,887
	240	5.2	1,248	
Alternative 5 (Palm Avenue & Nees Avenue Access)	318	8.3	2,639	3,839
	240	5.0	1,200	
Alternative 5B (Spano Park Access)	318	8.3	2,639	3,794
	240	4.8	1,154	

SEGMENT ANALYSIS

As discussed in the March 2016 Traffic Study, the assessment of roadway segment level-of-service (LOS) is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. For analysis purposes and consistent with the City of Fresno Traffic Impact Study Guidelines requirement, the roadway segment assessment was based on the Florida Department of Transportation Table 7, Generalized Peak Hour Directional Volumes for Urbanized Areas. Table 2 provides the Generalized Peak Hour Directional Volumes Ranges for Urbanized Areas and LOS categories that will be used in the evaluation of roadway segment performance and in determining project significant impacts.

Table 2
Generalized Peak Hour Directional Volume Ranges for Urbanized Areas

Uninterrupted Flow Facilities (Freeways)					
Lanes	Median	Level of Service (LOS)			
		B	C	D	E
2	Divided	2,260	3,020	3,660	3,940
3	Divided	3,360	4,580	5,500	6,080
4	Divided	4,500	6,080	7,320	8,220
5	Divided	5,660	7,680	9,220	10,360
6	Divided	7,900	10,320	12,060	12,500
Interrupted Flow Facilities (Non-State Roadways) Class I (40 mph or higher posted speed limit)					
Lanes	Median	Level of Service (LOS)			
		B	C	D	E
1	Undivided	*	750	790	**
2	Divided	*	1,720	1,800	**
3	Divided	*	2,650	2,720	**
4	Divided	*	3,570	3,640	**
Interrupted Flow Facilities (Non-State Roadways) Class II (35 mph or slower posted speed limit)					
Lanes	Median	Level of Service (LOS)			
		B	C	D	E
1	Undivided	*	330	680	**
2	Divided	*	660	1,470	**
3	Divided	*	1,050	2,270	**
4	Divided	*	1,450	3,050	**
Source: Florida Department of Transportation Table 7, Generalized Peak Hour Directional Volumes for Urbanized Areas (Modified for Non-State Roadways)					

Table 3 summarizes the results of the roadway segment LOS analysis under all traffic

conditions analyzed as well as compares the resulting LOS under the project alternative to the LOS under base condition.

Existing (Year 2017) Traffic Condition

Under Existing (year 2017) traffic condition, the study segments are currently operating at LOS C or better except along Audubon Drive between SR-41 and Palm Avenue during the PM peak hour in the eastbound direction where the roadway segment is currently operating at LOS E.

Existing (Year 2017) Plus Project Condition

Under Existing (year 2017) Plus Project traffic condition, the study segments are anticipated to operate at LOS C or better except along Audubon Drive between SR-41 and Palm Avenue during the PM peak hour in the eastbound direction where the roadway segment is anticipated to operate at LOS E.

Year 2025 Base Condition

Under Year 2025 Base traffic condition, the study segments are anticipated to operate at LOS C or better except along Audubon Drive between SR-41 and Palm Avenue which is anticipated to operate at LOS E during the AM peak hour in the westbound direction and in the eastbound direction during the PM peak hour.

Year 2025 Base Plus Project Condition

Under Year 2025 Base Plus Project traffic condition, the study segments are anticipated to operate at LOS C or better except along Audubon Drive between SR-41 and Palm Avenue which is anticipated to operate at LOS E during the AM peak hour in the westbound direction and in the eastbound direction during the PM peak hour.

Year 2025 Plus Project Alternative 1 Condition

Under Year 2025 Plus Project Alternative 1 traffic condition, the study segments are anticipated to operate at LOS C or better except along Audubon Drive between SR-41 and Palm Avenue which is anticipated to operate at LOS E during the AM peak hour in the westbound direction and in the eastbound direction during the PM peak hour.

Year 2025 Plus Project Alternative 5 Condition

Under Year 2025 Plus Project Alternative 5 traffic condition, the study segments are anticipated to operate at LOS C or better except along Audubon Drive between SR-41 and Palm Avenue which is anticipated to operate at LOS E during the AM peak hour in the westbound direction and in the eastbound direction during the PM peak hour.

Year 2025 Plus Project Alternative 5B Condition

Under Year 2025 Plus Project Alternative 5B traffic condition, the study segments are anticipated to operate at LOS C or better except along Audubon Drive between SR-41 and Palm Avenue which is anticipated to operate at LOS E during the AM peak hour in the westbound direction and in the eastbound direction during the PM peak hour.

Table 3
Roadway Segment Level-of-Service (LOS) Summary

Roadway Segment		# of Lanes	Direction	Existing (Year 2017) Condition					Existing Plus Project Condition					Significant Impact?
#	Location			ADT	AM Peak Hour		PM Peak Hour		ADT	AM Peak Hour		PM Peak Hour		
					Volume	LOS	Volume	LOS		Volume	LOS	Volume	LOS	
1	SR-41 between Fresno-Madera County Line and Avenue 12	2/D	NB	27,750	576	B	865	B	28,068	616	B	918	B	No
			SB		457	B	1,036	B		477	B	1,056	B	No
2	SR-41 East Frontage Road (Cobb Ranch Road) north of Vin Rose Lane	1/U	NB	158	8	C	6	C	476	28	C	26	C	No
			SB		2	C	6	C		42	C	59	C	No
3	Audubon Drive between SR-41 and Palm Avenue	1/U	EB	14,659	424	C	929	E	14,659	424	C	929	E	No
			WB		698	C	520	C		698	C	520	C	No
4	Audubon Drive East of SR-41	2/D	EB	16,313	513	C	958	C	16,313	513	C	958	C	No
			WB		690	C	605	C		690	C	605	C	No
5	Del Mar Avenue between Audubon Drive and Riverview Drive	1/U	NB	1,748	27	C	55	C	1,748	27	C	55	C	No
			SB		73	C	77	C		73	C	77	C	No
6	Palm Avenue South of Nees Avenue	2/D	NB	32,423	679	C	1,177	C	32,423	679	C	1,177	C	No
			SB		930	C	915	C		930	C	915	C	No

Roadway Segment		# of Lanes	Direction	Year 2025 Base Condition					Year 2025 Plus Project Condition					Significant Impact?
#	Location			ADT	AM Peak Hour		PM Peak Hour		ADT	AM Peak Hour		PM Peak Hour		
					Volume	LOS	Volume	LOS		Volume	LOS	Volume	LOS	
1	SR-41 between Fresno-Madera County Line and Avenue 12	2/D	NB	36,630	760	B	1,142	B	36,948	800	B	1,195	B	No
			SB		603	B	1,368	B		623	B	1,388	B	No
2	SR-41 East Frontage Road (Cobb Ranch Road) north of Vin Rose Lane	1/U	NB	210	11	C	8	C	528	31	C	28	C	No
			SB		3	C	8	C		43	C	61	C	No
3	Audubon Drive between SR-41 and Palm Avenue	1/U	EB	18,177	526	C	1,152	E	18,177	526	C	1,152	E	No
			WB		921	E	686	C		921	E	686	C	No

Table 3
Roadway Segment Level-of-Service (LOS) Summary

Roadway Segment		# of Lanes	Direction	Year 2025 Base Condition					Year 2025 Plus Project Condition					Significant Impact?
#	Location			ADT	AM Peak Hour		PM Peak Hour		ADT	AM Peak Hour		PM Peak Hour		
					Volume	LOS	Volume	LOS		Volume	LOS	Volume	LOS	
4	Audubon Drive East of SR-41	2/D	EB	20,228	636	C	1,188	C	20,228	636	C	1,188	C	No
			WB		911	C	799	C		911	C	799	C	No
5	Del Mar Avenue between Audubon Drive and Riverview Drive	1/U	NB	2,168	33	C	68	C	2,168	33	C	68	C	No
			SB		91	C	95	C		91	C	95	C	No
6	Palm Avenue South of Nees Avenue	2/D	NB	42,798	896	C	1,554	C	42,798	896	C	1,554	C	No
			SB		1,228	C	1,208	C		1,228	C	1,208	C	No

Roadway Segment		# of Lanes	Direction	Year 2025 Base Condition					Year 2025 Plus Project Alternative 1 Condition					Significant Impact?
#	Location			ADT	AM Peak Hour		PM Peak Hour		ADT	AM Peak Hour		PM Peak Hour		
					Volume	LOS	Volume	LOS		Volume	LOS	Volume	LOS	
1	SR-41 between Fresno-Madera County Line and Avenue 12	2/D	NB	36,630	760	B	1,142	B	36,948	800	B	1,195	B	No
			SB		603	B	1,368	B		623	B	1,388	B	No
2	SR-41 East Frontage Road (Cobb Ranch Road) north of Vin Rose Lane	1/U	NB	210	11	C	8	C	528	31	C	28	C	No
			SB		3	C	8	C		43	C	61	C	No
3	Audubon Drive between SR-41 and Palm Avenue	1/U	EB	18,177	526	C	1,152	E	18,417	541	C	1,167	E	No
			WB		921	E	686	C		951	E	726	C	No
4	Audubon Drive East of SR-41	2/D	EB	20,228	636	C	1,188	C	20,468	651	C	1,203	C	No
			WB		911	C	799	C		941	C	839	C	No
5	Del Mar Avenue between Audubon Drive and Riverview Drive	1/U	NB	2,168	33	C	68	C	2,408	63	C	108	C	No
			SB		91	C	95	C		106	C	110	C	No
6	Palm Avenue South of Nees Avenue	2/D	NB	42,798	896	C	1,554	C	42,798	896	C	1,554	C	No
			SB		1,228	C	1,208	C		1,228	C	1,208	C	No

Table 3
Roadway Segment Level-of-Service (LOS) Summary

Roadway Segment		# of Lanes	Direction	Year 2025 Base Condition					Year 2025 Plus Project Alternative 5 Condition					Significant Impact?
#	Location			ADT	AM Peak Hour		PM Peak Hour		ADT	AM Peak Hour		PM Peak Hour		
					Volume	LOS	Volume	LOS		Volume	LOS	Volume	LOS	
1	SR-41 between Fresno-Madera County Line and Avenue 12	2/D	NB	36,630	760	B	1,142	B	36,948	800	B	1,195	B	No
			SB		603	B	1,368	B		623	B	1,388	B	No
2	SR-41 East Frontage Road (Cobb Ranch Road) north of Vin Rose Lane	1/U	NB	210	11	C	8	C	528	31	C	28	C	No
			SB		3	C	8	C		43	C	61	C	No
3	Audubon Drive between SR-41 and Palm Avenue	1/U	EB	18,177	526	C	1,152	E	18,225	529	C	1,155	E	No
			WB		921	E	686	C		927	E	694	C	No
4	Audubon Drive East of SR-41	2/D	EB	20,228	636	C	1,188	C	20,276	639	C	1,191	C	No
			WB		911	C	799	C		917	C	807	C	No
5	Del Mar Avenue between Audubon Drive and Riverview Drive	1/U	NB	2,168	33	C	68	C	2,168	33	C	68	C	No
			SB		91	C	95	C		91	C	95	C	No
6	Palm Avenue South of Nees Avenue	2/D	NB	42,798	896	C	1,554	C	42,894	908	C	1,570	C	No
			SB		1,228	C	1,208	C		1,234	C	1,214	C	No

Roadway Segment		# of Lanes	Direction	Year 2025 Base Condition					Year 2025 Plus Project Alternative 5B Condition					Significant Impact?
#	Location			ADT	AM Peak Hour		PM Peak Hour		ADT	AM Peak Hour		PM Peak Hour		
					Volume	LOS	Volume	LOS		Volume	LOS	Volume	LOS	
1	SR-41 between Fresno-Madera County Line and Avenue 12	2/D	NB	36,630	760	B	1,142	B	36,948	800	B	1,195	B	No
			SB		603	B	1,368	B		623	B	1,388	B	No
2	SR-41 East Frontage Road (Cobb Ranch Road) north of Vin Rose Lane	1/U	NB	210	11	C	8	C	528	31	C	28	C	No
			SB		3	C	8	C		43	C	61	C	No
3	Audubon Drive between SR-41 and Palm Avenue	1/U	EB	18,177	526	C	1,152	E	18,225	529	C	1,155	E	No
			WB		921	E	686	C		927	E	694	C	No

Table 3
Roadway Segment Level-of-Service (LOS) Summary

Roadway Segment		# of Lanes	Direction	Year 2025 Base Condition					Year 2025 Plus Project Alternative 5B Condition					Significant Impact?
#	Location			ADT	AM Peak Hour		PM Peak Hour		ADT	AM Peak Hour		PM Peak Hour		
					Volume	LOS	Volume	LOS		Volume	LOS	Volume	LOS	
4	Audubon Drive East of SR-41	2/D	EB	20,228	636	C	1,188	C	20,276	639	C	1,191	C	No
			WB		911	C	799	C		917	C	807	C	No
5	Del Mar Avenue between Audubon Drive and Riverview Drive	1/U	NB	2,168	33	C	68	C	2,168	33	C	68	C	No
			SB		91	C	95	C		91	C	95	C	No
6	Palm Avenue South of Nees Avenue	2/D	NB	42,798	896	C	1,554	C	42,894	908	C	1,570	C	No
			SB		1,228	C	1,208	C		1,234	C	1,214	C	No

Determination of Significant Impact at Study Roadway Segments

According to the City of Fresno Traffic Impact Study Guidelines, a project is considered to have an individually significant impact on the operation of an intersection if the addition traffic generated from the proposed project results in any of the following conditions:

- Triggers an intersection operating at acceptable level-of-service (LOS D or better) to operate at unacceptable levels of service (LOS E or F);
- Triggers an intersection operating at unacceptable level-of-service (LOS E) to operate at LOS F; or
- Increases the average delay for a study intersection that is already operating at unacceptable level-of-service.

Since the City of Fresno Traffic Impact Study Guidelines does not provide for specific significance criteria for roadway segments, first two conditions described above were used to evaluate roadway segment impacts.

Table 3 above provides a comparison of the resulting LOS under the project alternatives to Existing (year 2017) and Year 2025 Base traffic conditions and are summarized below:

Existing (Year 2017) Plus Project Condition

As shown in **Table 3**, the Project does not significantly impact the study roadway segments under Existing (year 2017) Plus Project traffic condition. Majority of the study segments are anticipated to operate at LOS C with the additional traffic generated by the Project. The Audubon Drive between SR-41 and Palm Avenue is anticipated to operate at LOS E under Existing (year 2017) and Existing (year 2017) Plus Project conditions. No additional vehicles due to the Project are anticipated at this segment under this condition.

Year 2025 Base Plus Project Condition

As shown in **Table 3**, the Project does not significantly impact the study roadway segments under Year 2025 Base Plus Project traffic condition. Majority of the study segments are anticipated to operate at LOS C with the additional traffic generated by the Project. The Audubon Drive between SR-41 and Palm Avenue is anticipated to operate at LOS E under Year 2025 Base and Year 2025 Base Plus Project traffic conditions. No additional vehicles due to the Project are anticipated at this segment under this condition.

Year 2025 Plus Project Alternative 1 Condition

As shown in **Table 3**, the Project does not significantly impact the study roadway segments under Year 2025 Plus Project Alternative 1 traffic condition. Majority of the study segments are anticipated to operate at LOS C with the additional traffic generated by the Project. The Audubon Drive between SR-41 and Palm Avenue is anticipated to operate at LOS E under Year 2025 Base and Year 2025 Plus Project Alternative 1 traffic conditions.

Year 2025 Plus Project Alternative 5 Condition

As shown in **Table 3**, the Project does not significantly impact the study roadway segments under Year 2025 Plus Project Alternative 5 traffic condition. Majority of the study segments are anticipated to operate at LOS C with the additional traffic generated by the Project. The Audubon Drive between SR-41 and Palm Avenue is anticipated to operate at LOS E under Year 2025 Base and Year 2025 Plus Project Alternative 5 traffic conditions.

Year 2025 Plus Project Alternative 5B Condition

As shown in **Table 3**, the Project does not significantly impact the study roadway segments under Year 2025 Plus Project Alternative 5B traffic condition. Majority of the study segments are anticipated to operate at LOS C with the additional traffic generated by the Project. The Audubon Drive between SR-41 and Palm Avenue is anticipated to operate at LOS E under Year 2025 Base and Year 2025 Plus Project Alternative 5B traffic conditions.

INTERSECTION ANALYSIS

Intersection analysis methodology and parameters are based on the City of Fresno Traffic Impact Study Guidelines. Intersection analysis was conducted for the following two locations:

- Palm Avenue and Nees Avenue (Signalized); and
- Del Mar Avenue and Audubon Drive (Unsignalized).

The analysis of intersections utilized the operational procedures as outlined in the 2010 Highway Capacity Manual (HCM). This method defines level of service in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses 1,900 vehicles per hour per lane as the maximum saturation volume of an intersection. The level of service criteria used is described in **Table 4**. The computerized analysis of intersection operations was performed utilizing Synchro version 10.0 traffic analysis software.

Table 4
HCM 2010 Intersection LOS Criteria

LOS	Average Control Delay Per Vehicle (seconds)	
	Type of Intersection Control	
	Signalized	Unsignalized/ STOP Controlled
A (minimal delay)	< 10	< 10
B (short delay)	> 10 and < 20	> 10 and < 15
C (average delay)	> 20 and < 35	> 15 and < 25
D (long delay)	> 35 and < 55	> 25 and < 35
E (very long delay)	> 55 and < 80	> 35 and < 50
F (extreme delay/jammed)	> 80	> 50
Source: HCM (2010: Exhibits 18-4 and 19-1)		

Table 5 summarizes the results of the roadway segment LOS analysis under all traffic conditions analyzed as well as compares the resulting LOS under the project alternative to the LOS under base condition.

Existing (Year 2017) Traffic Condition

Under Existing (year 2017) traffic condition, the study intersections are currently operating at LOS D or better during the AM and PM peak hours.

Existing (Year 2017) Plus Project Condition

Under Existing (year 2017) Plus Project traffic condition, the study intersections are currently operating at LOS D or better during the AM and PM peak hours.

Year 2025 Base Condition

Under Year 2025 Base traffic condition, the signalized intersection at Palm Avenue and Nees Avenue is anticipated to operate at LOS E during the AM and PM peak hours. The unsignalized intersection at Del Mar Avenue and Audubon Drive is anticipated to operate at LOS D during the AM peak hour and F during the PM peak hour.

Year 2025 Base Plus Project Condition

Under Year 2025 Base Plus Project traffic condition, the signalized intersection at Palm Avenue and Nees Avenue is anticipated to operate at LOS E during the AM and PM peal hours. The unsignalized intersection at Del Mar Avenue and Audubon Drive is anticipated to operate at LOS D during the AM peak hour and F during the PM peak hour.

Year 2025 Plus Project Alternative 1 Condition

Under Year 2025 Plus Project Alternative 1 traffic condition, the signalized intersection at Palm Avenue and Nees Avenue is anticipated to operate at LOS E during the AM and PM peal hours. The unsignalized intersection at Del Mar Avenue and Audubon Drive is anticipated to operate at LOS E during the AM peak hour and F during the PM peak hour.

Year 2025 Plus Project Alternative 5 Condition

Under Year 2025 Plus Project Alternative 5 traffic condition, the signalized intersection at Palm Avenue and Nees Avenue is anticipated to operate at LOS E during the AM and PM peal hours. The unsignalized intersection at Del Mar Avenue and Audubon Drive is anticipated to operate at LOS D during the AM peak hour and F during the PM peak hour.

Year 2025 Plus Project Alternative 5B Condition

Under Year 2025 Plus Project Alternative 5B traffic condition, the signalized intersection at Palm Avenue and Nees Avenue is anticipated to operate at LOS E during the AM and PM peal hours. The unsignalized intersection at Del Mar Avenue and Audubon Drive is anticipated to operate at LOS D during the AM peak hour and F during the PM peak hour.

Table 5
Intersection Level-of-Service (LOS) Summary

#	Intersection Location	Control	Existing (Year 2017) Condition				Existing Plus Project Condition				Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1	Palm Ave (NS) / Nees Ave (EW)	TS	29.8	C	31.1	C	29.8	C	31.1	C	No
2	Del Mar Ave (NS) / Audubon Dr (EW)	SC	20.2	C	28.0	D	20.2	C	28.0	D	No

#	Intersection Location	Control	Year 2025 Base Condition				Year 2025 Plus Project Condition				Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1	Palm Ave (NS) / Nees Ave (EW)	TS	59.0	E	67.8	E	59.0	E	67.8	E	No
2	Del Mar Ave (NS) / Audubon Dr (EW)	SC	33.3	D	65.3	F	33.3	D	65.3	F	No

#	Intersection Location	Control	Year 2025 Base Condition				Year 2025 Plus Project Alt 1 Condition				Significant Impact?	Year 2025 Plus Project Alt 1 with Proposed Mitigation				Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			AM Peak Hour		PM Peak Hour		
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS		Delay	LOS	Delay	LOS	
1	Palm Ave (NS) / Nees Ave (EW)	TS	59.0	E	67.8	E	59.0	E	67.8	E	No	-	-	-	-	-
2	Del Mar Ave (NS) / Audubon Dr (EW)	SC	33.3	D	65.3	F	39.2	E	89.2	F	*Yes*	10.8	B	13.5	B	No

#	Intersection Location	Control	Year 2025 Base Condition				Year 2025 Plus Project Alt 5 Condition				Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	
1	Palm Ave (NS) / Nees Ave (EW)	TS	59.0	E	67.8	E	56.2	E	65.4	E	No
2	Del Mar Ave (NS) / Audubon Dr (EW)	SC	33.3	D	65.3	F	33.8	D	66.4	F	No

Table 5 Intersection Level-of-Service (LOS) Summary												
#	Intersection Location	Control	Year 2025 Base Condition				Year 2025 Plus Project Alt 5B Condition				Significant Impact?	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS		
1	Palm Ave (NS) / Nees Ave (EW)	TS	59.0	E	67.8	E	58.7	E	67.3	E	No	
2	Del Mar Ave (NS) / Audubon Dr (EW)	SC	33.3	D	65.3	F	33.8	D	66.4	F	No	

Determination of Significant Impact at Study Roadway Segments

According to the City of Fresno Traffic Impact Study Guidelines and coordination with the City Traffic Engineer, a project is considered to have an individually significant impact on the operation of an intersection if the addition traffic generated from the proposed project results in any of the following conditions:

- Triggers an intersection operating at acceptable level-of-service (LOS D or better) to operate at unacceptable levels of service (LOS E or F);
- Triggers an intersection operating at unacceptable level-of-service (LOS E) to operate at LOS F; or
- Increases the average delay by 5 or more seconds at a study intersection that is already operating at unacceptable level-of-service.

Table 5 above provides a comparison of the resulting LOS under the project alternatives to Existing (year 2017) and Year 2025 Base traffic conditions and are summarized below:

Existing (Year 2017) Plus Project Condition

As shown in **Table 5**, the Project does not significantly impact the study intersections under Existing (year 2017) Plus Project traffic condition. The study intersections are anticipated to operate at LOS D or better with the additional traffic generated by the Project.

Year 2025 Base Plus Project Condition

As shown in **Table 5**, the Project does not significantly impact the study intersections under Year 2025 Base Plus Project traffic condition. Although, the intersections are anticipated to operate at unacceptable level-of-service (LOS E or F), no project traffic are added at these intersections under this traffic condition resulting in the same delay under the project condition compared to the base condition.

Year 2025 Plus Project Alternative 1 Condition

As shown in **Table 5**, a Project significant impact has been identified at the intersection of Del Mar Avenue and Audubon Drive under Year 2025 Base Plus Project traffic condition. The operation of the intersection is anticipated to deteriorate from LOS D to LOS E during the AM peak hour and during the PM peak hour the intersection delay is anticipated to increase with the Project condition.

Year 2025 Plus Project Alternative 5 Condition

As shown in **Table 5**, the Project does not significantly impact the study intersections under Year 2025 Base Plus Project Alternative 5 traffic condition. Although, the intersections are anticipated to operate at unacceptable level-of-service (LOS E or F), an impact is not determined because the resulting delay does not increase by 5 seconds or more.

Year 2025 Plus Project Alternative 5B Condition

As shown in **Table 5**, the Project does not significantly impact the study intersections under

Year 2025 Base Plus Project Alternative 5B traffic condition. Although, the intersections are anticipated to operate at unacceptable level-of-service (LOS E or F), an impact is not determined because the resulting delay does not increase by 5 seconds or more.

Proposed Mitigation

Based on the significant impact criteria, a Project significant impact has been identified at the intersection of Del Mar Avenue and Audubon Drive under Project Alternative 1. As a proposed mitigation for this Project impact, a traffic signal is recommended at the intersection. A signal warrant analysis for this intersection has been conducted using the peak hour warrants in the California MUTCD and based on the peak hour warrant a traffic signal is warranted. Signal warrant analysis worksheets are included in Attachment C.

As shown in **Table 5**, the intersection of Del Mar Avenue and Audubon Drive is anticipated to operate at LOS B during the AM and PM peak hour with a traffic signal.

CONCLUSION

The purpose of this technical memorandum is to present updated and additional analysis performed for the proposed River West Eaton Trail Extension Project as a supplement to the March, 2016 Traffic Study. The updated and additional analysis is a result of comments received during the public review of the project's Environmental Document.

The updated and additional analysis were performed using year 2017 traffic counts instead of year 2014 traffic counts used in the previous study and additional analysis was conducted at two intersection location and one roadway segment location which was not included in the previous study. In addition, this memorandum includes analysis for an additional alternative. The additional alternative is Alternative 5B which provides access to the River West Eaton Trail via Spano Park.

VMT

The proposed Project with the Perrin Parking only is anticipated to generate 2,639 vehicle miles travelled which is the least when compared to Project Alternatives 1, 5, and 5B which generates approximately 3,887 to 3,959 vehicle miles travelled. This is primarily attributed to the assumption that the Perrin Parking is built in addition to the parking proposed for Alternative 1, 5 and 5B.

Roadway Segment

No Project significant impact has been determined at the study roadway segments under all traffic conditions.

Intersection

A Project significant impact has been identified at the intersection of Del Mar Avenue and Audubon Drive under Project Alternative 1. As a proposed mitigation for this Project impact, a traffic signal is recommended at the intersection.

Attachments:

Attachment A: Existing (Year 2017) Traffic Counts
Attachment B: Intersection Analysis Worksheets
Attachment C: Signal Warrant Worksheet

Attachment A
Existing (Year 2017) Traffic Count Worksheets

Roadway Segment
Traffic Count Worksheets

Prepared by NDS/ATD

VOLUME

Palm Ave S/O Nees Ave

Day: Wednesday
Date: 7/5/2017

City: Fresno
Project #: CA17_8059_001

DAILY TOTALS	NB	SB	EB	WB	Total
	12,059	11,918	0	8,446	32,423

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	26		28				54		12:00	258		204			289	751	
00:15	21		33				54		12:15	227		184			244	655	
00:30	14		30				44		12:30	223		216			250	689	
00:45	10	71	20	111			30	182	12:45	209	917	253	857		254	1037	716	2811
01:00	10		14				24		13:00	220		230			237	687	
01:15	13		20				33		13:15	244		223			219	686	
01:30	7		11				18		13:30	185		228			226	639	
01:45	6	36	13	58			19	94	13:45	197	846	198	879		188	870	583	2595
02:00	7		7				14		14:00	208		197			219	624	
02:15	6		15				21		14:15	193		224			211	628	
02:30	4		12				16		14:30	172		157			182	511	
02:45	4	21	10	44			14	65	14:45	205	778	212	790		195	807	612	2375
03:00	5		11				16		15:00	189		192			215	596	
03:15	11		13				24		15:15	204		205			216	625	
03:30	6		12				18		15:30	221		215			231	667	
03:45	6	28	18	54			24	82	15:45	218	832	213	825		232	894	663	2551
04:00	8		13				21		16:00	246		203			218	667	
04:15	9		12				21		16:15	263		218			288	769	
04:30	9		16				25		16:30	271		238			288	797	
04:45	15	41	23	64			38	105	16:45	253	1033	214	873		263	1057	730	2963
05:00	24		34				58		17:00	312		235			333	880	
05:15	33		30				63		17:15	295		228			304	827	
05:30	33		44				77		17:30	304		212			313	829	
05:45	50	140	51	159			101	299	17:45	266	1177	176	851		276	1226	718	3254
06:00	55		48				103		18:00	257		168			240	665	
06:15	61		66				127		18:15	232		198			224	654	
06:30	72		91				163		18:30	212		166			195	573	
06:45	98	286	130	335			228	621	18:45	185	886	131	663		149	808	465	2357
07:00	71		130				201		19:00	166		119			150	435	
07:15	108		163				271		19:15	148		142			169	459	
07:30	162		235				397		19:30	143		113			154	410	
07:45	196	537	260	788			456	1325	19:45	127	584	121	495		135	608	383	1687
08:00	154		215				369		20:00	117		122			128	367	
08:15	167		220				387		20:15	107		108			115	330	
08:30	150		180				330		20:30	122		107			131	360	
08:45	165	636	189	804			354	1440	20:45	111	457	131	468		87	461	329	1386
09:00	162		168				330		21:00	120		130			133	383	
09:15	138		166				304		21:15	104		85			113	302	
09:30	152		162				314		21:30	88		67			77	232	
09:45	161	613	197	693			358	1306	21:45	80	392	74	356		72	395	226	1143
10:00	138		137				275		22:00	61		66			68	195	
10:15	146		141				287		22:15	52		57			48	157	
10:30	146		188				334		22:30	35		53			38	126	
10:45	195	625	186	652			381	1277	22:45	29	177	49	225		39	193	117	595
11:00	208		168				376		23:00	34		39			36	109	
11:15	185		192				377		23:15	25		23			18	66	
11:30	227		193				420		23:30	23		32			20	75	
11:45	225	845	211	764			436	1609	23:45	19	101	16	110		16	90	51	301
TOTALS		3879		4526				8405	TOTALS		8180		7392			8446		24018
SPLIT %		46.2%		53.8%				25.9%	SPLIT %		34.1%		30.8%			35.2%		74.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,059	11,918	0	8,446	32,423

AM Peak Hour	11:30	07:30		11:45	11:45	PM Peak Hour	17:00	12:45		17:00	16:45
AM Pk Volume	937	930		783	2531	PM Pk Volume	1177	934		1226	3266
Pk Hr Factor	0.908	0.894		0.677	0.843	Pk Hr Factor	0.943	0.923		0.920	0.928
7 - 9 Volume	1173	1592	0	0	2765	4 - 6 Volume	2210	1724	0	2283	6217
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	17:00	16:30		17:00	16:45
7 - 9 Pk Volume	679	930	0	0	1609	4 - 6 Pk Volume	1177	915	0	1226	3266
Pk Hr Factor	0.866	0.894	0.000	0.000	0.882	Pk Hr Factor	0.943	0.961	0.000	0.920	0.928

Prepared by NDS/ATD

VOLUME

Palm Ave S/O Nees Ave

Day: Thursday
Date: 7/6/2017

City: Fresno
Project #: CA17_8059_001

DAILY TOTALS	NB	SB	EB	WB	Total
	12,594	12,640	0	0	25,234

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	12		15				27		12:00	289		220				509	
00:15	12		9				21		12:15	244		228				472	
00:30	5		20				25		12:30	250		209				459	
00:45	5	34	14	58			19	92	12:45	254	1037	243	900			497	1937
01:00	9		13				22		13:00	237		224				461	
01:15	11		18				29		13:15	219		217				436	
01:30	5		17				22		13:30	226		204				430	
01:45	4	29	10	58			14	87	13:45	188	870	240	885			428	1755
02:00	11		11				22		14:00	219		217				436	
02:15	6		6				12		14:15	211		172				383	
02:30	3		7				10		14:30	182		219				401	
02:45	7	27	8	32			15	59	14:45	195	807	224	832			419	1639
03:00	5		5				10		15:00	215		196				411	
03:15	2		12				14		15:15	216		209				425	
03:30	4		8				12		15:30	231		204				435	
03:45	13	24	19	44			32	68	15:45	232	894	240	849			472	1743
04:00	12		16				28		16:00	218		212				430	
04:15	17		17				34		16:15	288		209				497	
04:30	19		18				37		16:30	288		227				515	
04:45	24	72	21	72			45	144	16:45	263	1057	212	860			475	1917
05:00	25		25				50		17:00	333		275				608	
05:15	38		36				74		17:15	304		220				524	
05:30	41		40				81		17:30	313		247				560	
05:45	62	166	50	151			112	317	17:45	276	1226	202	944			478	2170
06:00	53		66				119		18:00	240		178				418	
06:15	80		60				140		18:15	224		183				407	
06:30	98		100				198		18:30	195		180				375	
06:45	107	338	142	368			249	706	18:45	149	808	161	702			310	1510
07:00	111		153				264		19:00	150		145				295	
07:15	118		169				287		19:15	169		149				318	
07:30	136		202				338		19:30	154		160				314	
07:45	206	571	281	805			487	1376	19:45	135	608	128	582			263	1190
08:00	190		228				418		20:00	128		128				256	
08:15	161		240				401		20:15	115		155				270	
08:30	167		199				366		20:30	131		152				283	
08:45	198	716	225	892			423	1608	20:45	87	461	104	539			191	1000
09:00	139		153				292		21:00	133		144				277	
09:15	149		167				316		21:15	113		116				229	
09:30	160		175				335		21:30	77		106				183	
09:45	170	618	223	718			393	1336	21:45	72	395	89	455			161	850
10:00	141		145				286		22:00	68		114				182	
10:15	152		157				309		22:15	48		62				110	
10:30	151		190				341		22:30	38		58				96	
10:45	219	663	183	675			402	1338	22:45	39	193	53	287			92	480
11:00	175		180				355		23:00	36		52				88	
11:15	209		194				403		23:15	18		37				55	
11:30	259		201				460		23:30	20		33				53	
11:45	247	890	202	777			449	1667	23:45	16	90	33	155			49	245
TOTALS		4148		4650				8798	TOTALS		8446		7990				16436
SPLIT %		47.1%		52.9%				34.9%	SPLIT %		51.4%		48.6%				65.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,594	12,640	0	0	25,234

AM Peak Hour	11:30	07:30			11:30	PM Peak Hour	17:00	16:45			17:00
AM Pk Volume	1039	951			1890	PM Pk Volume	1226	954			2170
Pk Hr Factor	0.899	0.846			0.928	Pk Hr Factor	0.920	0.867			0.892
7 - 9 Volume	1287	1697	0	0	2984	4 - 6 Volume	2283	1804	0	0	4087
7 - 9 Peak Hour	07:45	07:30			07:45	4 - 6 Peak Hour	17:00	16:45			17:00
7 - 9 Pk Volume	724	951	0	0	1672	4 - 6 Pk Volume	1226	954	0	0	2170
Pk Hr Factor	0.879	0.846	0.000	0.000	0.858	Pk Hr Factor	0.920	0.867	0.000	0.000	0.892

Prepared by NDS/ATD

VOLUME

Palm Ave S/O Nees Ave

Day: Friday
Date: 7/7/2017

City: Fresno
Project #: CA17_8059_001

DAILY TOTALS	NB	SB	EB	WB	Total
	12,801	12,546	0	0	25,347

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	15		21				36		12:00	284		241				525	
00:15	11		30				41		12:15	248		224				472	
00:30	9		24				33		12:30	249		207				456	
00:45	21	56	23	98			44	154	12:45	252	1033	269	941			521	1974
01:00	12		28				40		13:00	251		196				447	
01:15	9		8				17		13:15	228		239				467	
01:30	8		23				31		13:30	214		200				414	
01:45	6	35	12	71			18	106	13:45	208	901	220	855			428	1756
02:00	6		10				16		14:00	180		209				389	
02:15	10		14				24		14:15	221		215				436	
02:30	6		9				15		14:30	217		165				382	
02:45	3	25	11	44			14	69	14:45	187	805	225	814			412	1619
03:00	2		6				8		15:00	207		211				418	
03:15	6		8				14		15:15	209		195				404	
03:30	6		6				12		15:30	235		200				435	
03:45	18	32	20	40			38	72	15:45	222	873	187	793			409	1666
04:00	11		13				24		16:00	236		222				458	
04:15	18		19				37		16:15	295		235				530	
04:30	20		19				39		16:30	282		202				484	
04:45	28	77	32	83			60	160	16:45	255	1068	257	916			512	1984
05:00	23		27				50		17:00	305		250				555	
05:15	33		44				77		17:15	265		231				496	
05:30	39		50				89		17:30	288		184				472	
05:45	54	149	55	176			109	325	17:45	281	1139	171	836			452	1975
06:00	51		63				114		18:00	213		186				399	
06:15	58		63				121		18:15	225		155				380	
06:30	80		87				167		18:30	182		170				352	
06:45	126	315	116	329			242	644	18:45	155	775	148	659			303	1434
07:00	135		155				290		19:00	165		155				320	
07:15	149		188				337		19:15	151		146				297	
07:30	153		200				353		19:30	141		145				286	
07:45	203	640	295	838			498	1478	19:45	122	579	126	572			248	1151
08:00	183		224				407		20:00	139		123				262	
08:15	186		223				409		20:15	119		120				239	
08:30	150		204				354		20:30	105		128				233	
08:45	189	708	217	868			406	1576	20:45	98	461	116	487			214	948
09:00	144		179				323		21:00	115		123				238	
09:15	154		138				292		21:15	101		107				208	
09:30	155		189				344		21:30	83		98				181	
09:45	161	614	186	692			347	1306	21:45	79	378	108	436			187	814
10:00	180		159				339		22:00	86		99				185	
10:15	171		178				349		22:15	83		66				149	
10:30	176		181				357		22:30	78		71				149	
10:45	172	699	192	710			364	1409	22:45	91	338	82	318			173	656
11:00	221		167				388		23:00	51		58				109	
11:15	210		185				395		23:15	46		47				93	
11:30	263		192				455		23:30	38		50				88	
11:45	243	937	213	757			456	1694	23:45	29	164	58	213			87	377
TOTALS		4287		4706				8993	TOTALS		8514		7840				16354
SPLIT %		47.7%		52.3%				35.5%	SPLIT %		52.1%		47.9%				64.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	12,801	12,546	0	0	25,347

AM Peak Hour	11:30	07:45			11:45	PM Peak Hour	17:00	16:15			16:15
AM Pk Volume	1038	946			1909	PM Pk Volume	1139	944			2081
Pk Hr Factor	0.914	0.802			0.909	Pk Hr Factor	0.934	0.918			0.937
7 - 9 Volume	1348	1706	0	0	3054	4 - 6 Volume	2207	1752	0	0	3959
7 - 9 Peak Hour	07:30	07:45			07:45	4 - 6 Peak Hour	17:00	16:15			16:15
7 - 9 Pk Volume	725	946	0	0	1668	4 - 6 Pk Volume	1139	944	0	0	2081
Pk Hr Factor	0.893	0.802	0.000	0.000	0.837	Pk Hr Factor	0.934	0.918	0.000	0.000	0.937

Prepared by NDS/ATD

VOLUME

SR 41 E Frontage Rd(Cobb Ranch Rd) N/O Vin Rose Ln

Day: Wednesday
Date: 7/5/2017

City: Fresno
Project #: CA17_8059_002

DAILY TOTALS	NB	SB	EB	WB	Total
	40	42	0	0	82

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0						0		12:00	0		1						1	
00:15	0		0						0		12:15	0		0						0	
00:30	0		0						0		12:30	0		0						0	
00:45	0		0						0		12:45	3	3	1	2					4	5
01:00	0		0						0		13:00	0		0						0	
01:15	0		0						0		13:15	0		1						1	
01:30	0		0						0		13:30	1		1						2	
01:45	0		0						0		13:45	0	1	0	2					0	3
02:00	0		0						0		14:00	0		0						0	
02:15	0		0						0		14:15	0		1						1	
02:30	0		0						0		14:30	2		1						3	
02:45	0		0						0		14:45	0	2	0	2					0	4
03:00	0		0						0		15:00	1		1						2	
03:15	0		0						0		15:15	1		1						2	
03:30	0		0						0		15:30	1		0						1	
03:45	0		0						0		15:45	2	5	2	4					4	9
04:00	0		0						0		16:00	1		2						3	
04:15	0		0						0		16:15	0		1						1	
04:30	0		0						0		16:30	0		0						0	
04:45	0		0						0		16:45	0	1	1	4					1	5
05:00	0		0						0		17:00	0		1						1	
05:15	0		0						0		17:15	1		0						1	
05:30	0		0						0		17:30	0		1						1	
05:45	0		0						0		17:45	1	2	1	3					2	5
06:00	0		0						0		18:00	1		0						1	
06:15	0		0						0		18:15	0		2						2	
06:30	0		0						0		18:30	0		2						2	
06:45	0		0						0		18:45	0	1	1	5					1	6
07:00	0		2						2		19:00	1		1						2	
07:15	2		1						3		19:15	0		1						1	
07:30	0		0						0		19:30	0		1						1	
07:45	0	2	1	4					1	6	19:45	0	1	1	4					1	5
08:00	2		0						2		20:00	0		0						0	
08:15	1		0						1		20:15	1		0						1	
08:30	0		1						1		20:30	1		1						2	
08:45	1	4	0	1					1	5	20:45	2	4	1	2					3	6
09:00	0		0						0		21:00	0		0						0	
09:15	0		0						0		21:15	0		0						0	
09:30	0		1						1		21:30	0		0						0	
09:45	4	4	2	3					6	7	21:45	0		0						0	
10:00	1		0						1		22:00	1		1						2	
10:15	1		1						2		22:15	0		0						0	
10:30	0		0						0		22:30	1		1						2	
10:45	1	3	0	1					1	4	22:45	0	2	0	2					0	4
11:00	1		0						1		23:00	0		0						0	
11:15	3		2						5		23:15	0		0						0	
11:30	1		0						1		23:30	0		0						0	
11:45	0	5	1	3					1	8	23:45	0		0						0	
TOTALS		18		12						30	TOTALS		22		30						52
SPLIT %		60.0%		40.0%						36.6%	SPLIT %		42.3%		57.7%						63.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	40	42	0	0	82

AM Peak Hour	09:30	07:00			09:30	PM Peak Hour	15:00	18:15			15:15
AM Pk Volume	6	4			10	PM Pk Volume	5	6			10
Pk Hr Factor	0.375	0.500			0.417	Pk Hr Factor	0.625	0.750			0.625
7 - 9 Volume	6	5	0	0	11	4 - 6 Volume	3	7	0	0	10
7 - 9 Peak Hour	07:15	07:00			07:00	4 - 6 Peak Hour	17:00	16:00			16:00
7 - 9 Pk Volume	4	4	0	0	6	4 - 6 Pk Volume	2	4	0	0	5
Pk Hr Factor	0.500	0.500	0.000	0.000	0.500	Pk Hr Factor	0.500	0.500	0.000	0.000	0.417

Prepared by NDS/ATD

VOLUME

SR 41 E Frontage Rd(Cobb Ranch Rd) N/O Vin Rose Ln

Day: Thursday
Date: 7/6/2017

City: Fresno
Project #: CA17_8059_002

DAILY TOTALS	NB	SB	EB	WB	Total
	48	51	0	0	99

AM Period	NB		SB		EB		WB		TOTAL	
00:00	0		0						0	
00:15	0		0						0	
00:30	0		0						0	
00:45	0		0						0	
01:00	0		0						0	
01:15	0		0						0	
01:30	0		0						0	
01:45	0		0						0	
02:00	0		0						0	
02:15	0		0						0	
02:30	0		0						0	
02:45	0		0						0	
03:00	0		0						0	
03:15	0		0						0	
03:30	0		0						0	
03:45	0		0						0	
04:00	0		0						0	
04:15	0		0						0	
04:30	0		0						0	
04:45	0		0						0	
05:00	0		0						0	
05:15	1		2						3	
05:30	0		0						0	
05:45	0	1	0	2					0	3
06:00	0		0						0	
06:15	0		0						0	
06:30	1		1						2	
06:45	1	2	1	2					2	4
07:00	0		0						0	
07:15	1		0						1	
07:30	0		0						0	
07:45	0	1	2	2					2	3
08:00	0		0						0	
08:15	0		0						0	
08:30	0		0						0	
08:45	0		0						0	
09:00	1		0						1	
09:15	2		1						3	
09:30	0		0						0	
09:45	0	3	2	3					2	6
10:00	1		1						2	
10:15	2		2						4	
10:30	0		0						0	
10:45	0	3	0	3					0	6
11:00	0		0						0	
11:15	1		1						2	
11:30	0		1						1	
11:45	1	2	0	2					1	4
TOTALS	12		14						**26**	
SPLIT %	46.2%		53.8%						**26.3%**	

PM Period	NB		SB		EB		WB		TOTAL	
12:00	1		1						2	
12:15	1		0						1	
12:30	1		2						3	
12:45	0	3	0	3					0	6
13:00	1		1						2	
13:15	2		2						4	
13:30	0		0						0	
13:45	0	3	0	3					0	6
14:00	1		0						1	
14:15	0		0						0	
14:30	0		0						0	
14:45	1	2	0						1	2
15:00	0		0						0	
15:15	1		1						2	
15:30	1		1						2	
15:45	2	4	1	3					3	7
16:00	0		0						0	
16:15	1		0						1	
16:30	2		2						4	
16:45	0	3	0	2					0	5
17:00	0		1						1	
17:15	1		1						2	
17:30	0		1						1	
17:45	1	2	2	5					3	7
18:00	3		2						5	
18:15	2		1						3	
18:30	2		2						4	
18:45	3	10	3	8					6	18
19:00	1		2						3	
19:15	1		2						3	
19:30	0		2						2	
19:45	0	2	0	6					0	8
20:00	2		1						3	
20:15	1		0						1	
20:30	0		1						1	
20:45	1	4	2	4					3	8
21:00	0		0						0	
21:15	0		0						0	
21:30	0		0						0	
21:45	3	3	2	2					5	5
22:00	0		0						0	
22:15	0		1						1	
22:30	0		0						0	
22:45	0		0	1					0	1
23:00	0		0						0	
23:15	0		0						0	
23:30	0		0						0	
23:45	0		0						0	
TOTALS	36		37						**73**	
SPLIT %	49.3%		50.7%						**73.7%**	

DAILY TOTALS	NB	SB	EB	WB	Total
	48	51	0	0	99

AM Peak Hour	11:45	09:30			**09:30**
AM Pk Volume	4	5			**8**
Pk Hr Factor	1.000	0.625			**0.500**
7 - 9 Volume	1	2	0	0	**3**
7 - 9 Peak Hour	07:00	07:00			**07:00**
7 - 9 Pk Volume	1	2	0	0	**3**
Pk Hr Factor	0.250	0.250	0.000	0.000	**0.375**

PM Peak Hour	18:00	18:30			**18:00**
PM Pk Volume	10	9			**18**
Pk Hr Factor	0.833	0.750			**0.750**
4 - 6 Volume	5	7	0	0	**12**
4 - 6 Peak Hour	16:00	17:00			**16:30**
4 - 6 Pk Volume	3	5	0	0	**7**
Pk Hr Factor	0.375	0.625	0.000	0.000	**0.438**

Prepared by NDS/ATD

VOLUME

SR 41 E Frontage Rd(Cobb Ranch Rd) N/O Vin Rose Ln

Day: Friday
Date: 7/7/2017

City: Fresno
Project #: CA17_8059_002

DAILY TOTALS	NB	SB	EB	WB	Total
	48	49	0	0	97

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	1		1						2		12:00	0		0						0	
00:15	1		1						2		12:15	3		2						5	
00:30	0		0						0		12:30	0		0						0	
00:45	0	2	0	2					0	4	12:45	0	3	0	2					0	5
01:00	0		0						0		13:00	3		2						5	
01:15	0		0						0		13:15	1		1						2	
01:30	0		0						0		13:30	1		5						6	
01:45	0		0						0		13:45	4	9	1	9					5	18
02:00	0		0						0		14:00	1		1						2	
02:15	0		0						0		14:15	1		1						2	
02:30	0		0						0		14:30	0		0						0	
02:45	0		0						0		14:45	0	2	0	2					0	4
03:00	0		0						0		15:00	0		1						1	
03:15	0		1						1		15:15	1		0						1	
03:30	0		0						0		15:30	1		2						3	
03:45	1	1	0	1					1	2	15:45	1	3	1	4					2	7
04:00	0		0						0		16:00	0		0						0	
04:15	0		0						0		16:15	0		0						0	
04:30	0		0						0		16:30	1		2						3	
04:45	0		0						0		16:45	2	3	1	3					3	6
05:00	0		0						0		17:00	0		0						0	
05:15	0		0						0		17:15	1		2						3	
05:30	0		0						0		17:30	0		0						0	
05:45	0		0						0		17:45	0	1	0	2					0	3
06:00	0		0						0		18:00	0		0						0	
06:15	1		1						2		18:15	1		0						1	
06:30	1		1						2		18:30	1		1						2	
06:45	0	2	2	4					2	6	18:45	1	3	0	1					1	4
07:00	0		1						1		19:00	1		1						2	
07:15	2		3						5		19:15	0		0						0	
07:30	1		1						2		19:30	0		0						0	
07:45	1	4	1	6					2	10	19:45	0	1	0	1					0	2
08:00	0		0						0		20:00	0		0						0	
08:15	1		0						1		20:15	1		1						2	
08:30	0		0						0		20:30	0		0						0	
08:45	0	1	0						0	1	20:45	0	1	0	1					0	2
09:00	1		0						1		21:00	1		0						1	
09:15	2		1						3		21:15	0		0						0	
09:30	1		0						1		21:30	0		0						0	
09:45	1	5	2	3					3	8	21:45	0	1	0						0	1
10:00	2		2						4		22:00	0		1						1	
10:15	0		0						0		22:15	0		0						0	
10:30	1		2						3		22:30	0		0						0	
10:45	0	3	0	4					0	7	22:45	0		0	1					0	1
11:00	0		0						0		23:00	1		1						2	
11:15	0		0						0		23:15	2		1						3	
11:30	0		0						0		23:30	0		0						0	
11:45	0		1	1					1	1	23:45	0	3	0	2					0	5
TOTALS		18		21						39	TOTALS		30		28						58
SPLIT %		46.2%		53.8%						40.2%	SPLIT %		51.7%		48.3%						59.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	48	49	0	0	97

AM Peak Hour	09:15	06:30			09:15	PM Peak Hour	13:00	13:00			13:00
AM Pk Volume	6	7			11	PM Pk Volume	9	9			18
Pk Hr Factor	0.750	0.583			0.688	Pk Hr Factor	0.563	0.450			0.750
7 - 9 Volume	5	6	0	0	11	4 - 6 Volume	4	5	0	0	9
7 - 9 Peak Hour	07:00	07:00			07:00	4 - 6 Peak Hour	16:30	16:30			16:30
7 - 9 Pk Volume	4	6	0	0	10	4 - 6 Pk Volume	4	5	0	0	9
Pk Hr Factor	0.500	0.500	0.000	0.000	0.500	Pk Hr Factor	0.500	0.625	0.000	0.000	0.750

Prepared by NDS/ATD

VOLUME

Audubon Dr Bet. SR 41 & Palm Ave

Day: Wednesday
Date: 7/5/2017

City: Fresno
Project #: CA17_8059_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,901	6,938	13,839

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			8		13		21		12:00			115		115		230	
00:15			11		17		28		12:15			120		94		214	
00:30			12		8		20		12:30			113		118		231	
00:45			8	39	12	50	20	89	12:45			125	473	136	463	261	936
01:00			6		9		15		13:00			103		136		239	
01:15			13		11		24		13:15			117		116		233	
01:30			4		4		8		13:30			102		126		228	
01:45			6	29	9	33	15	62	13:45			103	425	102	480	205	905
02:00			6		7		13		14:00			89		106		195	
02:15			3		5		8		14:15			95		113		208	
02:30			1		4		5		14:30			116		111		227	
02:45			1	11	8	24	9	35	14:45			97	397	119	449	216	846
03:00			3		0		3		15:00			97		117		214	
03:15			6		6		12		15:15			96		104		200	
03:30			1		5		6		15:30			118		117		235	
03:45			0	10	13	24	13	34	15:45			150	461	100	438	250	899
04:00			2		5		7		16:00			121		106		227	
04:15			6		8		14		16:15			154		116		270	
04:30			6		11		17		16:30			159		123		282	
04:45			6	20	14	38	20	58	16:45			192	626	107	452	299	1078
05:00			9		17		26		17:00			241		124		365	
05:15			19		21		40		17:15			225		116		341	
05:30			23		28		51		17:30			197		120		317	
05:45			42	93	31	97	73	190	17:45			184	847	96	456	280	1303
06:00			26		30		56		18:00			134		93		227	
06:15			37		50		87		18:15			127		112		239	
06:30			46		58		104		18:30			119		72		191	
06:45			73	182	95	233	168	415	18:45			105	485	54	331	159	816
07:00			47		92		139		19:00			78		62		140	
07:15			76		106		182		19:15			72		68		140	
07:30			104		169		273		19:30			85		69		154	
07:45			125	352	217	584	342	936	19:45			96	331	56	255	152	586
08:00			99		162		261		20:00			56		77		133	
08:15			98		155		253		20:15			56		66		122	
08:30			94		141		235		20:30			82		72		154	
08:45			106	397	137	595	243	992	20:45			62	256	84	299	146	555
09:00			91		133		224		21:00			51		79		130	
09:15			76		102		178		21:15			56		43		99	
09:30			89		125		214		21:30			61		41		102	
09:45			90	346	136	496	226	842	21:45			41	209	44	207	85	416
10:00			77		86		163		22:00			36		36		72	
10:15			66		78		144		22:15			36		32		68	
10:30			81		101		182		22:30			24		26		50	
10:45			103	327	102	367	205	694	22:45			21	117	21	115	42	232
11:00			87		93		180		23:00			21		17		38	
11:15			100		85		185		23:15			19		12		31	
11:30			123		102		225		23:30			17		18		35	
11:45			91	401	119	399	210	800	23:45			10	67	6	53	16	120
TOTALS				2207		2940		**5147**	**TOTALS**				4694		3998		**8692**
SPLIT %				42.9%		57.1%		**37.2%**	**SPLIT %**				54.0%		46.0%		**62.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,901	6,938	13,839

AM Peak Hour			11:30	07:30	**07:30**	**PM Peak Hour**			16:45	12:45	**16:45**
AM Pk Volume			449	703	**1129**	**PM Pk Volume**			855	514	**1322**
Pk Hr Factor			0.913	0.810	**0.825**	**Pk Hr Factor**			0.887	0.945	**0.905**
7 - 9 Volume	0	0	749	1179	**1928**	**4 - 6 Volume**	0	0	1473	908	**2381**
7 - 9 Peak Hour			07:30	07:30	**07:30**	**4 - 6 Peak Hour**			16:45	16:15	**16:45**
7 - 9 Pk Volume	0	0	426	703	**1129**	**4 - 6 Pk Volume**	0	0	855	470	**1322**
Pk Hr Factor	0.000	0.000	0.852	0.810	**0.825**	**Pk Hr Factor**	0.000	0.000	0.887	0.948	**0.905**

Prepared by NDS/ATD

VOLUME

Audubon Dr Bet. SR 41 & Palm Ave

Day: Thursday
Date: 7/6/2017

City: Fresno
Project #: CA17_8059_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,422	7,237	14,659

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			6		9		15		12:00			126		98		224	
00:15			4		7		11		12:15			127		116		243	
00:30			5		10		15		12:30			101		112		213	
00:45			6	21	7	33	13	54	12:45			145	499	129	455	274	954
01:00			7		5		12		13:00			125		136		261	
01:15			6		6		12		13:15			100		114		214	
01:30			4		10		14		13:30			125		117		242	
01:45			3	20	5	26	8	46	13:45			111	461	111	478	222	939
02:00			5		5		10		14:00			101		90		191	
02:15			3		3		6		14:15			102		79		181	
02:30			1		7		8		14:30			110		112		222	
02:45			1	10	4	19	5	29	14:45			103	416	112	393	215	809
03:00			3		3		6		15:00			99		114		213	
03:15			2		4		6		15:15			121		120		241	
03:30			3		2		5		15:30			144		115		259	
03:45			7	15	12	21	19	36	15:45			133	497	115	464	248	961
04:00			1		4		5		16:00			145		106		251	
04:15			5		9		14		16:15			169		136		305	
04:30			13		13		26		16:30			174		110		284	
04:45			12	31	17	43	29	74	16:45			179	667	115	467	294	1134
05:00			17		17		34		17:00			265		142		407	
05:15			18		33		51		17:15			252		129		381	
05:30			22		29		51		17:30			220		134		354	
05:45			48	105	35	114	83	219	17:45			192	929	91	496	283	1425
06:00			40		46		86		18:00			159		90		249	
06:15			46		38		84		18:15			151		107		258	
06:30			71		70		141		18:30			120		100		220	
06:45			82	239	104	258	186	497	18:45			100	530	66	363	166	893
07:00			62		100		162		19:00			85		86		171	
07:15			80		121		201		19:15			99		89		188	
07:30			108		150		258		19:30			86		79		165	
07:45			118	368	207	578	325	946	19:45			82	352	58	312	140	664
08:00			102		154		256		20:00			76		68		144	
08:15			96		187		283		20:15			79		92		171	
08:30			94		149		243		20:30			72		80		152	
08:45			112	404	171	661	283	1065	20:45			56	283	61	301	117	584
09:00			85		104		189		21:00			67		68		135	
09:15			80		119		199		21:15			74		60		134	
09:30			90		111		201		21:30			49		44		93	
09:45			85	340	147	481	232	821	21:45			36	226	51	223	87	449
10:00			87		102		189		22:00			43		48		91	
10:15			93		94		187		22:15			47		30		77	
10:30			86		100		186		22:30			35		28		63	
10:45			88	354	94	390	182	744	22:45			29	154	31	137	60	291
11:00			87		97		184		23:00			26		22		48	
11:15			134		117		251		23:15			16		19		35	
11:30			100		110		210		23:30			11		21		32	
11:45			117	438	124	448	241	886	23:45			10	63	14	76	24	139
TOTALS				2345		3072		**5417**	**TOTALS**				5077		4165		**9242**
SPLIT %				43.3%		56.7%		**37.0%**	**SPLIT %**				54.9%		45.1%		**63.0%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,422	7,237	14,659

AM Peak Hour			11:15	07:30	**07:30**	**PM Peak Hour**			17:00	16:45	**16:45**
AM Pk Volume			477	698	**1122**	**PM Pk Volume**			929	520	**1436**
Pk Hr Factor			0.890	0.843	**0.863**	**Pk Hr Factor**			0.876	0.915	**0.882**
7 - 9 Volume	0	0	772	1239	**2011**	**4 - 6 Volume**	0	0	1596	963	**2559**
7 - 9 Peak Hour			07:30	07:30	**07:30**	**4 - 6 Peak Hour**			17:00	16:45	**16:45**
7 - 9 Pk Volume	0	0	424	698	**1122**	**4 - 6 Pk Volume**	0	0	929	520	**1436**
Pk Hr Factor	0.000	0.000	0.898	0.843	**0.863**	**Pk Hr Factor**	0.000	0.000	0.876	0.915	**0.882**

Prepared by NDS/ATD

VOLUME

Audubon Dr Bet. SR 41 & Palm Ave

Day: Friday
Date: 7/7/2017

City: Fresno
Project #: CA17_8059_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,238	7,121	14,359

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			14		7		21		12:00			136		114		250	
00:15			9		15		24		12:15			133		113		246	
00:30			13		14		27		12:30			121		106		227	
00:45			8	44	10	46	18	90	12:45			124	514	140	473	264	987
01:00			9		9		18		13:00			128		96		224	
01:15			9		8		17		13:15			111		120		231	
01:30			2		11		13		13:30			125		128		253	
01:45			9	29	4	32	13	61	13:45			104	468	121	465	225	933
02:00			3		6		9		14:00			113		113		226	
02:15			11		10		21		14:15			130		110		240	
02:30			1		9		10		14:30			125		117		242	
02:45			4	19	5	30	9	49	14:45			101	469	90	430	191	899
03:00			2		2		4		15:00			102		100		202	
03:15			2		6		8		15:15			107		91		198	
03:30			7		5		12		15:30			147		120		267	
03:45			5	16	8	21	13	37	15:45			135	491	108	419	243	910
04:00			3		2		5		16:00			122		101		223	
04:15			4		6		10		16:15			139		121		260	
04:30			10		10		20		16:30			156		109		265	
04:45			24	41	13	31	37	72	16:45			171	588	117	448	288	1036
05:00			13		14		27		17:00			215		134		349	
05:15			21		29		50		17:15			172		115		287	
05:30			26		24		50		17:30			160		105		265	
05:45			35	95	34	101	69	196	17:45			191	738	76	430	267	1168
06:00			26		42		68		18:00			127		95		222	
06:15			41		45		86		18:15			144		92		236	
06:30			36		64		100		18:30			108		88		196	
06:45			90	193	98	249	188	442	18:45			117	496	85	360	202	856
07:00			51		101		152		19:00			93		60		153	
07:15			80		133		213		19:15			87		70		157	
07:30			85		160		245		19:30			73		70		143	
07:45			135	351	215	609	350	960	19:45			84	337	78	278	162	615
08:00			95		172		267		20:00			90		64		154	
08:15			97		188		285		20:15			78		64		142	
08:30			83		143		226		20:30			61		73		134	
08:45			125	400	168	671	293	1071	20:45			69	298	57	258	126	556
09:00			85		111		196		21:00			50		62		112	
09:15			92		100		192		21:15			45		53		98	
09:30			81		131		212		21:30			42		58		100	
09:45			84	342	128	470	212	812	21:45			57	194	49	222	106	416
10:00			80		106		186		22:00			41		41		82	
10:15			89		105		194		22:15			44		42		86	
10:30			93		93		186		22:30			54		26		80	
10:45			105	367	106	410	211	777	22:45			35	174	35	144	70	318
11:00			117		92		209		23:00			40		24		64	
11:15			103		116		219		23:15			32		26		58	
11:30			111		96		207		23:30			26		17		43	
11:45			122	453	119	423	241	876	23:45			23	121	34	101	57	222
TOTALS				2350		3093		5443	TOTALS				4888		4028		8916
SPLIT %				43.2%		56.8%		37.9%	SPLIT %				54.8%		45.2%		62.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,238	7,121	14,359

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour			17:00	12:45	16:30
AM Pk Volume			512	735	1147	PM Pk Volume			738	484	1189
Pk Hr Factor			0.941	0.855	0.819	Pk Hr Factor			0.858	0.864	0.852
7 - 9 Volume	0	0	751	1280	2031	4 - 6 Volume	0	0	1326	878	2204
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	16:15	16:30
7 - 9 Pk Volume	0	0	412	735	1147	4 - 6 Pk Volume	0	0	738	481	1189
Pk Hr Factor	0.000	0.000	0.763	0.855	0.819	Pk Hr Factor	0.000	0.000	0.858	0.897	0.852

Prepared by NDS/ATD

VOLUME

Audubon Dr E/O SR 41

Day: Wednesday
Date: 7/5/2017

City: Fresno
Project #: CA17_8059_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,799	7,665	15,464

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			11		18		29		12:00			114		131		245	
00:15			20		23		43		12:15			146		110		256	
00:30			14		13		27		12:30			120		128		248	
00:45			9	54	16	70	25	124	12:45			147	527	141	510	288	1037
01:00			7		10		17		13:00			120		162		282	
01:15			12		16		28		13:15			131		135		266	
01:30			8		5		13		13:30			113		140		253	
01:45			7	34	11	42	18	76	13:45			119	483	113	550	232	1033
02:00			3		6		9		14:00			118		120		238	
02:15			4		5		9		14:15			119		129		248	
02:30			2		2		4		14:30			135		125		260	
02:45			2	11	9	22	11	33	14:45			107	479	136	510	243	989
03:00			3		1		4		15:00			109		132		241	
03:15			6		7		13		15:15			110		109		219	
03:30			1		8		9		15:30			127		139		266	
03:45			1	11	9	25	10	36	15:45			152	498	118	498	270	996
04:00			5		4		9		16:00			137		125		262	
04:15			9		7		16		16:15			158		125		283	
04:30			9		12		21		16:30			173		136		309	
04:45			10	33	11	34	21	67	16:45			190	658	125	511	315	1169
05:00			14		17		31		17:00			246		158		404	
05:15			20		20		40		17:15			231		141		372	
05:30			31		25		56		17:30			215		144		359	
05:45			51	116	27	89	78	205	17:45			197	889	115	558	312	1447
06:00			32		35		67		18:00			152		119		271	
06:15			44		52		96		18:15			130		136		266	
06:30			63		60		123		18:30			134		82		216	
06:45			83	222	99	246	182	468	18:45			126	542	77	414	203	956
07:00			67		94		161		19:00			87		78		165	
07:15			91		109		200		19:15			81		79		160	
07:30			123		166		289		19:30			92		83		175	
07:45			147	428	211	580	358	1008	19:45			102	362	67	307	169	669
08:00			122		167		289		20:00			71		93		164	
08:15			114		152		266		20:15			59		84		143	
08:30			117		148		265		20:30			90		90		180	
08:45			116	469	146	613	262	1082	20:45			71	291	95	362	166	653
09:00			102		123		225		21:00			66		97		163	
09:15			95		101		196		21:15			48		61		109	
09:30			101		93		194		21:30			69		56		125	
09:45			103	401	137	454	240	855	21:45			42	225	53	267	95	492
10:00			79		88		167		22:00			47		45		92	
10:15			82		80		162		22:15			37		41		78	
10:30			103		113		216		22:30			32		29		61	
10:45			121	385	105	386	226	771	22:45			24	140	28	143	52	283
11:00			97		97		194		23:00			27		22		49	
11:15			111		85		196		23:15			16		19		35	
11:30			134		105		239		23:30			20		17		37	
11:45			119	461	119	406	238	867	23:45			17	80	10	68	27	148
TOTALS				2625		2967		**5592**	**TOTALS**				5174		4698		**9872**
SPLIT %				46.9%		53.1%		**36.2%**	**SPLIT %**				52.4%		47.6%		**63.8%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,799	7,665	15,464

AM Peak Hour			11:30	07:30	**07:30**	**PM Peak Hour**			17:00	12:45	**16:45**
AM Pk Volume			513	696	**1202**	**PM Pk Volume**			889	578	**1450**
Pk Hr Factor			0.878	0.825	**0.839**	**Pk Hr Factor**			0.903	0.892	**0.897**
7 - 9 Volume	0	0	897	1193	**2090**	**4 - 6 Volume**	0	0	1547	1069	**2616**
7 - 9 Peak Hour			07:30	07:30	**07:30**	**4 - 6 Peak Hour**			17:00	16:45	**16:45**
7 - 9 Pk Volume	0	0	506	696	**1202**	**4 - 6 Pk Volume**	0	0	889	568	**1450**
Pk Hr Factor	0.000	0.000	0.861	0.825	**0.839**	**Pk Hr Factor**	0.000	0.000	0.903	0.899	**0.897**

Prepared by NDS/ATD

VOLUME

Audubon Dr E/O SR 41

Day: Thursday
Date: 7/6/2017

City: Fresno
Project #: CA17_8059_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,313	8,000	16,313

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			8		10		18		12:00			140		107		247	
00:15			5		8		13		12:15			122		130		252	
00:30			6		11		17		12:30			125		120		245	
00:45			7	26	9	38	16	64	12:45			150	537	137	494	287	1031
01:00			7		5		12		13:00			143		150		293	
01:15			7		6		13		13:15			122		123		245	
01:30			5		9		14		13:30			133		122		255	
01:45			4	23	5	25	9	48	13:45			114	512	123	518	237	1030
02:00			5		7		12		14:00			120		107		227	
02:15			2		4		6		14:15			119		119		238	
02:30			0		8		8		14:30			120		123		243	
02:45			2	9	6	25	8	34	14:45			114	473	123	472	237	945
03:00			7		7		14		15:00			118		125		243	
03:15			3		7		10		15:15			123		145		268	
03:30			4		2		6		15:30			149		130		279	
03:45			9	23	13	29	22	52	15:45			147	537	129	529	276	1066
04:00			4		5		9		16:00			156		125		281	
04:15			5		8		13		16:15			177		149		326	
04:30			16		12		28		16:30			177		130		307	
04:45			12	37	12	37	24	74	16:45			181	691	136	540	317	1231
05:00			23		16		39		17:00			266		165		431	
05:15			25		35		60		17:15			249		153		402	
05:30			19		31		50		17:30			235		151		386	
05:45			64	131	36	118	100	249	17:45			208	958	103	572	311	1530
06:00			47		48		95		18:00			177		115		292	
06:15			50		39		89		18:15			159		130		289	
06:30			84		66		150		18:30			139		114		253	
06:45			92	273	101	254	193	527	18:45			112	587	81	440	193	1027
07:00			86		102		188		19:00			111		114		225	
07:15			108		133		241		19:15			111		100		211	
07:30			128		144		272		19:30			104		96		200	
07:45			149	471	201	580	350	1051	19:45			90	416	82	392	172	808
08:00			128		166		294		20:00			83		77		160	
08:15			105		179		284		20:15			87		107		194	
08:30			117		144		261		20:30			86		96		182	
08:45			134	484	170	659	304	1143	20:45			66	322	78	358	144	680
09:00			103		114		217		21:00			69		80		149	
09:15			94		118		212		21:15			90		84		174	
09:30			111		119		230		21:30			58		55		113	
09:45			97	405	142	493	239	898	21:45			37	254	62	281	99	535
10:00			108		105		213		22:00			44		57		101	
10:15			105		109		214		22:15			56		41		97	
10:30			104		112		216		22:30			38		35		73	
10:45			104	421	89	415	193	836	22:45			33	171	34	167	67	338
11:00			105		96		201		23:00			29		27		56	
11:15			145		125		270		23:15			12		25		37	
11:30			107		118		225		23:30			15		27		42	
11:45			127	484	129	468	256	952	23:45			12	68	17	96	29	164
TOTALS				2787		3141		5928	TOTALS				5526		4859		10385
SPLIT %				47.0%		53.0%		36.3%	SPLIT %				53.2%		46.8%		63.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,313	8,000	16,313

AM Peak Hour			11:15	07:30	07:30	PM Peak Hour			17:00	16:45	16:45
AM Pk Volume			519	690	1200	PM Pk Volume			958	605	1536
Pk Hr Factor			0.895	0.858	0.857	Pk Hr Factor			0.900	0.917	0.891
7 - 9 Volume	0	0	955	1239	2194	4 - 6 Volume	0	0	1649	1112	2761
7 - 9 Peak Hour			07:15	07:30	07:30	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	513	690	1200	4 - 6 Pk Volume	0	0	958	605	1536
Pk Hr Factor	0.000	0.000	0.861	0.858	0.857	Pk Hr Factor	0.000	0.000	0.900	0.917	0.891

Prepared by NDS/ATD

VOLUME

Audubon Dr E/O SR 41

Day: Friday
Date: 7/7/2017

City: Fresno
Project #: CA17_8059_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,146	7,817	15,963

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			17		13		30		12:00			146		126		272	
00:15			12		17		29		12:15			142		137		279	
00:30			15		16		31		12:30			125		110		235	
00:45			9	53	11	57	20	110	12:45			142	555	157	530	299	1085
01:00			8		12		20		13:00			142		103		245	
01:15			12		8		20		13:15			126		137		263	
01:30			3		12		15		13:30			130		142		272	
01:45			9	32	5	37	14	69	13:45			130	528	126	508	256	1036
02:00			3		7		10		14:00			120		121		241	
02:15			11		11		22		14:15			128		106		234	
02:30			0		9		9		14:30			115		132		247	
02:45			3	17	5	32	8	49	14:45			118	481	112	471	230	952
03:00			3		2		5		15:00			102		107		209	
03:15			2		6		8		15:15			121		107		228	
03:30			7		5		12		15:30			161		129		290	
03:45			4	16	5	18	9	34	15:45			150	534	129	472	279	1006
04:00			5		2		7		16:00			138		112		250	
04:15			4		8		12		16:15			151		138		289	
04:30			11		11		22		16:30			166		140		306	
04:45			26	46	11	32	37	78	16:45			166	621	136	526	302	1147
05:00			16		16		32		17:00			226		155		381	
05:15			25		25		50		17:15			201		130		331	
05:30			31		24		55		17:30			171		124		295	
05:45			44	116	32	97	76	213	17:45			198	796	111	520	309	1316
06:00			32		48		80		18:00			139		106		245	
06:15			51		40		91		18:15			158		108		266	
06:30			49		68		117		18:30			128		101		229	
06:45			99	231	102	258	201	489	18:45			124	549	99	414	223	963
07:00			63		98		161		19:00			105		78		183	
07:15			101		125		226		19:15			104		76		180	
07:30			114		157		271		19:30			82		84		166	
07:45			163	441	207	587	370	1028	19:45			94	385	88	326	182	711
08:00			129		175		304		20:00			100		78		178	
08:15			122		181		303		20:15			93		79		172	
08:30			109		154		263		20:30			72		77		149	
08:45			143	503	173	683	316	1186	20:45			72	337	66	300	138	637
09:00			99		114		213		21:00			67		76		143	
09:15			115		115		230		21:15			61		65		126	
09:30			103		128		231		21:30			51		64		115	
09:45			98	415	129	486	227	901	21:45			57	236	67	272	124	508
10:00			99		103		202		22:00			54		52		106	
10:15			115		112		227		22:15			49		51		100	
10:30			101		101		202		22:30			59		36		95	
10:45			111	426	104	420	215	846	22:45			45	207	40	179	85	386
11:00			126		105		231		23:00			39		29		68	
11:15			123		115		238		23:15			31		38		69	
11:30			117		114		231		23:30			27		30		57	
11:45			135	501	123	457	258	958	23:45			23	120	38	135	61	255
TOTALS				2797		3164		**5961**	**TOTALS**				5349		4653		**10002**
SPLIT %				46.9%		53.1%		**37.3%**	**SPLIT %**				53.5%		46.5%		**62.7%**

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,146	7,817	15,963

AM Peak Hour			11:45	07:30	**07:30**	**PM Peak Hour**			17:00	16:15	**16:30**
AM Pk Volume			548	720	**1248**	**PM Pk Volume**			796	569	**1320**
Pk Hr Factor			0.938	0.870	**0.843**	**Pk Hr Factor**			0.881	0.918	**0.866**
7 - 9 Volume	0	0	944	1270	**2214**	**4 - 6 Volume**	0	0	1417	1046	**2463**
7 - 9 Peak Hour			07:30	07:30	**07:30**	**4 - 6 Peak Hour**			17:00	16:15	**16:30**
7 - 9 Pk Volume	0	0	528	720	**1248**	**4 - 6 Pk Volume**	0	0	796	569	**1320**
Pk Hr Factor	0.000	0.000	0.810	0.870	**0.843**	**Pk Hr Factor**	0.000	0.000	0.881	0.918	**0.866**

Intersection
Traffic Count Worksheets

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-8060-001 **Day:** Thursday

City: Fresno **Date:** 7/6/2017

AM

NS/EW Streets:	Del Mar Ave			Del Mar Ave			Audubon Dr			Audubon Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	0	1	0	1	0	0	1	0	
7:00 AM	0	0	0	22	0	6	4	60	0	0	88	5	185
7:15 AM	0	0	0	23	0	7	2	81	0	0	116	7	236
7:30 AM	0	0	0	28	0	14	3	101	0	0	137	7	290
7:45 AM	0	0	0	24	0	10	4	111	0	0	199	7	355
8:00 AM	0	0	0	21	0	5	4	95	0	0	153	8	286
8:15 AM	0	0	0	15	0	7	6	94	0	0	168	1	291
8:30 AM	0	0	0	24	0	9	3	91	0	0	149	5	281
8:45 AM	0	0	0	24	0	6	5	103	0	0	150	7	295
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	181	0	64	31	736	0	0	1160	47	2219
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	73.88%	0.00%	26.12%	4.04%	95.96%	0.00%	0.00%	96.11%	3.89%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	0	0	88	0	36	17	401	0	0	657	23	1222
PEAK HR FACTOR :		0.000			0.738			0.909			0.825		0.861

CONTROL : 1-Way Stop

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-8060-001 **Day:** Thursday

City: Fresno **Date:** 7/6/2017

PM

NS/EW Streets:	Del Mar Ave			Del Mar Ave			Audubon Dr			Audubon Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	0	1	0	1	0	0	1	0	
4:00 PM	0	0	0	14	0	4	9	138	0	0	105	7	277
4:15 PM	0	0	0	11	0	3	7	170	0	0	129	6	326
4:30 PM	0	0	0	10	0	5	8	160	0	0	104	7	294
4:45 PM	0	0	0	13	0	6	12	170	0	0	100	8	309
5:00 PM	0	0	0	14	0	4	9	268	0	0	142	8	445
5:15 PM	0	0	0	11	0	4	17	232	0	0	120	12	396
5:30 PM	0	0	0	14	0	7	10	213	0	0	119	14	377
5:45 PM	0	0	0	20	0	7	8	184	0	0	85	13	317
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	0	0	107	0	40	80	1535	0	0	904	75	2741
APPROACH %'s :	#DIV/0!	#DIV/0!	#DIV/0!	72.79%	0.00%	27.21%	4.95%	95.05%	0.00%	0.00%	92.34%	7.66%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	0	0	59	0	22	44	897	0	0	466	47	1535
PEAK HR FACTOR :		0.000			0.750			0.849			0.855		0.862

CONTROL : 1-Way Stop

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Del Mar Ave and Audubon Dr , Fresno

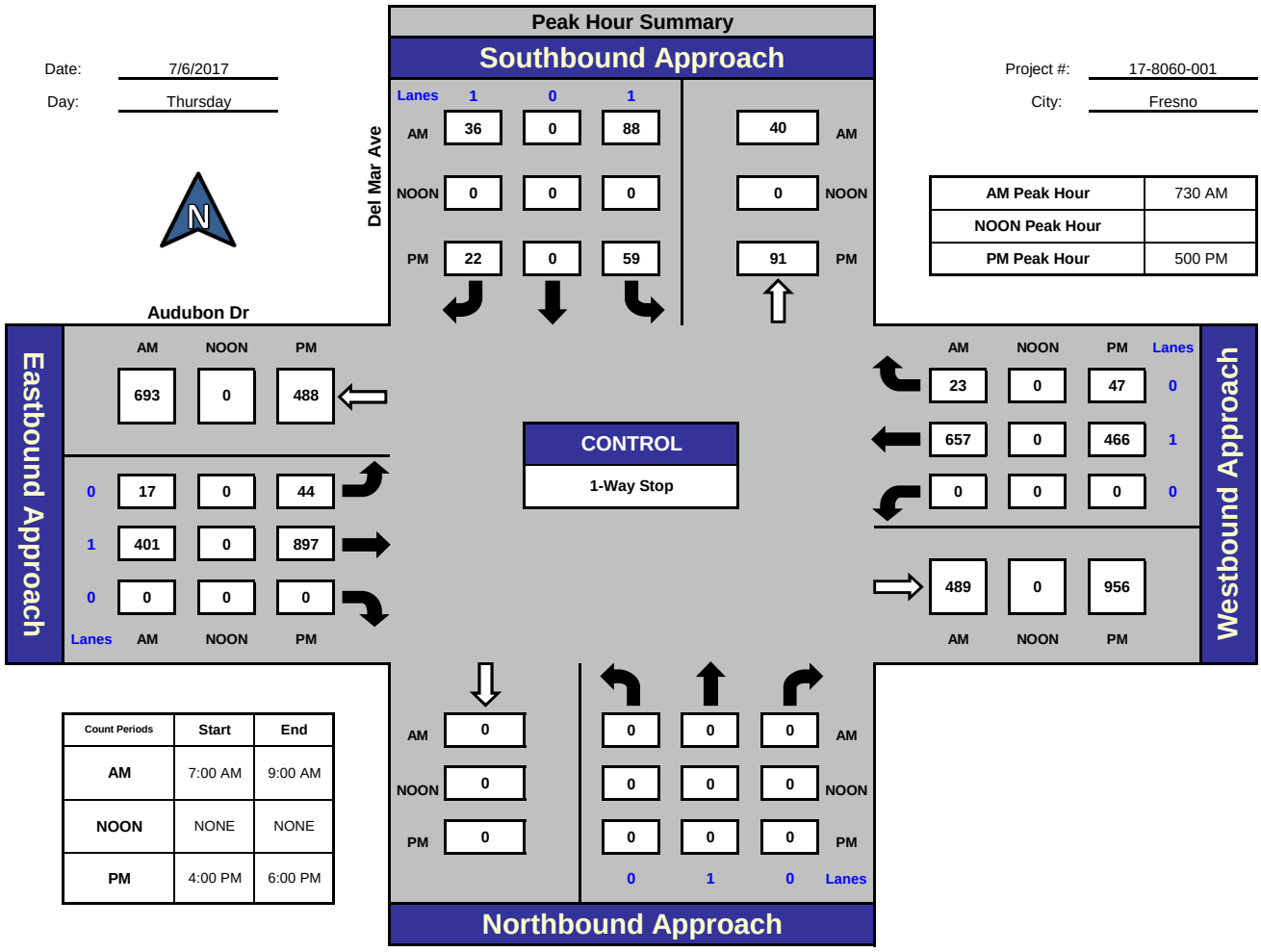
Date: 7/6/2017

Day: Thursday

Project #: 17-8060-001

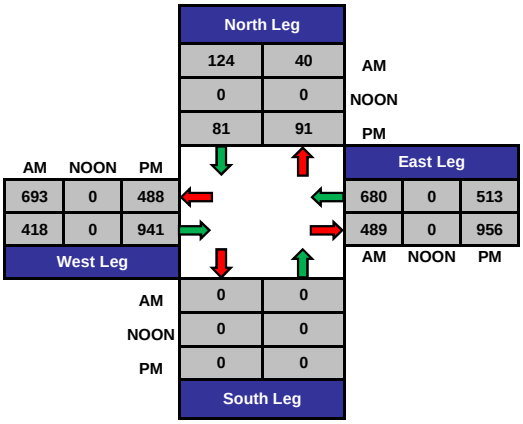
City: Fresno

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

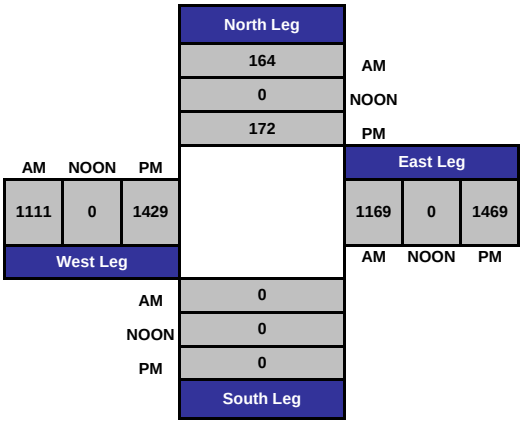


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-8060-002 **Day:** Thursday

City: Fresno **Date:** 7/6/2017

AM

NS/EW Streets:	Palm Ave			Palm Ave			Nees Ave			Nees Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	2	1	0.5	0.5	1	1	1	2	1	1	
7:00 AM	32	1	72	0	0	0	0	9	0	132	16	9	271
7:15 AM	22	2	97	2	0	0	0	12	4	163	10	14	326
7:30 AM	18	6	107	2	0	2	0	7	4	200	32	20	398
7:45 AM	44	19	141	4	4	1	1	10	1	270	44	37	576
8:00 AM	41	21	122	7	3	1	0	15	3	216	53	28	510
8:15 AM	47	5	113	3	1	0	0	22	2	236	63	16	508
8:30 AM	37	10	110	1	0	1	0	23	5	185	48	7	427
8:45 AM	57	6	136	5	3	0	0	22	4	206	57	7	503
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	298	70	898	24	11	5	1	120	23	1608	323	138	3519
APPROACH %'s :	23.54%	5.53%	70.93%	60.00%	27.50%	12.50%	0.69%	83.33%	15.97%	77.72%	15.61%	6.67%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	169	55	486	15	8	3	1	70	11	907	208	88	2021
PEAK HR FACTOR :		0.870			0.591			0.732			0.857		0.877

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 17-8060-002 **Day:** Thursday

City: Fresno **Date:** 7/6/2017

PM

NS/EW Streets:	Palm Ave			Palm Ave			Nees Ave			Nees Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	2	1	0.5	0.5	1	1	1	2	1	1	
4:00 PM	28	3	192	6	5	0	0	27	4	189	14	5	473
4:15 PM	39	5	243	10	1	0	0	23	3	210	39	1	574
4:30 PM	43	2	240	10	6	2	0	31	4	194	30	1	563
4:45 PM	42	2	227	10	5	0	0	38	5	193	41	2	565
5:00 PM	56	7	271	28	22	3	2	45	8	253	52	1	748
5:15 PM	41	3	271	8	10	0	0	50	2	205	40	3	633
5:30 PM	54	2	250	12	8	1	0	47	14	225	29	4	646
5:45 PM	47	3	231	6	3	1	0	33	7	162	44	0	537
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	350	27	1925	90	60	7	2	294	47	1631	289	17	4739
APPROACH %'s :	15.20%	1.17%	83.62%	57.32%	38.22%	4.46%	0.58%	85.71%	13.70%	84.20%	14.92%	0.88%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	193	14	1019	58	45	4	2	180	29	876	162	10	2592
PEAK HR FACTOR :		0.918			0.505			0.865			0.856		0.866

CONTROL : Signalized

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

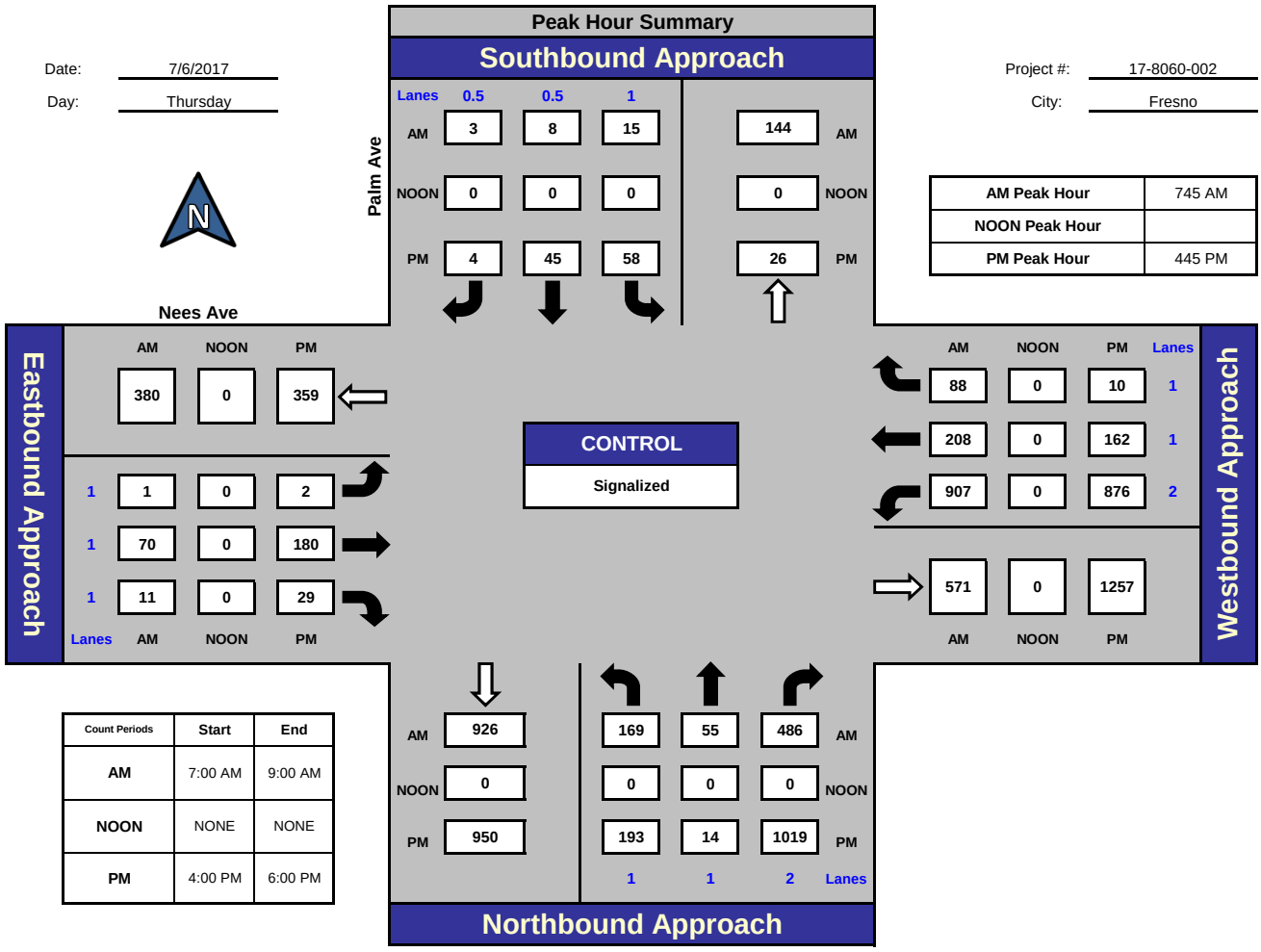
Palm Ave and Nees Ave , Fresno

Date: 7/6/2017

Day: Thursday

Project #: 17-8060-002

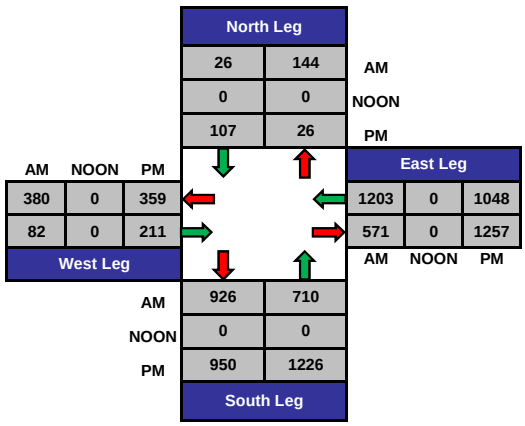
City: Fresno



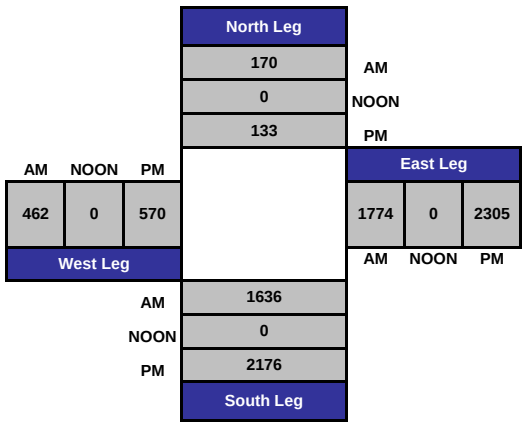
AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	NONE	NONE
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



Attachment B
Intersection Analysis Worksheets

Existing (Year 2017) Condition
Intersection Analysis Worksheets

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1	93	1031	236	100	192	63	552	17	12
v/c Ratio	0.01	0.21	0.85	0.26	0.12	0.82	0.09	0.25	0.10	0.03
Control Delay	51.0	38.4	42.4	18.5	3.8	75.4	29.1	1.1	51.6	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	38.4	42.4	18.5	3.8	75.4	29.1	1.1	51.6	30.4
Queue Length 50th (ft)	1	27	335	92	0	132	26	0	11	5
Queue Length 95th (ft)	7	50	#558	173	30	#301	78	22	38	23
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	164	1112	1215	1080	960	235	683	2242	266	446
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.08	0.85	0.22	0.10	0.82	0.09	0.25	0.06	0.03

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	70	11	907	208	88	169	55	486	15	8	3
Future Volume (veh/h)	1	70	11	907	208	88	169	55	486	15	8	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
Parking Bus, Adj	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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1	80	12	1031	236	100	192	62	552	17	9	3
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	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	14	318	47	1158	804	683	231	674	1946	75	367	122
Arrive On Green	0.01	0.10	0.10	0.34	0.43	0.43	0.13	0.36	0.36	0.04	0.27	0.27
Sat Flow, veh/h	1774	3097	455	3442	1863	1583	1774	1863	2787	1774	1338	446
Grp Volume(v), veh/h	1	45	47	1031	236	100	192	62	552	17	0	12
Grp Sat Flow(s),veh/h/ln	1774	1770	1782	1721	1863	1583	1774	1863	1393	1774	0	1784
Q Serve(g_s), s	0.1	2.4	2.5	29.0	8.4	3.9	10.8	2.2	7.6	0.9	0.0	0.5
Cycle Q Clear(g_c), s	0.1	2.4	2.5	29.0	8.4	3.9	10.8	2.2	7.6	0.9	0.0	0.5
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	14	182	183	1158	804	683	231	674	1946	75	0	489
V/C Ratio(X)	0.07	0.25	0.26	0.89	0.29	0.15	0.83	0.09	0.28	0.23	0.00	0.02
Avail Cap(c_a), veh/h	182	623	628	1347	1194	1015	260	674	1946	295	0	489
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	50.4	42.2	42.3	32.1	18.9	17.6	43.3	21.5	5.8	47.3	0.0	27.2
Incr Delay (d2), s/veh	2.3	0.7	0.7	7.0	0.2	0.1	18.1	0.3	0.4	1.5	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	0.0	1.2	1.3	14.9	4.4	1.7	6.4	1.2	3.0	0.5	0.0	0.3
LnGrp Delay(d),s/veh	52.6	42.9	43.0	39.1	19.1	17.7	61.5	21.8	6.2	48.8	0.0	27.3
LnGrp LOS	D	D	D	D	B	B	E	C	A	D		C
Approach Vol, veh/h		93			1367			806			29	
Approach Delay, s/veh		43.1			34.1			20.5			39.9	
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	8.3	41.0	38.4	14.5	17.3	32.0	4.8	48.1
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	16.5	25.5	39.5	35.5	14.5	27.5	10.0	65.0
Max Q Clear Time (g_c+I1), s	2.9	9.6	31.0	4.5	12.8	2.5	2.1	10.4
Green Ext Time (p_c), s	0.0	2.4	2.9	0.4	0.1	0.0	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	401	657	23	88	36
Future Vol, veh/h	17	401	657	23	88	36
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	466	764	27	102	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	791	0	-	0	1284	778
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	506	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	829	-	-	-	182	396
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	606	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	829	-	-	-	178	396
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	20.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	829	-	-	-	309	396
HCM Lane V/C Ratio	0.024	-	-	-	0.331	0.106
HCM Control Delay (s)	9.4	-	-	-	22.3	15.2
HCM Lane LOS	A	-	-	-	C	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4	0.4

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	2	240	1007	186	11	222	16	1171	67	57
v/c Ratio	0.01	0.50	0.89	0.21	0.01	0.89	0.03	0.54	0.38	0.12
Control Delay	52.0	46.4	47.6	18.7	0.0	84.2	33.1	4.4	56.5	34.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	46.4	47.6	18.7	0.0	84.2	33.1	4.4	56.5	34.6
Queue Length 50th (ft)	1	82	347	73	0	159	8	52	46	30
Queue Length 95th (ft)	9	116	#549	140	0	#339	29	148	97	72
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	161	1096	1137	1031	914	250	594	2157	262	464
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.22	0.89	0.18	0.01	0.89	0.03	0.54	0.26	0.12

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	180	29	876	162	10	193	14	1019	58	45	4
Future Volume (veh/h)	2	180	29	876	162	10	193	14	1019	58	45	4
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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	2	207	33	1007	186	11	222	16	1171	67	52	5
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	314	49	1118	777	660	259	622	1836	153	459	44
Arrive On Green	0.01	0.10	0.10	0.32	0.42	0.42	0.15	0.33	0.33	0.09	0.27	0.27
Sat Flow, veh/h	1774	3066	481	3442	1863	1583	1774	1863	2787	1774	1673	161
Grp Volume(v), veh/h	2	118	122	1007	186	11	222	16	1171	67	0	57
Grp Sat Flow(s),veh/h/ln	1774	1770	1778	1721	1863	1583	1774	1863	1393	1774	0	1834
Q Serve(g_s), s	0.1	6.7	6.9	29.3	6.8	0.4	12.8	0.6	26.0	3.8	0.0	2.4
Cycle Q Clear(g_c), s	0.1	6.7	6.9	29.3	6.8	0.4	12.8	0.6	26.0	3.8	0.0	2.4
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	18	181	182	1118	777	660	259	622	1836	153	0	503
V/C Ratio(X)	0.11	0.65	0.67	0.90	0.24	0.02	0.86	0.03	0.64	0.44	0.00	0.11
Avail Cap(c_a), veh/h	177	607	609	1245	1126	957	274	622	1836	287	0	503
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	51.5	45.3	45.5	33.8	19.8	18.0	43.8	23.5	10.5	45.5	0.0	28.6
Incr Delay (d2), s/veh	2.7	3.9	4.2	8.6	0.2	0.0	21.7	0.1	1.7	1.9	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	0.1	3.5	3.6	15.2	3.5	0.2	7.9	0.3	10.3	1.9	0.0	1.3
LnGrp Delay(d),s/veh	54.2	49.3	49.7	42.4	20.0	18.0	65.5	23.6	12.3	47.5	0.0	29.0
LnGrp LOS	D	D	D	D	B	B	E	C	B	D		C
Approach Vol, veh/h		242			1204			1409			124	
Approach Delay, s/veh		49.5			38.7			20.8			39.0	
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	13.1	39.1	38.1	14.7	19.4	32.8	5.1	47.8
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	16.5	27.5	37.5	35.5	15.7	28.3	10.0	63.0
Max Q Clear Time (g_c+I1), s	5.8	28.0	31.3	8.9	14.8	4.4	2.1	8.8
Green Ext Time (p_c), s	0.1	0.0	2.3	1.3	0.1	0.2	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	44	897	466	47	59	22
Future Vol, veh/h	44	897	466	47	59	22
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	1043	542	55	69	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	597	0	-	0	1715	570
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	1145	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	980	-	-	-	99	521
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	303	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	980	-	-	-	94	521
Mov Cap-2 Maneuver	-	-	-	-	192	-
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	303	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	28
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	980	-	-	-	192	521
HCM Lane V/C Ratio	0.052	-	-	-	0.357	0.049
HCM Control Delay (s)	8.9	-	-	-	33.8	12.3
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.5	0.2

Existing (Year 2017) Plus Project Condition
Intersection Analysis Worksheets

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1	93	1031	236	100	192	63	552	17	12
v/c Ratio	0.01	0.21	0.85	0.26	0.12	0.82	0.09	0.25	0.10	0.03
Control Delay	51.0	38.4	42.4	18.5	3.8	75.4	29.1	1.1	51.6	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	38.4	42.4	18.5	3.8	75.4	29.1	1.1	51.6	30.4
Queue Length 50th (ft)	1	27	335	92	0	132	26	0	11	5
Queue Length 95th (ft)	7	50	#558	173	30	#301	78	22	38	23
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	164	1112	1215	1080	960	235	683	2242	266	446
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.08	0.85	0.22	0.10	0.82	0.09	0.25	0.06	0.03

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	70	11	907	208	88	169	55	486	15	8	3
Future Volume (veh/h)	1	70	11	907	208	88	169	55	486	15	8	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
Parking Bus, Adj	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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1	80	12	1031	236	100	192	62	552	17	9	3
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	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	14	318	47	1158	804	683	231	674	1946	75	367	122
Arrive On Green	0.01	0.10	0.10	0.34	0.43	0.43	0.13	0.36	0.36	0.04	0.27	0.27
Sat Flow, veh/h	1774	3097	455	3442	1863	1583	1774	1863	2787	1774	1338	446
Grp Volume(v), veh/h	1	45	47	1031	236	100	192	62	552	17	0	12
Grp Sat Flow(s),veh/h/ln	1774	1770	1782	1721	1863	1583	1774	1863	1393	1774	0	1784
Q Serve(g_s), s	0.1	2.4	2.5	29.0	8.4	3.9	10.8	2.2	7.6	0.9	0.0	0.5
Cycle Q Clear(g_c), s	0.1	2.4	2.5	29.0	8.4	3.9	10.8	2.2	7.6	0.9	0.0	0.5
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	14	182	183	1158	804	683	231	674	1946	75	0	489
V/C Ratio(X)	0.07	0.25	0.26	0.89	0.29	0.15	0.83	0.09	0.28	0.23	0.00	0.02
Avail Cap(c_a), veh/h	182	623	628	1347	1194	1015	260	674	1946	295	0	489
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	50.4	42.2	42.3	32.1	18.9	17.6	43.3	21.5	5.8	47.3	0.0	27.2
Incr Delay (d2), s/veh	2.3	0.7	0.7	7.0	0.2	0.1	18.1	0.3	0.4	1.5	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	0.0	1.2	1.3	14.9	4.4	1.7	6.4	1.2	3.0	0.5	0.0	0.3
LnGrp Delay(d),s/veh	52.6	42.9	43.0	39.1	19.1	17.7	61.5	21.8	6.2	48.8	0.0	27.3
LnGrp LOS	D	D	D	D	B	B	E	C	A	D		C
Approach Vol, veh/h		93			1367			806			29	
Approach Delay, s/veh		43.1			34.1			20.5			39.9	
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	8.3	41.0	38.4	14.5	17.3	32.0	4.8	48.1
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	16.5	25.5	39.5	35.5	14.5	27.5	10.0	65.0
Max Q Clear Time (g_c+I1), s	2.9	9.6	31.0	4.5	12.8	2.5	2.1	10.4
Green Ext Time (p_c), s	0.0	2.4	2.9	0.4	0.1	0.0	0.0	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	29.8
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	401	657	23	88	36
Future Vol, veh/h	17	401	657	23	88	36
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	466	764	27	102	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	791	0	-	0	1284	778
Stage 1	-	-	-	-	778	-
Stage 2	-	-	-	-	506	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	829	-	-	-	182	396
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	606	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	829	-	-	-	178	396
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	606	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	20.2
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	829	-	-	-	309	396
HCM Lane V/C Ratio	0.024	-	-	-	0.331	0.106
HCM Control Delay (s)	9.4	-	-	-	22.3	15.2
HCM Lane LOS	A	-	-	-	C	C
HCM 95th %tile Q(veh)	0.1	-	-	-	1.4	0.4

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	2	240	1007	186	11	222	16	1171	67	57
v/c Ratio	0.01	0.50	0.89	0.21	0.01	0.89	0.03	0.54	0.38	0.12
Control Delay	52.0	46.4	47.6	18.7	0.0	84.2	33.1	4.4	56.5	34.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	46.4	47.6	18.7	0.0	84.2	33.1	4.4	56.5	34.6
Queue Length 50th (ft)	1	82	347	73	0	159	8	52	46	30
Queue Length 95th (ft)	9	116	#549	140	0	#339	29	148	97	72
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	161	1096	1137	1031	914	250	594	2157	262	464
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.22	0.89	0.18	0.01	0.89	0.03	0.54	0.26	0.12

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	180	29	876	162	10	193	14	1019	58	45	4
Future Volume (veh/h)	2	180	29	876	162	10	193	14	1019	58	45	4
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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	2	207	33	1007	186	11	222	16	1171	67	52	5
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	314	49	1118	777	660	259	622	1836	153	459	44
Arrive On Green	0.01	0.10	0.10	0.32	0.42	0.42	0.15	0.33	0.33	0.09	0.27	0.27
Sat Flow, veh/h	1774	3066	481	3442	1863	1583	1774	1863	2787	1774	1673	161
Grp Volume(v), veh/h	2	118	122	1007	186	11	222	16	1171	67	0	57
Grp Sat Flow(s),veh/h/ln	1774	1770	1778	1721	1863	1583	1774	1863	1393	1774	0	1834
Q Serve(g_s), s	0.1	6.7	6.9	29.3	6.8	0.4	12.8	0.6	26.0	3.8	0.0	2.4
Cycle Q Clear(g_c), s	0.1	6.7	6.9	29.3	6.8	0.4	12.8	0.6	26.0	3.8	0.0	2.4
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	18	181	182	1118	777	660	259	622	1836	153	0	503
V/C Ratio(X)	0.11	0.65	0.67	0.90	0.24	0.02	0.86	0.03	0.64	0.44	0.00	0.11
Avail Cap(c_a), veh/h	177	607	609	1245	1126	957	274	622	1836	287	0	503
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	51.5	45.3	45.5	33.8	19.8	18.0	43.8	23.5	10.5	45.5	0.0	28.6
Incr Delay (d2), s/veh	2.7	3.9	4.2	8.6	0.2	0.0	21.7	0.1	1.7	1.9	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	0.1	3.5	3.6	15.2	3.5	0.2	7.9	0.3	10.3	1.9	0.0	1.3
LnGrp Delay(d),s/veh	54.2	49.3	49.7	42.4	20.0	18.0	65.5	23.6	12.3	47.5	0.0	29.0
LnGrp LOS	D	D	D	D	B	B	E	C	B	D		C
Approach Vol, veh/h		242			1204			1409			124	
Approach Delay, s/veh		49.5			38.7			20.8			39.0	
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	13.1	39.1	38.1	14.7	19.4	32.8	5.1	47.8
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	16.5	27.5	37.5	35.5	15.7	28.3	10.0	63.0
Max Q Clear Time (g_c+I1), s	5.8	28.0	31.3	8.9	14.8	4.4	2.1	8.8
Green Ext Time (p_c), s	0.1	0.0	2.3	1.3	0.1	0.2	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	31.1
HCM 2010 LOS	C

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	44	897	466	47	59	22
Future Vol, veh/h	44	897	466	47	59	22
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	1043	542	55	69	26

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	597	0	-	0	1715	570
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	1145	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	980	-	-	-	99	521
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	303	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	980	-	-	-	94	521
Mov Cap-2 Maneuver	-	-	-	-	192	-
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	303	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	28
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	980	-	-	-	192	521
HCM Lane V/C Ratio	0.052	-	-	-	0.357	0.049
HCM Control Delay (s)	8.9	-	-	-	33.8	12.3
HCM Lane LOS	A	-	-	-	D	B
HCM 95th %tile Q(veh)	0.2	-	-	-	1.5	0.2

Year 2025 Base Condition
Intersection Analysis Worksheets

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1	122	1360	313	132	253	83	730	23	18
v/c Ratio	0.01	0.28	1.15	0.35	0.16	1.01	0.12	0.32	0.14	0.04
Control Delay	51.0	40.9	111.9	20.3	3.6	109.2	28.3	1.1	52.1	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	40.9	111.9	20.3	3.6	109.2	28.3	1.1	52.1	28.9
Queue Length 50th (ft)	1	38	~565	131	0	179	34	0	15	7
Queue Length 95th (ft)	7	64	#863	235	34	#409	97	22	46	29
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	164	1112	1184	1063	960	250	700	2286	266	446
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.11	1.15	0.29	0.14	1.01	0.12	0.32	0.09	0.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	92	15	1197	275	116	223	73	642	20	11	4
Future Volume (veh/h)	1	92	15	1197	275	116	223	73	642	20	11	4
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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1	105	17	1360	312	132	253	83	730	23	12	5
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	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	13	294	47	1226	828	704	259	654	1971	90	320	133
Arrive On Green	0.01	0.10	0.09	0.36	0.44	0.44	0.15	0.35	0.35	0.05	0.26	0.25
Sat Flow, veh/h	1774	3061	486	3442	1863	1583	1774	1863	2787	1774	1250	521
Grp Volume(v), veh/h	1	60	62	1360	312	132	253	83	730	23	0	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1777	1721	1863	1583	1774	1863	1393	1774	0	1771
Q Serve(g_s), s	0.1	3.5	3.6	39.0	12.2	5.5	15.6	3.3	11.4	1.4	0.0	0.8
Cycle Q Clear(g_c), s	0.1	3.5	3.6	39.0	12.2	5.5	15.6	3.3	11.4	1.4	0.0	0.8
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	13	170	170	1226	828	704	259	654	1971	90	0	453
V/C Ratio(X)	0.08	0.35	0.37	1.11	0.38	0.19	0.98	0.13	0.37	0.26	0.00	0.04
Avail Cap(c_a), veh/h	170	582	584	1226	1097	933	259	654	1971	275	0	453
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	54.0	46.3	46.4	35.3	20.3	18.4	46.6	24.1	6.3	50.0	0.0	30.7
Incr Delay (d2), s/veh	2.5	1.2	1.3	61.2	0.3	0.1	49.0	0.4	0.5	1.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	1.8	28.8	6.3	2.4	11.1	1.8	4.5	0.7	0.0	0.4
LnGrp Delay(d),s/veh	56.5	47.6	47.7	96.5	20.6	18.5	95.6	24.5	6.9	51.5	0.0	30.8
LnGrp LOS	E	D	D	F	C	B	F	C	A	D		C
Approach Vol, veh/h		123			1804			1066			40	
Approach Delay, s/veh		47.7			77.7			29.3			42.7	
Approach LOS		D			E			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	9.5	42.5	43.0	14.5	20.0	32.0	4.8	52.7
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	26.5	38.5	35.5	15.5	27.5	10.0	64.0
Max Q Clear Time (g_c+I1), s	3.4	13.4	41.0	5.6	17.6	2.8	2.1	14.2
Green Ext Time (p_c), s	0.0	3.1	0.0	0.6	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	59.0
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	497	867	30	109	45
Future Vol, veh/h	21	497	867	30	109	45
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	578	1008	35	127	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1043	0	-	0	1652	1026
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	626	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	667	-	-	-	~ 108	285
Stage 1	-	-	-	-	346	-
Stage 2	-	-	-	-	533	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	667	-	-	-	~ 104	285
Mov Cap-2 Maneuver	-	-	-	-	229	-
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	533	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	33.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	667	-	-	-	229	285
HCM Lane V/C Ratio	0.037	-	-	-	0.553	0.184
HCM Control Delay (s)	10.6	-	-	-	38.6	20.5
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q(veh)	0.1	-	-	-	3	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	3	318	1329	246	15	293	21	1546	89	74
v/c Ratio	0.02	0.59	1.22	0.28	0.02	1.07	0.04	0.77	0.48	0.17
Control Delay	52.3	48.7	143.4	19.9	0.1	122.8	34.3	13.2	58.8	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	48.7	143.4	19.9	0.1	122.8	34.3	13.2	58.8	36.7
Queue Length 50th (ft)	2	113	~615	102	0	~238	11	251	63	41
Queue Length 95th (ft)	13	153	#845	187	0	#455	36	504	121	91
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	159	1078	1089	998	887	273	536	1995	258	444
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.29	1.22	0.25	0.02	1.07	0.04	0.77	0.34	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	238	38	1156	214	13	255	18	1345	77	59	5
Future Volume (veh/h)	3	238	38	1156	214	13	255	18	1345	77	59	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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	3	274	44	1329	246	15	293	21	1546	89	68	6
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	382	61	1126	819	696	282	595	1801	155	418	37
Arrive On Green	0.01	0.12	0.12	0.33	0.44	0.44	0.16	0.32	0.32	0.09	0.25	0.24
Sat Flow, veh/h	1774	3061	486	3442	1863	1583	1774	1863	2787	1774	1688	149
Grp Volume(v), veh/h	3	157	161	1329	246	15	293	21	1546	89	0	74
Grp Sat Flow(s),veh/h/ln	1774	1770	1777	1721	1863	1583	1774	1863	1393	1774	0	1836
Q Serve(g_s), s	0.2	9.6	9.9	37.0	9.6	0.6	18.0	0.9	36.1	5.5	0.0	3.6
Cycle Q Clear(g_c), s	0.2	9.6	9.9	37.0	9.6	0.6	18.0	0.9	36.1	5.5	0.0	3.6
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	22	221	222	1126	819	696	282	595	1801	155	0	455
V/C Ratio(X)	0.14	0.71	0.73	1.18	0.30	0.02	1.04	0.04	0.86	0.57	0.00	0.16
Avail Cap(c_a), veh/h	165	563	566	1126	1029	875	282	595	1801	267	0	455
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	55.3	47.5	47.7	38.1	20.5	17.9	47.6	26.5	15.9	49.6	0.0	33.4
Incr Delay (d2), s/veh	2.8	4.2	4.5	90.6	0.2	0.0	63.8	0.1	5.6	3.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.0	5.1	31.7	5.0	0.3	13.8	0.5	20.3	2.8	0.0	1.9
LnGrp Delay(d),s/veh	58.0	51.7	52.2	128.7	20.7	17.9	111.3	26.6	21.5	52.9	0.0	34.2
LnGrp LOS	E	D	D	F	C	B	F	C	C	D		C
Approach Vol, veh/h		321			1590			1860			163	
Approach Delay, s/veh		52.0			110.9			35.7			44.4	
Approach LOS		D			F			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	13.9	40.1	41.0	18.1	22.0	32.0	5.4	53.7
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	28.5	36.5	35.5	17.5	27.5	10.0	62.0
Max Q Clear Time (g_c+I1), s	7.5	38.1	39.0	11.9	20.0	5.6	2.2	11.6
Green Ext Time (p_c), s	0.1	0.0	0.0	1.7	0.0	0.3	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	1112	615	62	73	27
Future Vol, veh/h	55	1112	615	62	73	27
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	1293	715	72	85	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	787	0	-	0	2172	751
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	1421	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	832	-	-	-	~ 51	411
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	223	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	832	-	-	-	~ 47	411
Mov Cap-2 Maneuver	-	-	-	-	122	-
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	223	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	65.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	832	-	-	-	122	411
HCM Lane V/C Ratio	0.077	-	-	-	0.696	0.076
HCM Control Delay (s)	9.7	-	-	-	84.1	14.5
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.2	-	-	-	3.8	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Year 2025 Base Plus Project Condition
Intersection Analysis Worksheets

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1	122	1360	313	132	253	83	730	23	18
v/c Ratio	0.01	0.28	1.15	0.35	0.16	1.01	0.12	0.32	0.14	0.04
Control Delay	51.0	40.9	111.9	20.3	3.6	109.2	28.3	1.1	52.1	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	40.9	111.9	20.3	3.6	109.2	28.3	1.1	52.1	28.9
Queue Length 50th (ft)	1	38	~565	131	0	179	34	0	15	7
Queue Length 95th (ft)	7	64	#863	235	34	#409	97	22	46	29
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	164	1112	1184	1063	960	250	700	2286	266	446
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.11	1.15	0.29	0.14	1.01	0.12	0.32	0.09	0.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	92	15	1197	275	116	223	73	642	20	11	4
Future Volume (veh/h)	1	92	15	1197	275	116	223	73	642	20	11	4
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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1	105	17	1360	312	132	253	83	730	23	12	5
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	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	13	294	47	1226	828	704	259	654	1971	90	320	133
Arrive On Green	0.01	0.10	0.09	0.36	0.44	0.44	0.15	0.35	0.35	0.05	0.26	0.25
Sat Flow, veh/h	1774	3061	486	3442	1863	1583	1774	1863	2787	1774	1250	521
Grp Volume(v), veh/h	1	60	62	1360	312	132	253	83	730	23	0	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1777	1721	1863	1583	1774	1863	1393	1774	0	1771
Q Serve(g_s), s	0.1	3.5	3.6	39.0	12.2	5.5	15.6	3.3	11.4	1.4	0.0	0.8
Cycle Q Clear(g_c), s	0.1	3.5	3.6	39.0	12.2	5.5	15.6	3.3	11.4	1.4	0.0	0.8
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	13	170	170	1226	828	704	259	654	1971	90	0	453
V/C Ratio(X)	0.08	0.35	0.37	1.11	0.38	0.19	0.98	0.13	0.37	0.26	0.00	0.04
Avail Cap(c_a), veh/h	170	582	584	1226	1097	933	259	654	1971	275	0	453
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	54.0	46.3	46.4	35.3	20.3	18.4	46.6	24.1	6.3	50.0	0.0	30.7
Incr Delay (d2), s/veh	2.5	1.2	1.3	61.2	0.3	0.1	49.0	0.4	0.5	1.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	1.8	28.8	6.3	2.4	11.1	1.8	4.5	0.7	0.0	0.4
LnGrp Delay(d),s/veh	56.5	47.6	47.7	96.5	20.6	18.5	95.6	24.5	6.9	51.5	0.0	30.8
LnGrp LOS	E	D	D	F	C	B	F	C	A	D		C
Approach Vol, veh/h		123			1804			1066			40	
Approach Delay, s/veh		47.7			77.7			29.3			42.7	
Approach LOS		D			E			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	9.5	42.5	43.0	14.5	20.0	32.0	4.8	52.7
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	26.5	38.5	35.5	15.5	27.5	10.0	64.0
Max Q Clear Time (g_c+I1), s	3.4	13.4	41.0	5.6	17.6	2.8	2.1	14.2
Green Ext Time (p_c), s	0.0	3.1	0.0	0.6	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	59.0
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	497	867	30	109	45
Future Vol, veh/h	21	497	867	30	109	45
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	578	1008	35	127	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1043	0	-	0	1652	1026
Stage 1	-	-	-	-	1026	-
Stage 2	-	-	-	-	626	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	667	-	-	-	~ 108	285
Stage 1	-	-	-	-	346	-
Stage 2	-	-	-	-	533	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	667	-	-	-	~ 104	285
Mov Cap-2 Maneuver	-	-	-	-	229	-
Stage 1	-	-	-	-	334	-
Stage 2	-	-	-	-	533	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	33.3
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	667	-	-	-	229	285
HCM Lane V/C Ratio	0.037	-	-	-	0.553	0.184
HCM Control Delay (s)	10.6	-	-	-	38.6	20.5
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q(veh)	0.1	-	-	-	3	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	3	318	1329	246	15	293	21	1546	89	74
v/c Ratio	0.02	0.59	1.22	0.28	0.02	1.07	0.04	0.77	0.48	0.17
Control Delay	52.3	48.7	143.4	19.9	0.1	122.8	34.3	13.2	58.8	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	48.7	143.4	19.9	0.1	122.8	34.3	13.2	58.8	36.7
Queue Length 50th (ft)	2	113	~615	102	0	~238	11	251	63	41
Queue Length 95th (ft)	13	153	#845	187	0	#455	36	504	121	91
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	159	1078	1089	998	887	273	536	1995	258	444
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.29	1.22	0.25	0.02	1.07	0.04	0.77	0.34	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	238	38	1156	214	13	255	18	1345	77	59	5
Future Volume (veh/h)	3	238	38	1156	214	13	255	18	1345	77	59	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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	3	274	44	1329	246	15	293	21	1546	89	68	6
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	382	61	1126	819	696	282	595	1801	155	418	37
Arrive On Green	0.01	0.12	0.12	0.33	0.44	0.44	0.16	0.32	0.32	0.09	0.25	0.24
Sat Flow, veh/h	1774	3061	486	3442	1863	1583	1774	1863	2787	1774	1688	149
Grp Volume(v), veh/h	3	157	161	1329	246	15	293	21	1546	89	0	74
Grp Sat Flow(s),veh/h/ln	1774	1770	1777	1721	1863	1583	1774	1863	1393	1774	0	1836
Q Serve(g_s), s	0.2	9.6	9.9	37.0	9.6	0.6	18.0	0.9	36.1	5.5	0.0	3.6
Cycle Q Clear(g_c), s	0.2	9.6	9.9	37.0	9.6	0.6	18.0	0.9	36.1	5.5	0.0	3.6
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	22	221	222	1126	819	696	282	595	1801	155	0	455
V/C Ratio(X)	0.14	0.71	0.73	1.18	0.30	0.02	1.04	0.04	0.86	0.57	0.00	0.16
Avail Cap(c_a), veh/h	165	563	566	1126	1029	875	282	595	1801	267	0	455
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	55.3	47.5	47.7	38.1	20.5	17.9	47.6	26.5	15.9	49.6	0.0	33.4
Incr Delay (d2), s/veh	2.8	4.2	4.5	90.6	0.2	0.0	63.8	0.1	5.6	3.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.0	5.1	31.7	5.0	0.3	13.8	0.5	20.3	2.8	0.0	1.9
LnGrp Delay(d),s/veh	58.0	51.7	52.2	128.7	20.7	17.9	111.3	26.6	21.5	52.9	0.0	34.2
LnGrp LOS	E	D	D	F	C	B	F	C	C	D		C
Approach Vol, veh/h		321			1590			1860			163	
Approach Delay, s/veh		52.0			110.9			35.7			44.4	
Approach LOS		D			F			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	13.9	40.1	41.0	18.1	22.0	32.0	5.4	53.7
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	28.5	36.5	35.5	17.5	27.5	10.0	62.0
Max Q Clear Time (g_c+I1), s	7.5	38.1	39.0	11.9	20.0	5.6	2.2	11.6
Green Ext Time (p_c), s	0.1	0.0	0.0	1.7	0.0	0.3	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	1112	615	62	73	27
Future Vol, veh/h	55	1112	615	62	73	27
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	1293	715	72	85	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	787	0	-	0	2172	751
Stage 1	-	-	-	-	751	-
Stage 2	-	-	-	-	1421	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	832	-	-	-	~ 51	411
Stage 1	-	-	-	-	466	-
Stage 2	-	-	-	-	223	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	832	-	-	-	~ 47	411
Mov Cap-2 Maneuver	-	-	-	-	122	-
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	223	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	65.3
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	832	-	-	-	122	411
HCM Lane V/C Ratio	0.077	-	-	-	0.696	0.076
HCM Control Delay (s)	9.7	-	-	-	84.1	14.5
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.2	-	-	-	3.8	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Year 2025 Plus Project Alternative 1 Condition
Intersection Analysis Worksheets

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1	122	1360	313	132	253	83	730	23	18
v/c Ratio	0.01	0.28	1.15	0.35	0.16	1.01	0.12	0.32	0.14	0.04
Control Delay	51.0	40.9	111.9	20.3	3.6	109.2	28.3	1.1	52.1	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	40.9	111.9	20.3	3.6	109.2	28.3	1.1	52.1	28.9
Queue Length 50th (ft)	1	38	~565	131	0	179	34	0	15	7
Queue Length 95th (ft)	7	64	#863	235	34	#409	97	22	46	29
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	164	1112	1184	1063	960	250	700	2286	266	446
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.11	1.15	0.29	0.14	1.01	0.12	0.32	0.09	0.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	92	15	1197	275	116	223	73	642	20	11	4
Future Volume (veh/h)	1	92	15	1197	275	116	223	73	642	20	11	4
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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1	105	17	1360	312	132	253	83	730	23	12	5
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	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	13	294	47	1226	828	704	259	654	1971	90	320	133
Arrive On Green	0.01	0.10	0.09	0.36	0.44	0.44	0.15	0.35	0.35	0.05	0.26	0.25
Sat Flow, veh/h	1774	3061	486	3442	1863	1583	1774	1863	2787	1774	1250	521
Grp Volume(v), veh/h	1	60	62	1360	312	132	253	83	730	23	0	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1777	1721	1863	1583	1774	1863	1393	1774	0	1771
Q Serve(g_s), s	0.1	3.5	3.6	39.0	12.2	5.5	15.6	3.3	11.4	1.4	0.0	0.8
Cycle Q Clear(g_c), s	0.1	3.5	3.6	39.0	12.2	5.5	15.6	3.3	11.4	1.4	0.0	0.8
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	13	170	170	1226	828	704	259	654	1971	90	0	453
V/C Ratio(X)	0.08	0.35	0.37	1.11	0.38	0.19	0.98	0.13	0.37	0.26	0.00	0.04
Avail Cap(c_a), veh/h	170	582	584	1226	1097	933	259	654	1971	275	0	453
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	54.0	46.3	46.4	35.3	20.3	18.4	46.6	24.1	6.3	50.0	0.0	30.7
Incr Delay (d2), s/veh	2.5	1.2	1.3	61.2	0.3	0.1	49.0	0.4	0.5	1.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	1.8	28.8	6.3	2.4	11.1	1.8	4.5	0.7	0.0	0.4
LnGrp Delay(d),s/veh	56.5	47.6	47.7	96.5	20.6	18.5	95.6	24.5	6.9	51.5	0.0	30.8
LnGrp LOS	E	D	D	F	C	B	F	C	A	D		C
Approach Vol, veh/h		123			1804			1066			40	
Approach Delay, s/veh		47.7			77.7			29.3			42.7	
Approach LOS		D			E			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	9.5	42.5	43.0	14.5	20.0	32.0	4.8	52.7
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	26.5	38.5	35.5	15.5	27.5	10.0	64.0
Max Q Clear Time (g_c+I1), s	3.4	13.4	41.0	5.6	17.6	2.8	2.1	14.2
Green Ext Time (p_c), s	0.0	3.1	0.0	0.6	0.0	0.0	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	59.0
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	497	867	60	124	45
Future Vol, veh/h	21	497	867	60	124	45
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	578	1008	70	144	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1078	0	-	0	1669	1043
Stage 1	-	-	-	-	1043	-
Stage 2	-	-	-	-	626	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	647	-	-	-	~ 106	279
Stage 1	-	-	-	-	339	-
Stage 2	-	-	-	-	533	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	647	-	-	-	~ 102	279
Mov Cap-2 Maneuver	-	-	-	-	225	-
Stage 1	-	-	-	-	326	-
Stage 2	-	-	-	-	533	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	39.2
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	647	-	-	-	225	279
HCM Lane V/C Ratio	0.038	-	-	-	0.641	0.188
HCM Control Delay (s)	10.8	-	-	-	45.8	20.9
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q(veh)	0.1	-	-	-	3.9	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	3	318	1329	246	15	293	21	1546	89	74
v/c Ratio	0.02	0.59	1.22	0.28	0.02	1.07	0.04	0.77	0.48	0.17
Control Delay	52.3	48.7	143.4	19.9	0.1	122.8	34.3	13.2	58.8	36.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	48.7	143.4	19.9	0.1	122.8	34.3	13.2	58.8	36.7
Queue Length 50th (ft)	2	113	~615	102	0	~238	11	251	63	41
Queue Length 95th (ft)	13	153	#845	187	0	#455	36	504	121	91
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	159	1078	1089	998	887	273	536	1995	258	444
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.29	1.22	0.25	0.02	1.07	0.04	0.77	0.34	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	238	38	1156	214	13	255	18	1345	77	59	5
Future Volume (veh/h)	3	238	38	1156	214	13	255	18	1345	77	59	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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	3	274	44	1329	246	15	293	21	1546	89	68	6
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	382	61	1126	819	696	282	595	1801	155	418	37
Arrive On Green	0.01	0.12	0.12	0.33	0.44	0.44	0.16	0.32	0.32	0.09	0.25	0.24
Sat Flow, veh/h	1774	3061	486	3442	1863	1583	1774	1863	2787	1774	1688	149
Grp Volume(v), veh/h	3	157	161	1329	246	15	293	21	1546	89	0	74
Grp Sat Flow(s),veh/h/ln	1774	1770	1777	1721	1863	1583	1774	1863	1393	1774	0	1836
Q Serve(g_s), s	0.2	9.6	9.9	37.0	9.6	0.6	18.0	0.9	36.1	5.5	0.0	3.6
Cycle Q Clear(g_c), s	0.2	9.6	9.9	37.0	9.6	0.6	18.0	0.9	36.1	5.5	0.0	3.6
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	22	221	222	1126	819	696	282	595	1801	155	0	455
V/C Ratio(X)	0.14	0.71	0.73	1.18	0.30	0.02	1.04	0.04	0.86	0.57	0.00	0.16
Avail Cap(c_a), veh/h	165	563	566	1126	1029	875	282	595	1801	267	0	455
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	55.3	47.5	47.7	38.1	20.5	17.9	47.6	26.5	15.9	49.6	0.0	33.4
Incr Delay (d2), s/veh	2.8	4.2	4.5	90.6	0.2	0.0	63.8	0.1	5.6	3.3	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.0	5.1	31.7	5.0	0.3	13.8	0.5	20.3	2.8	0.0	1.9
LnGrp Delay(d),s/veh	58.0	51.7	52.2	128.7	20.7	17.9	111.3	26.6	21.5	52.9	0.0	34.2
LnGrp LOS	E	D	D	F	C	B	F	C	C	D		C
Approach Vol, veh/h		321			1590			1860			163	
Approach Delay, s/veh		52.0			110.9			35.7			44.4	
Approach LOS		D			F			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	13.9	40.1	41.0	18.1	22.0	32.0	5.4	53.7
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	28.5	36.5	35.5	17.5	27.5	10.0	62.0
Max Q Clear Time (g_c+I1), s	7.5	38.1	39.0	11.9	20.0	5.6	2.2	11.6
Green Ext Time (p_c), s	0.1	0.0	0.0	1.7	0.0	0.3	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	67.8
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	5.4

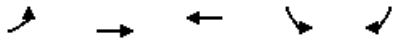
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	1112	615	102	88	27
Future Vol, veh/h	55	1112	615	102	88	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	1293	715	119	102	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	834	0	-	0	2196	775
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	1421	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	799	-	-	-	~ 50	398
Stage 1	-	-	-	-	454	-
Stage 2	-	-	-	-	223	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	799	-	-	-	~ 46	398
Mov Cap-2 Maneuver	-	-	-	-	121	-
Stage 1	-	-	-	-	418	-
Stage 2	-	-	-	-	223	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	89.2
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	799	-	-	-	121	398
HCM Lane V/C Ratio	0.08	-	-	-	0.846	0.079
HCM Control Delay (s)	9.9	-	-	-	112	14.8
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	5.1	0.3

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	24	578	1078	144	52
v/c Ratio	0.20	0.47	0.88	0.42	0.15
Control Delay	9.2	6.8	19.4	29.6	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	9.2	6.8	19.4	29.6	9.2
Queue Length 50th (ft)	3	82	250	54	0
Queue Length 95th (ft)	16	175	#597	105	24
Internal Link Dist (ft)		771	616	378	
Turn Bay Length (ft)				100	
Base Capacity (vph)	149	1510	1498	556	533
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.16	0.38	0.72	0.26	0.10

Intersection Summary

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	497	867	60	124	45
Future Volume (veh/h)	21	497	867	60	124	45
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	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	24	578	1008	70	144	52
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	232	1248	1154	80	308	275
Arrive On Green	0.67	0.67	0.67	0.67	0.17	0.17
Sat Flow, veh/h	521	1863	1722	120	1774	1583
Grp Volume(v), veh/h	24	578	0	1078	144	52
Grp Sat Flow(s),veh/h/ln	521	1863	0	1842	1774	1583
Q Serve(g_s), s	2.2	8.5	0.0	26.8	4.2	1.6
Cycle Q Clear(g_c), s	29.0	8.5	0.0	26.8	4.2	1.6
Prop In Lane	1.00			0.06	1.00	1.00
Lane Grp Cap(c), veh/h	232	1248	0	1234	308	275
V/C Ratio(X)	0.10	0.46	0.00	0.87	0.47	0.19
Avail Cap(c_a), veh/h	348	1665	0	1647	601	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.1	4.5	0.0	7.6	21.4	20.3
Incr Delay (d2), s/veh	0.2	0.3	0.0	4.3	1.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.4	0.0	14.6	2.1	0.7
LnGrp Delay(d),s/veh	19.3	4.8	0.0	11.9	22.5	20.7
LnGrp LOS	B	A		B	C	C
Approach Vol, veh/h		602	1078		196	
Approach Delay, s/veh		5.4	11.9		22.0	
Approach LOS		A	B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				43.1		14.5		43.1
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				51.5		19.5		51.5
Max Q Clear Time (g_c+I1), s				31.0		6.2		28.8
Green Ext Time (p_c), s				4.0		0.4		9.8

Intersection Summary	
HCM 2010 Ctrl Delay	10.8
HCM 2010 LOS	B

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	64	1293	834	102	31
v/c Ratio	0.17	0.93	0.61	0.41	0.12
Control Delay	4.8	22.8	7.4	37.5	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.8	22.8	7.4	37.5	12.3
Queue Length 50th (ft)	7	384	134	49	0
Queue Length 95th (ft)	24	#931	297	90	22
Internal Link Dist (ft)		771	616	378	
Turn Bay Length (ft)					
Base Capacity (vph)	385	1397	1376	392	375
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.93	0.61	0.26	0.08

Intersection Summary

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	1112	615	102	88	27
Future Volume (veh/h)	55	1112	615	102	88	27
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	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	64	1293	715	119	102	31
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	447	1395	1167	194	234	209
Arrive On Green	0.75	0.75	0.75	0.75	0.13	0.13
Sat Flow, veh/h	656	1863	1558	259	1774	1583
Grp Volume(v), veh/h	64	1293	0	834	102	31
Grp Sat Flow(s),veh/h/ln	656	1863	0	1817	1774	1583
Q Serve(g_s), s	3.8	43.1	0.0	16.1	4.0	1.3
Cycle Q Clear(g_c), s	19.9	43.1	0.0	16.1	4.0	1.3
Prop In Lane	1.00			0.14	1.00	1.00
Lane Grp Cap(c), veh/h	447	1395	0	1361	234	209
V/C Ratio(X)	0.14	0.93	0.00	0.61	0.44	0.15
Avail Cap(c_a), veh/h	497	1539	0	1501	434	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.0	7.8	0.0	4.4	30.2	29.1
Incr Delay (d2), s/veh	0.1	9.5	0.0	0.6	1.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	24.9	0.0	8.1	2.0	0.6
LnGrp Delay(d),s/veh	9.2	17.3	0.0	5.0	31.5	29.4
LnGrp LOS	A	B		A	C	C
Approach Vol, veh/h		1357	834		133	
Approach Delay, s/veh		16.9	5.0		31.0	
Approach LOS		B	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				61.2		14.5		61.2
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				62.5		18.5		62.5
Max Q Clear Time (g_c+I1), s				45.1		6.0		18.1
Green Ext Time (p_c), s				11.6		0.2		7.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Year 2025 Plus Project Alternative 5 Condition
Intersection Analysis Worksheets

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1	139	1360	333	132	267	83	730	23	18
v/c Ratio	0.01	0.33	1.12	0.37	0.16	1.06	0.12	0.32	0.15	0.04
Control Delay	54.0	43.3	101.5	21.3	3.6	121.0	29.0	1.0	55.1	30.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.0	43.3	101.5	21.3	3.6	121.0	29.0	1.0	55.1	30.1
Queue Length 50th (ft)	1	45	~582	148	0	~210	35	0	16	7
Queue Length 95th (ft)	7	73	#879	259	34	#447	99	22	48	30
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	156	898	1215	973	890	253	706	2307	253	447
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.15	1.12	0.34	0.15	1.06	0.12	0.32	0.09	0.04

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	101	21	1197	293	116	235	73	642	20	11	4
Future Volume (veh/h)	1	101	21	1197	293	116	235	73	642	20	11	4
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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1	115	24	1360	333	132	267	83	730	23	12	5
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	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	13	268	54	1257	837	712	262	661	2006	88	321	134
Arrive On Green	0.01	0.09	0.09	0.37	0.45	0.45	0.15	0.35	0.35	0.05	0.26	0.25
Sat Flow, veh/h	1774	2931	596	3442	1863	1583	1774	1863	2787	1774	1250	521
Grp Volume(v), veh/h	1	68	71	1360	333	132	267	83	730	23	0	17
Grp Sat Flow(s),veh/h/ln	1774	1770	1758	1721	1863	1583	1774	1863	1393	1774	0	1771
Q Serve(g_s), s	0.1	4.2	4.4	42.0	13.8	5.8	17.0	3.5	11.4	1.4	0.0	0.8
Cycle Q Clear(g_c), s	0.1	4.2	4.4	42.0	13.8	5.8	17.0	3.5	11.4	1.4	0.0	0.8
Prop In Lane	1.00		0.34	1.00		1.00	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	13	162	160	1257	837	712	262	661	2006	88	0	454
V/C Ratio(X)	0.08	0.42	0.44	1.08	0.40	0.19	1.02	0.13	0.36	0.26	0.00	0.04
Avail Cap(c_a), veh/h	162	469	466	1257	1004	854	262	661	2006	262	0	454
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	56.7	49.4	49.6	36.5	21.2	19.0	49.0	25.1	6.1	52.6	0.0	32.1
Incr Delay (d2), s/veh	2.7	1.7	1.9	50.7	0.3	0.1	60.3	0.4	0.5	1.6	0.0	0.2
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	0.0	2.1	2.2	28.7	7.1	2.5	12.7	1.8	4.5	0.7	0.0	0.4
LnGrp Delay(d),s/veh	59.4	51.1	51.4	87.2	21.5	19.1	109.4	25.4	6.6	54.2	0.0	32.3
LnGrp LOS	E	D	D	F	C	B	F	C	A	D		C
Approach Vol, veh/h		140			1825			1080			40	
Approach Delay, s/veh		51.4			70.3			33.5			44.9	
Approach LOS		D			E			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	9.7	44.8	46.0	14.5	21.0	33.5	4.8	55.7
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	29.0	41.5	30.0	16.5	29.0	10.0	61.5
Max Q Clear Time (g_c+I1), s	3.4	13.4	44.0	6.4	19.0	2.8	2.1	15.8
Green Ext Time (p_c), s	0.0	3.3	0.0	0.7	0.0	0.0	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	56.2
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	500	873	30	109	45
Future Vol, veh/h	21	500	873	30	109	45
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	581	1015	35	127	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1050	0	-	0	1662	1033
Stage 1	-	-	-	-	1033	-
Stage 2	-	-	-	-	629	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	663	-	-	-	~ 107	282
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	663	-	-	-	~ 103	282
Mov Cap-2 Maneuver	-	-	-	-	227	-
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	531	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	33.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	663	-	-	-	227	282
HCM Lane V/C Ratio	0.037	-	-	-	0.558	0.186
HCM Control Delay (s)	10.6	-	-	-	39.2	20.7
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q(veh)	0.1	-	-	-	3.1	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	3	335	1329	274	15	311	21	1546	89	74
v/c Ratio	0.02	0.63	1.19	0.30	0.02	1.08	0.04	0.78	0.49	0.17
Control Delay	55.3	52.2	132.4	20.9	0.1	125.5	35.6	14.2	62.6	39.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	52.2	132.4	20.9	0.1	125.5	35.6	14.2	62.6	39.3
Queue Length 50th (ft)	2	127	~642	122	0	~270	12	292	68	45
Queue Length 95th (ft)	13	168	#860	215	0	#491	36	545	125	94
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	150	868	1116	920	825	287	543	1989	244	428
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.39	1.19	0.30	0.02	1.08	0.04	0.78	0.36	0.17

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	247	44	1156	238	13	271	18	1345	77	59	5
Future Volume (veh/h)	3	247	44	1156	238	13	271	18	1345	77	59	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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	3	284	51	1329	274	15	311	21	1546	89	68	6
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	21	382	68	1150	837	711	296	599	1827	148	402	35
Arrive On Green	0.01	0.13	0.12	0.33	0.45	0.45	0.17	0.32	0.32	0.08	0.24	0.23
Sat Flow, veh/h	1774	3006	533	3442	1863	1583	1774	1863	2787	1774	1688	149
Grp Volume(v), veh/h	3	166	169	1329	274	15	311	21	1546	89	0	74
Grp Sat Flow(s),veh/h/ln	1774	1770	1769	1721	1863	1583	1774	1863	1393	1774	0	1836
Q Serve(g_s), s	0.2	10.8	11.1	40.0	11.4	0.6	20.0	0.9	38.5	5.8	0.0	3.8
Cycle Q Clear(g_c), s	0.2	10.8	11.1	40.0	11.4	0.6	20.0	0.9	38.5	5.8	0.0	3.8
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	21	225	225	1150	837	711	296	599	1827	148	0	437
V/C Ratio(X)	0.14	0.74	0.75	1.16	0.33	0.02	1.05	0.04	0.85	0.60	0.00	0.17
Avail Cap(c_a), veh/h	156	451	451	1150	933	793	296	599	1827	252	0	437
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	58.5	50.3	50.5	39.9	21.3	18.3	49.9	27.9	15.9	53.0	0.0	36.2
Incr Delay (d2), s/veh	2.9	4.6	5.0	80.3	0.2	0.0	65.8	0.1	5.0	3.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	5.6	5.7	31.7	5.9	0.3	15.1	0.5	20.9	3.0	0.0	2.1
LnGrp Delay(d),s/veh	61.4	54.9	55.5	120.2	21.5	18.3	115.7	28.0	21.0	56.8	0.0	37.1
LnGrp LOS	E	D	E	F	C	B	F	C	C	E		D
Approach Vol, veh/h		338			1618			1878			163	
Approach Delay, s/veh		55.3			102.5			36.7			47.9	
Approach LOS		E			F			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	14.0	42.5	44.0	19.2	24.0	32.5	5.4	57.8
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	16.5	31.0	39.5	30.0	19.5	28.0	10.0	59.5
Max Q Clear Time (g_c+I1), s	7.8	40.5	42.0	13.1	22.0	5.8	2.2	13.4
Green Ext Time (p_c), s	0.1	0.0	0.0	1.7	0.0	0.3	0.0	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	65.4
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.7

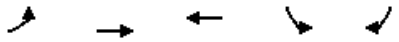
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	1115	623	62	73	27
Future Vol, veh/h	55	1115	623	62	73	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	1297	724	72	85	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	796	0	-	0	2185	760
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	1425	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	826	-	-	-	~ 50	406
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	222	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	826	-	-	-	~ 46	406
Mov Cap-2 Maneuver	-	-	-	-	121	-
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	222	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	66.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	826	-	-	-	121	406
HCM Lane V/C Ratio	0.077	-	-	-	0.702	0.077
HCM Control Delay (s)	9.7	-	-	-	85.5	14.6
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	3.8	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	24	581	1050	127	52
v/c Ratio	0.18	0.48	0.87	0.37	0.15
Control Delay	8.3	7.0	18.5	28.0	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.3	7.0	18.5	28.0	9.2
Queue Length 50th (ft)	3	78	223	42	0
Queue Length 95th (ft)	15	175	511	94	25
Internal Link Dist (ft)		771	616	378	
Turn Bay Length (ft)					
Base Capacity (vph)	169	1573	1565	576	551
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.14	0.37	0.67	0.22	0.09

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	500	873	30	109	45
Future Volume (veh/h)	21	500	873	30	109	45
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	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	24	581	1015	35	127	52
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	242	1226	1178	41	319	285
Arrive On Green	0.66	0.66	0.66	0.66	0.18	0.18
Sat Flow, veh/h	535	1863	1790	62	1774	1583
Grp Volume(v), veh/h	24	581	0	1050	127	52
Grp Sat Flow(s),veh/h/ln	535	1863	0	1852	1774	1583
Q Serve(g_s), s	2.1	8.6	0.0	24.9	3.5	1.5
Cycle Q Clear(g_c), s	26.9	8.6	0.0	24.9	3.5	1.5
Prop In Lane	1.00			0.03	1.00	1.00
Lane Grp Cap(c), veh/h	242	1226	0	1219	319	285
V/C Ratio(X)	0.10	0.47	0.00	0.86	0.40	0.18
Avail Cap(c_a), veh/h	389	1735	0	1725	613	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	4.7	0.0	7.5	20.1	19.3
Incr Delay (d2), s/veh	0.2	0.3	0.0	3.4	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.5	0.0	13.4	1.8	0.7
LnGrp Delay(d),s/veh	18.3	5.0	0.0	10.9	20.9	19.6
LnGrp LOS	B	A		B	C	B
Approach Vol, veh/h		605	1050		179	
Approach Delay, s/veh		5.5	10.9		20.6	
Approach LOS		A	B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				41.1		14.5		41.1
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				51.8		19.2		51.8
Max Q Clear Time (g_c+I1), s				28.9		5.5		26.9
Green Ext Time (p_c), s				4.1		0.4		9.7

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	B

Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	64	1297	796	85	31
v/c Ratio	0.15	0.93	0.57	0.34	0.13
Control Delay	4.5	22.7	6.9	36.1	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	22.7	6.9	36.1	12.4
Queue Length 50th (ft)	7	388	124	41	0
Queue Length 95th (ft)	24	#937	274	78	22
Internal Link Dist (ft)		771	616	378	
Turn Bay Length (ft)					
Base Capacity (vph)	414	1400	1387	393	376
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.93	0.57	0.22	0.08

Intersection Summary

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	1115	623	62	73	27
Future Volume (veh/h)	55	1115	623	62	73	27
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	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	64	1297	724	72	85	31
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	474	1397	1250	124	234	209
Arrive On Green	0.75	0.75	0.75	0.75	0.13	0.13
Sat Flow, veh/h	679	1863	1668	166	1774	1583
Grp Volume(v), veh/h	64	1297	0	796	85	31
Grp Sat Flow(s),veh/h/ln	679	1863	0	1833	1774	1583
Q Serve(g_s), s	3.5	43.6	0.0	14.6	3.3	1.3
Cycle Q Clear(g_c), s	18.1	43.6	0.0	14.6	3.3	1.3
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	474	1397	0	1375	234	209
V/C Ratio(X)	0.14	0.93	0.00	0.58	0.36	0.15
Avail Cap(c_a), veh/h	524	1533	0	1509	432	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.2	7.8	0.0	4.2	30.1	29.2
Incr Delay (d2), s/veh	0.1	9.8	0.0	0.5	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	25.4	0.0	7.3	1.7	0.6
LnGrp Delay(d),s/veh	8.3	17.6	0.0	4.7	31.0	29.5
LnGrp LOS	A	B		A	C	C
Approach Vol, veh/h		1361	796		116	
Approach Delay, s/veh		17.2	4.7		30.6	
Approach LOS		B	A		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				61.4		14.5		61.4
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				62.5		18.5		62.5
Max Q Clear Time (g_c+I1), s				45.6		5.3		16.6
Green Ext Time (p_c), s				11.4		0.2		7.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Year 2025 Plus Project Alternative 5B Condition
Intersection Analysis Worksheets

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	1	122	1360	313	152	253	97	730	33	24
v/c Ratio	0.01	0.28	1.15	0.35	0.18	1.01	0.15	0.33	0.20	0.05
Control Delay	51.0	40.9	111.9	20.3	3.4	109.2	30.5	1.1	53.0	30.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	40.9	111.9	20.3	3.4	109.2	30.5	1.1	53.0	30.3
Queue Length 50th (ft)	1	38	~565	131	0	179	50	0	22	10
Queue Length 95th (ft)	7	64	#863	235	36	#409	110	23	60	36
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	164	1112	1184	1063	968	250	649	2230	266	451
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.11	1.15	0.29	0.16	1.01	0.15	0.33	0.12	0.05

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	92	15	1197	275	134	223	85	642	29	17	4
Future Volume (veh/h)	1	92	15	1197	275	134	223	85	642	29	17	4
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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1	105	17	1360	312	152	253	97	730	33	19	5
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	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	13	294	47	1226	828	704	259	632	1938	111	364	96
Arrive On Green	0.01	0.10	0.09	0.36	0.44	0.44	0.15	0.34	0.34	0.06	0.26	0.25
Sat Flow, veh/h	1774	3061	486	3442	1863	1583	1774	1863	2787	1774	1422	374
Grp Volume(v), veh/h	1	60	62	1360	312	152	253	97	730	33	0	24
Grp Sat Flow(s),veh/h/ln	1774	1770	1777	1721	1863	1583	1774	1863	1393	1774	0	1797
Q Serve(g_s), s	0.1	3.5	3.6	39.0	12.2	6.5	15.6	4.0	11.8	1.9	0.0	1.1
Cycle Q Clear(g_c), s	0.1	3.5	3.6	39.0	12.2	6.5	15.6	4.0	11.8	1.9	0.0	1.1
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	13	170	170	1226	828	704	259	632	1938	111	0	459
V/C Ratio(X)	0.08	0.35	0.37	1.11	0.38	0.22	0.98	0.15	0.38	0.30	0.00	0.05
Avail Cap(c_a), veh/h	170	582	584	1226	1097	933	259	632	1938	275	0	459
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	54.0	46.3	46.4	35.3	20.3	18.7	46.6	25.2	6.9	49.0	0.0	30.8
Incr Delay (d2), s/veh	2.5	1.2	1.3	61.2	0.3	0.2	49.0	0.5	0.6	1.5	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.8	1.8	28.8	6.3	2.9	11.1	2.1	4.6	1.0	0.0	0.6
LnGrp Delay(d),s/veh	56.5	47.6	47.7	96.5	20.6	18.8	95.6	25.7	7.4	50.5	0.0	31.0
LnGrp LOS	E	D	D	F	C	B	F	C	A	D		C
Approach Vol, veh/h		123			1824			1080			57	
Approach Delay, s/veh		47.7			77.0			29.7			42.3	
Approach LOS		D			E			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	10.8	41.2	43.0	14.5	20.0	32.0	4.8	52.7
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	26.5	38.5	35.5	15.5	27.5	10.0	64.0
Max Q Clear Time (g_c+I1), s	3.9	13.8	41.0	5.6	17.6	3.1	2.1	14.2
Green Ext Time (p_c), s	0.0	3.1	0.0	0.6	0.0	0.1	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	58.7
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	21	500	873	30	109	45
Future Vol, veh/h	21	500	873	30	109	45
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	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	581	1015	35	127	52

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1050	0	-	0	1662	1033
Stage 1	-	-	-	-	1033	-
Stage 2	-	-	-	-	629	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	663	-	-	-	~ 107	282
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	531	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	663	-	-	-	~ 103	282
Mov Cap-2 Maneuver	-	-	-	-	227	-
Stage 1	-	-	-	-	331	-
Stage 2	-	-	-	-	531	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	33.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	663	-	-	-	227	282
HCM Lane V/C Ratio	0.037	-	-	-	0.558	0.186
HCM Control Delay (s)	10.6	-	-	-	39.2	20.7
HCM Lane LOS	B	-	-	-	E	C
HCM 95th %tile Q(veh)	0.1	-	-	-	3.1	0.7

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	3	318	1329	246	43	293	39	1546	99	81
v/c Ratio	0.02	0.59	1.22	0.28	0.05	1.07	0.07	0.78	0.51	0.18
Control Delay	52.3	48.7	143.4	19.9	0.3	122.8	34.6	13.8	59.7	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.3	48.7	143.4	19.9	0.3	122.8	34.6	13.8	59.7	37.0
Queue Length 50th (ft)	2	113	~615	102	0	~238	21	265	70	46
Queue Length 95th (ft)	13	153	#845	187	1	#455	56	521	131	97
Internal Link Dist (ft)		205		340			699			322
Turn Bay Length (ft)			140			250		300		
Base Capacity (vph)	159	1078	1089	998	887	273	531	1980	258	444
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.02	0.29	1.22	0.25	0.05	1.07	0.07	0.78	0.38	0.18

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	238	38	1156	214	37	255	34	1345	86	65	5
Future Volume (veh/h)	3	238	38	1156	214	37	255	34	1345	86	65	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	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	3	274	44	1329	246	43	293	39	1546	99	75	6
Adj No. of Lanes	1	2	0	2	1	1	1	1	2	1	1	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	382	61	1126	819	696	282	592	1797	158	421	34
Arrive On Green	0.01	0.12	0.12	0.33	0.44	0.44	0.16	0.32	0.32	0.09	0.25	0.24
Sat Flow, veh/h	1774	3061	486	3442	1863	1583	1774	1863	2787	1774	1703	136
Grp Volume(v), veh/h	3	157	161	1329	246	43	293	39	1546	99	0	81
Grp Sat Flow(s),veh/h/ln	1774	1770	1777	1721	1863	1583	1774	1863	1393	1774	0	1839
Q Serve(g_s), s	0.2	9.6	9.9	37.0	9.6	1.8	18.0	1.7	35.9	6.1	0.0	3.9
Cycle Q Clear(g_c), s	0.2	9.6	9.9	37.0	9.6	1.8	18.0	1.7	35.9	6.1	0.0	3.9
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	22	221	222	1126	819	696	282	592	1797	158	0	455
V/C Ratio(X)	0.14	0.71	0.73	1.18	0.30	0.06	1.04	0.07	0.86	0.63	0.00	0.18
Avail Cap(c_a), veh/h	165	563	566	1126	1029	875	282	592	1797	267	0	455
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	55.3	47.5	47.7	38.1	20.5	18.3	47.6	26.9	16.0	49.7	0.0	33.5
Incr Delay (d2), s/veh	2.8	4.2	4.5	90.6	0.2	0.0	63.8	0.2	5.7	4.1	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	0.1	5.0	5.1	31.7	5.0	0.8	13.8	0.9	20.3	3.2	0.0	2.1
LnGrp Delay(d),s/veh	58.0	51.7	52.2	128.7	20.7	18.3	111.3	27.1	21.7	53.8	0.0	34.4
LnGrp LOS	E	D	D	F	C	B	F	C	C	D		C
Approach Vol, veh/h		321			1618			1878			180	
Approach Delay, s/veh		52.0			109.3			35.8			45.0	
Approach LOS		D			F			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	14.1	39.9	41.0	18.1	22.0	32.0	5.4	53.7
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	28.5	36.5	35.5	17.5	27.5	10.0	62.0
Max Q Clear Time (g_c+I1), s	8.1	37.9	39.0	11.9	20.0	5.9	2.2	11.6
Green Ext Time (p_c), s	0.1	0.0	0.0	1.7	0.0	0.3	0.0	1.6

Intersection Summary	
HCM 2010 Ctrl Delay	67.3
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	3.7

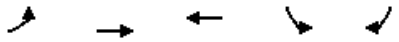
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	55	1115	623	62	73	27
Future Vol, veh/h	55	1115	623	62	73	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	64	1297	724	72	85	31

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	796	0	-	0	2185	760
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	1425	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	826	-	-	-	~ 50	406
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	222	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	826	-	-	-	~ 46	406
Mov Cap-2 Maneuver	-	-	-	-	121	-
Stage 1	-	-	-	-	426	-
Stage 2	-	-	-	-	222	-

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	66.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	826	-	-	-	121	406
HCM Lane V/C Ratio	0.077	-	-	-	0.702	0.077
HCM Control Delay (s)	9.7	-	-	-	85.5	14.6
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.3	-	-	-	3.8	0.2

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



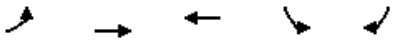
Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	24	581	1050	127	52
v/c Ratio	0.18	0.48	0.87	0.37	0.15
Control Delay	8.3	7.0	18.5	28.0	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	8.3	7.0	18.5	28.0	9.2
Queue Length 50th (ft)	3	78	223	42	0
Queue Length 95th (ft)	15	175	511	94	25
Internal Link Dist (ft)		771	616	378	
Turn Bay Length (ft)					
Base Capacity (vph)	169	1573	1565	576	551
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.14	0.37	0.67	0.22	0.09

Intersection Summary

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	21	500	873	30	109	45
Future Volume (veh/h)	21	500	873	30	109	45
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	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	24	581	1015	35	127	52
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	242	1226	1178	41	319	285
Arrive On Green	0.66	0.66	0.66	0.66	0.18	0.18
Sat Flow, veh/h	535	1863	1790	62	1774	1583
Grp Volume(v), veh/h	24	581	0	1050	127	52
Grp Sat Flow(s),veh/h/ln	535	1863	0	1852	1774	1583
Q Serve(g_s), s	2.1	8.6	0.0	24.9	3.5	1.5
Cycle Q Clear(g_c), s	26.9	8.6	0.0	24.9	3.5	1.5
Prop In Lane	1.00			0.03	1.00	1.00
Lane Grp Cap(c), veh/h	242	1226	0	1219	319	285
V/C Ratio(X)	0.10	0.47	0.00	0.86	0.40	0.18
Avail Cap(c_a), veh/h	389	1735	0	1725	613	547
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.1	4.7	0.0	7.5	20.1	19.3
Incr Delay (d2), s/veh	0.2	0.3	0.0	3.4	0.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.5	0.0	13.4	1.8	0.7
LnGrp Delay(d),s/veh	18.3	5.0	0.0	10.9	20.9	19.6
LnGrp LOS	B	A		B	C	B
Approach Vol, veh/h		605	1050		179	
Approach Delay, s/veh		5.5	10.9		20.6	
Approach LOS		A	B		C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				41.1		14.5		41.1
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				51.8		19.2		51.8
Max Q Clear Time (g_c+I1), s				28.9		5.5		26.9
Green Ext Time (p_c), s				4.1		0.4		9.7

Intersection Summary	
HCM 2010 Ctrl Delay	10.0
HCM 2010 LOS	B



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	64	1297	796	85	31
v/c Ratio	0.15	0.93	0.57	0.34	0.13
Control Delay	4.5	22.7	6.9	36.1	12.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	4.5	22.7	6.9	36.1	12.4
Queue Length 50th (ft)	7	388	124	41	0
Queue Length 95th (ft)	24	#937	274	78	22
Internal Link Dist (ft)		771	616	378	
Turn Bay Length (ft)					
Base Capacity (vph)	414	1400	1387	393	376
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.15	0.93	0.57	0.22	0.08

Intersection Summary

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

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	1115	623	62	73	27
Future Volume (veh/h)	55	1115	623	62	73	27
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	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	64	1297	724	72	85	31
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	474	1397	1250	124	234	209
Arrive On Green	0.75	0.75	0.75	0.75	0.13	0.13
Sat Flow, veh/h	679	1863	1668	166	1774	1583
Grp Volume(v), veh/h	64	1297	0	796	85	31
Grp Sat Flow(s),veh/h/ln	679	1863	0	1833	1774	1583
Q Serve(g_s), s	3.5	43.6	0.0	14.6	3.3	1.3
Cycle Q Clear(g_c), s	18.1	43.6	0.0	14.6	3.3	1.3
Prop In Lane	1.00			0.09	1.00	1.00
Lane Grp Cap(c), veh/h	474	1397	0	1375	234	209
V/C Ratio(X)	0.14	0.93	0.00	0.58	0.36	0.15
Avail Cap(c_a), veh/h	524	1533	0	1509	432	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.2	7.8	0.0	4.2	30.1	29.2
Incr Delay (d2), s/veh	0.1	9.8	0.0	0.5	0.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	25.4	0.0	7.3	1.7	0.6
LnGrp Delay(d),s/veh	8.3	17.6	0.0	4.7	31.0	29.5
LnGrp LOS	A	B		A	C	C
Approach Vol, veh/h		1361	796		116	
Approach Delay, s/veh		17.2	4.7		30.6	
Approach LOS		B	A		C	

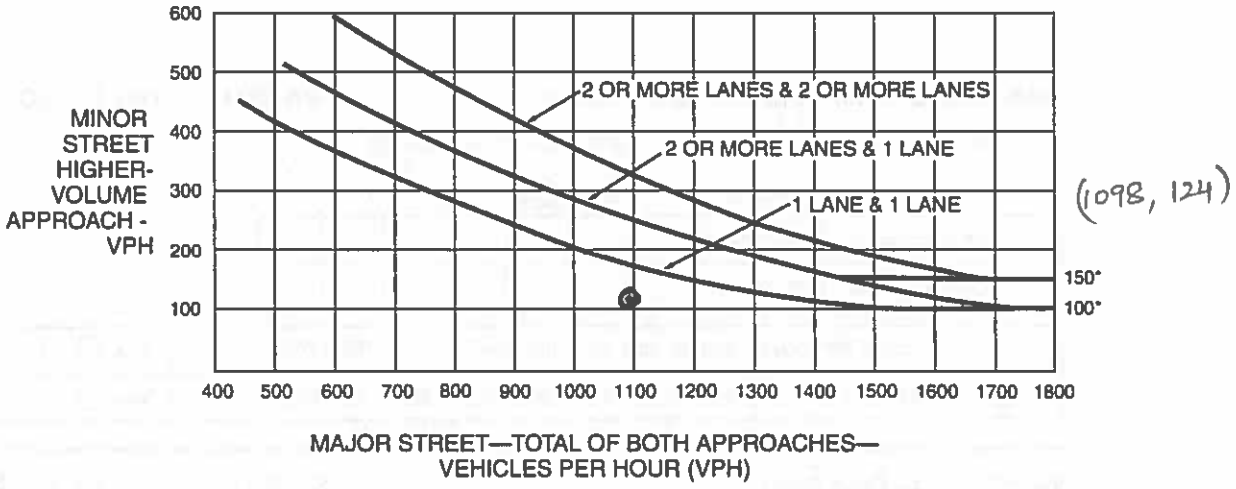
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				61.4		14.5		61.4
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				62.5		18.5		62.5
Max Q Clear Time (g_c+I1), s				45.6		5.3		16.6
Green Ext Time (p_c), s				11.4		0.2		7.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Attachment C
Traffic Signal Warrants

EXISTING (2017)
Del Mar Ave & Audubon Dr

Figure 4C-3. Warrant 3, Peak Hour

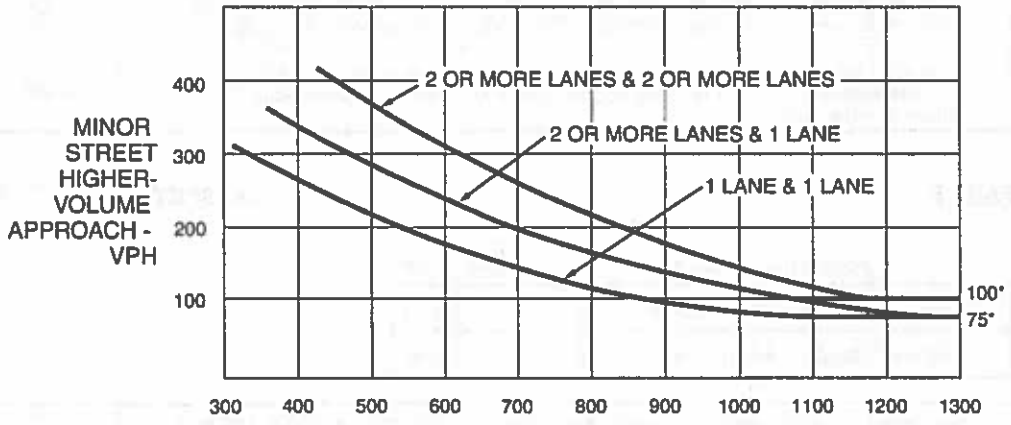


(1098, 124)

*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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.

EXISTING (2017)
Del Mar Ave & Audubon Dr

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More				Hour
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☐ NO ☒**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☒**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

AM
20.2 SOC × 124
=> 0.7 veh-hr

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B **SATISFIED YES ☐ NO ☒**

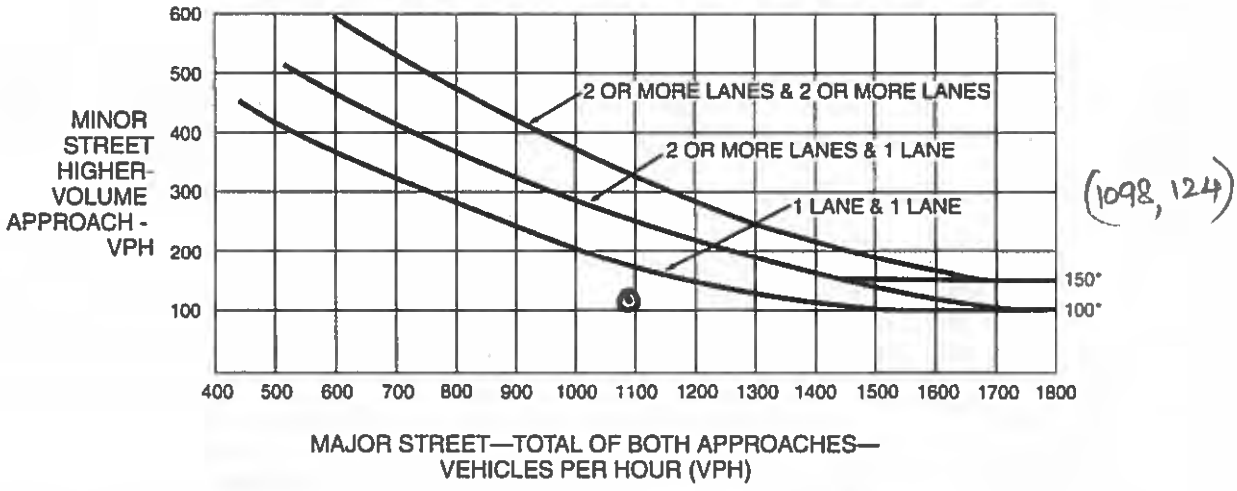
APPROACH LANES	One	2 or More	AM	Hour
Both Approaches - Major Street	X		1098	
Higher Approach - Minor Street	X		124	

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☒
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

EXISTING (2017) + PROJECT
Del Mar Ave & Audubon Dr

Figure 4C-3. Warrant 3, Peak Hour

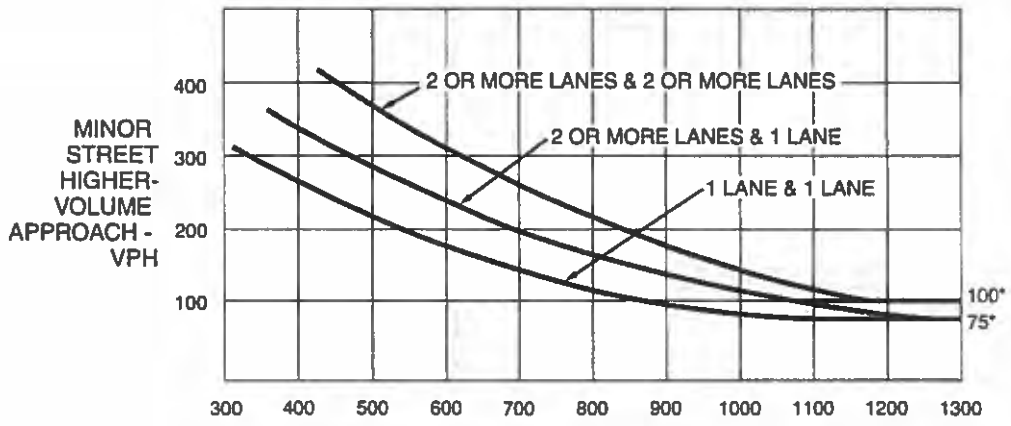


(1098, 124)

*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume SATISFIED* YES ☐ NO ☐

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour SATISFIED YES ☐ NO ☒
(Part A or Part B must be satisfied)

PART A SATISFIED YES ☐ NO ☒

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

AM
20.2 sec x 124
=> 0.7 veh-hr

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☒
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☒ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☒ No ☐

PART B SATISFIED YES ☐ NO ☒

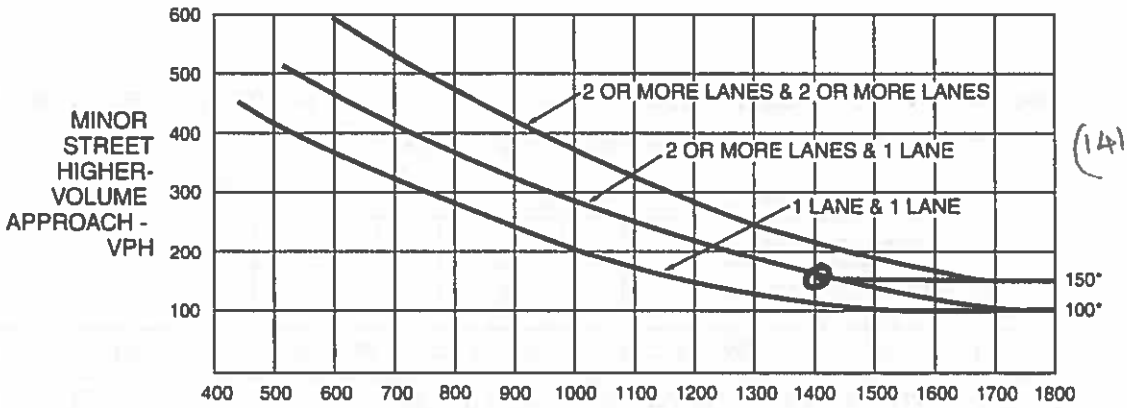
APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street	X		1098
Higher Approach - Minor Street	X		124

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☒
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

YEAR 2025 BASELINE
Del Mar Ave & Audubon Dr

Figure 4C-3. Warrant 3, Peak Hour

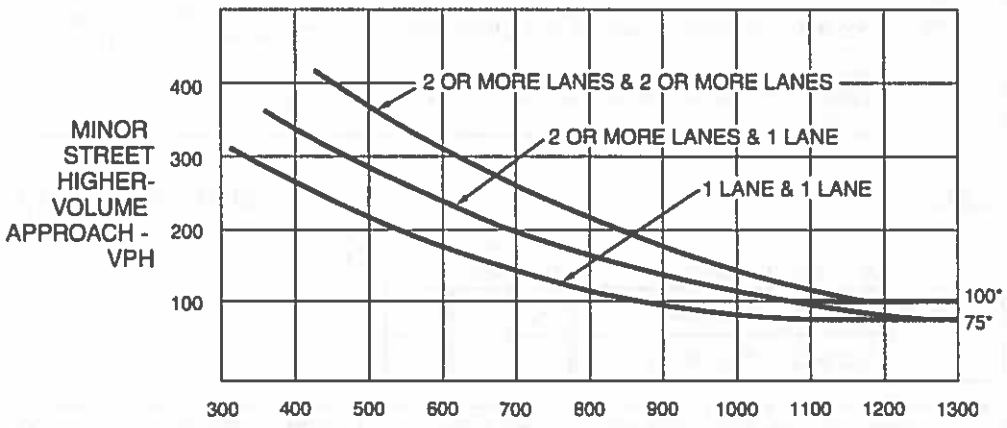


(1416, 154)

*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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.

YEAR 2025 BASELINE

Del Mar Ave & Audubon Dr

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

PART B **SATISFIED YES ☒ NO ☐**

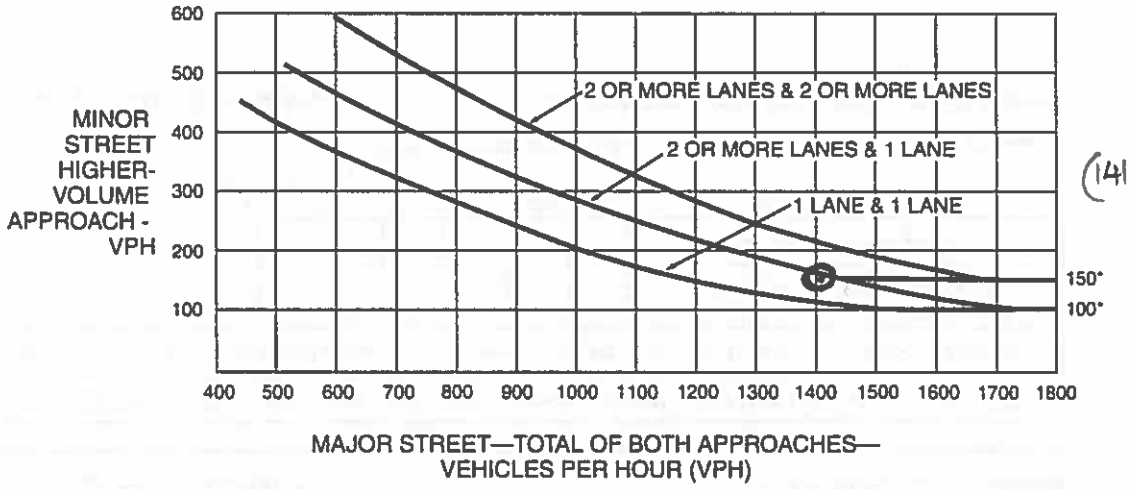
APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street	X		1416
Higher Approach - Minor Street	X		154

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☒ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

YEAR 2025 + PROJECT
Del Mar Ave & Audubon Dr

Figure 4C-3. Warrant 3, Peak Hour

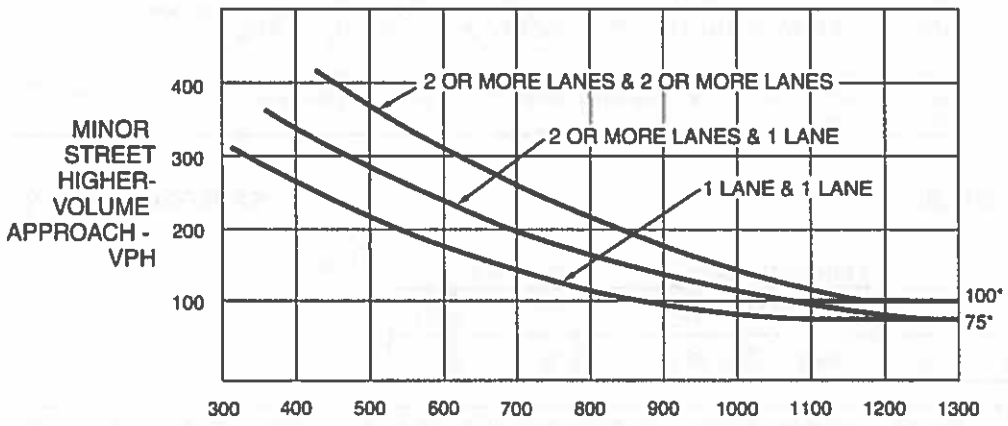


(1416, 154)

*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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.

YEAR 2025 + PROJECT
Del Mar Ave & Audubon Dr

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

PART B **SATISFIED YES ☒ NO ☐**

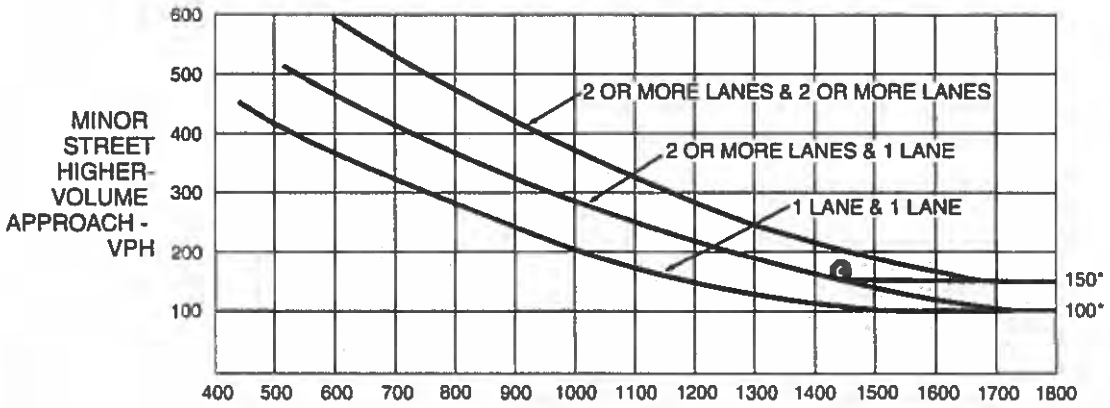
APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street	X		1416
Higher Approach - Minor Street	X		154

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☒ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

YEAR 2025 + PROJECT + ALT 1
Del Mar Ave & Audubon Dr

Figure 4C-3. Warrant 3, Peak Hour

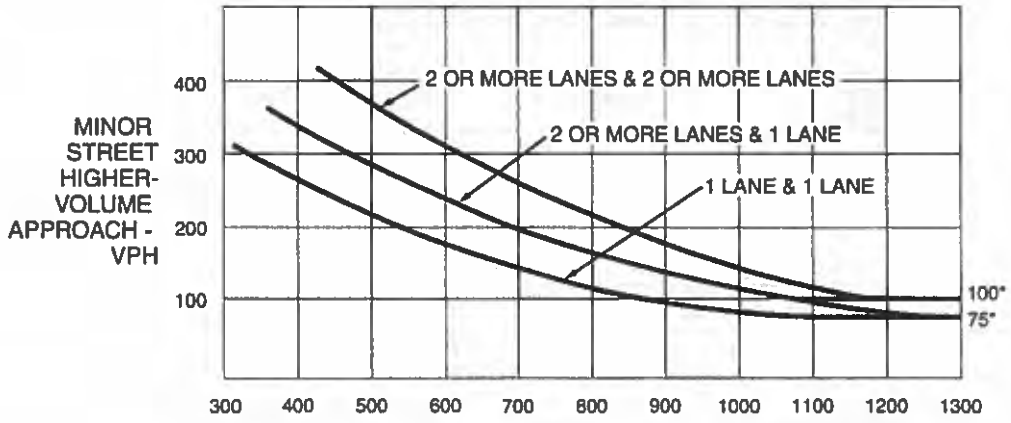


(1446, 169)

*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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.

YEAR 2025 + PROJECT + ALT 1

Del Mar Ave & Audubon Dr

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

PART B **SATISFIED YES ☒ NO ☐**

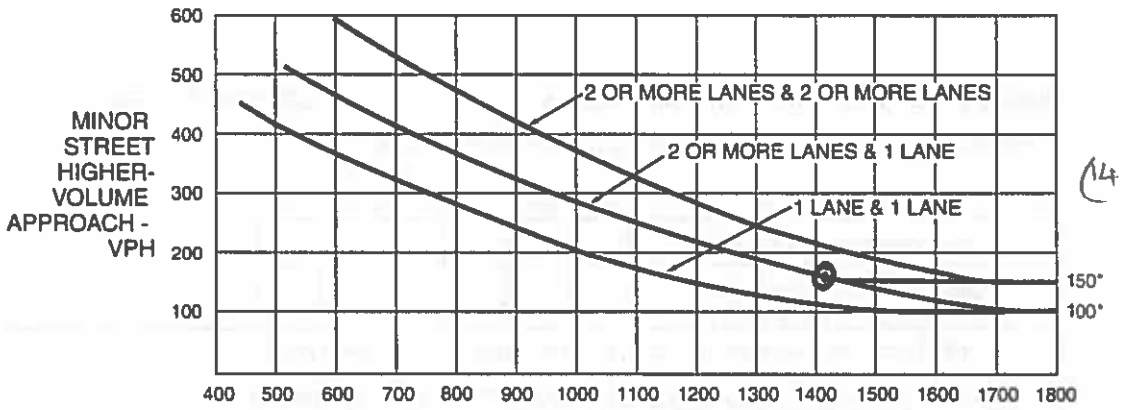
APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street	X		1446
Higher Approach - Minor Street	X		169

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☒ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

YEAR 2025+ PROJECT + ALT 5
Del Mar Ave & Audubon Dr

Figure 4C-3. Warrant 3, Peak Hour

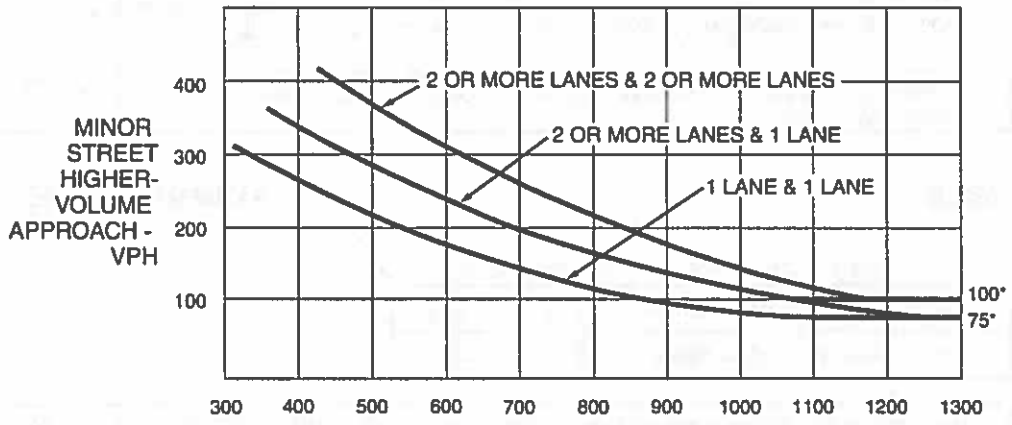


(1425, 154)

*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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.

YEAR 2025 + PROJECT + ALT 5
Del Mar Ave. & Audubon Dr

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

PART B **SATISFIED YES ☒ NO ☐**

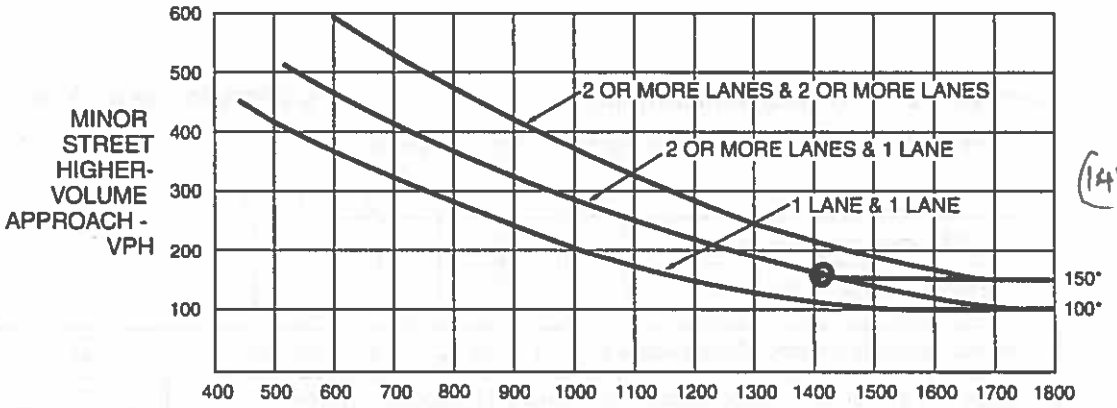
APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street	X		1425
Higher Approach - Minor Street	X		154

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☒ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

YEAR 2025 + PROJECT + ALT 5B
Del Mar Ave & Audubon Dr

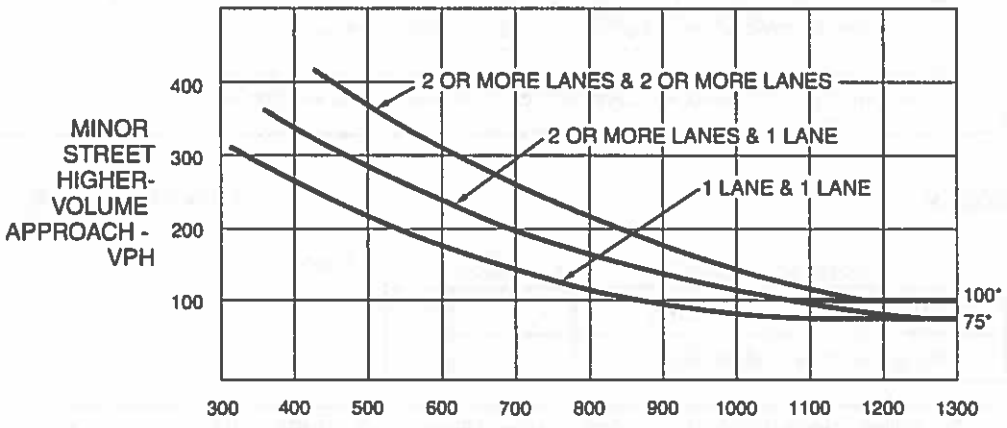
Figure 4C-3. Warrant 3, Peak Hour



(1425, 154)

*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.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*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.

YEAR 2025 + PROJECT + ALT 5B
Del Mar Ave & Audubon Dr.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☐ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
Both Approaches - Major Street						
Higher Approach - Minor Street						

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☐
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☐ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

PART B **SATISFIED YES ☒ NO ☐**

APPROACH LANES	One	2 or More	Hour
Both Approaches - Major Street	X		1425
Higher Approach - Minor Street	X		154

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☒ No ☐
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.