Carkel San Marcos Commercial

Technical Appendices

Appendix K

Traffic Report

LINSCOTT LAW & GREENSPAN engineers

LOCAL TRANSPORTATION ANALYSIS

BENT AVENUE COFFEE

San Marcos, California
January 28, 2021

LLG Ref. 3-20-3244

Prepared by:
Amelia Giacalone
Transportation Planner III

Under the Supervision of:
John Boarman, P.E.
Principal

Linscott, Law & Greenspan, Engineers
4542 Ruffner Street
Suite 100
San Diego, CA 92111
858.300.8800 T
858.300.8810 F
www.llgengineers.com

EXECUTIVE SUMMARY

Linscott, Law & Greenspan, Engineers (LLG) has prepared the following Local Transportation Analysis to determine and evaluate the potential effects to the local roadway system due to the proposed Bent Avenue Coffee project. The Project site is located at the southeast corner of the San Marcos Boulevard / Bent Avenue intersection in the City of San Marcos. The Project site is currently vacant.

The Project proposes a 2,128 SF coffee shop with a drive-through, including 1,797 SF of indoor space and a 331 SF outdoor patio. Access to the site is proposed via one right-in/right-out only driveway on San Marcos Boulevard. Access via Bent Avenue is not proposed.

The Project is calculated to generate a total of 1,746 ADT with 189 AM peak hour trips (96 inbound / 93 outbound) and 92 PM peak hour trips (46 inbound and 46 outbound). Of the total trips, 50% are considered pass-by trips, with the remaining 50% considered new trips. The Project is calculated to generate 873 new ADT with 94 new AM peak hour trips (48 inbound / 46 outbound) and 46 new PM peak hour trips (23 inbound and 23 outbound).

The intersection and segment analysis provided in this study shows that the analyzed facilities are consistent with the City of San Marcos LOS Standards with the exception of the San Marcos Boulevard / Bent Avenue intersection. The future restriping of the northbound leg of this intersection along Bent Avenue to provide a dedicated right-turn lane, which is associated with the Bent Avenue Bridge Capital Improvement Project (CIP), will increase performance to pre-project conditions.

Based on the Project's "locally serving" retail classification, the Project is presumed to have a less-than-significant transportation impact and does not require a detailed VMT analysis.

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LOCAL TRANSPORTATION ANALYSIS

BENT AVENUE COFFEE

San Marcos, California
January 28, 2021

1.0 INTRODUCTION

Linscott, Law & Greenspan, Engineers (LLG) has prepared the following Local Transportation Analysis to determine and evaluate the potential effects to the local roadway system due to the proposed Bent Avenue Coffee project. The Project site is located at the southeast corner of the San Marcos Boulevard / Bent Avenue intersection in the City of San Marcos.

The following items are included in this transportation study:

- Project Description
- Existing Conditions Discussion
- Analysis Approach and Methodology
- Level of Service Standards
- Analysis of Existing Conditions
- Cumulative Projects
- Trip Generation, Distribution, and Assignment
- Analysis of Near-Term Scenarios
- Analysis of Long-Term Scenarios
- Vehicle Miles Traveled Assessment
- Site Access and Circulation Review
- Active Transportation Review
- Conclusions

2.0 PROJECT DESCRIPTION

The Project site is located at the southeast corner of the San Marcos Boulevard / Bent Avenue intersection in the City of San Marcos. The Project site is currently vacant.

The Project proposes a 2,128 SF coffee shop with a drive-through, including 1,797 SF of indoor space and a 331 SF outdoor patio. Access to the site is proposed via one right-in/right-out only driveway on San Marcos Boulevard. No access via Bent Avenue is proposed.

Figure 2–1 shows the vicinity map. ***Figure 2–2*** shows a more detailed project area map. ***Figure 2–3*** shows the Project's site plan.

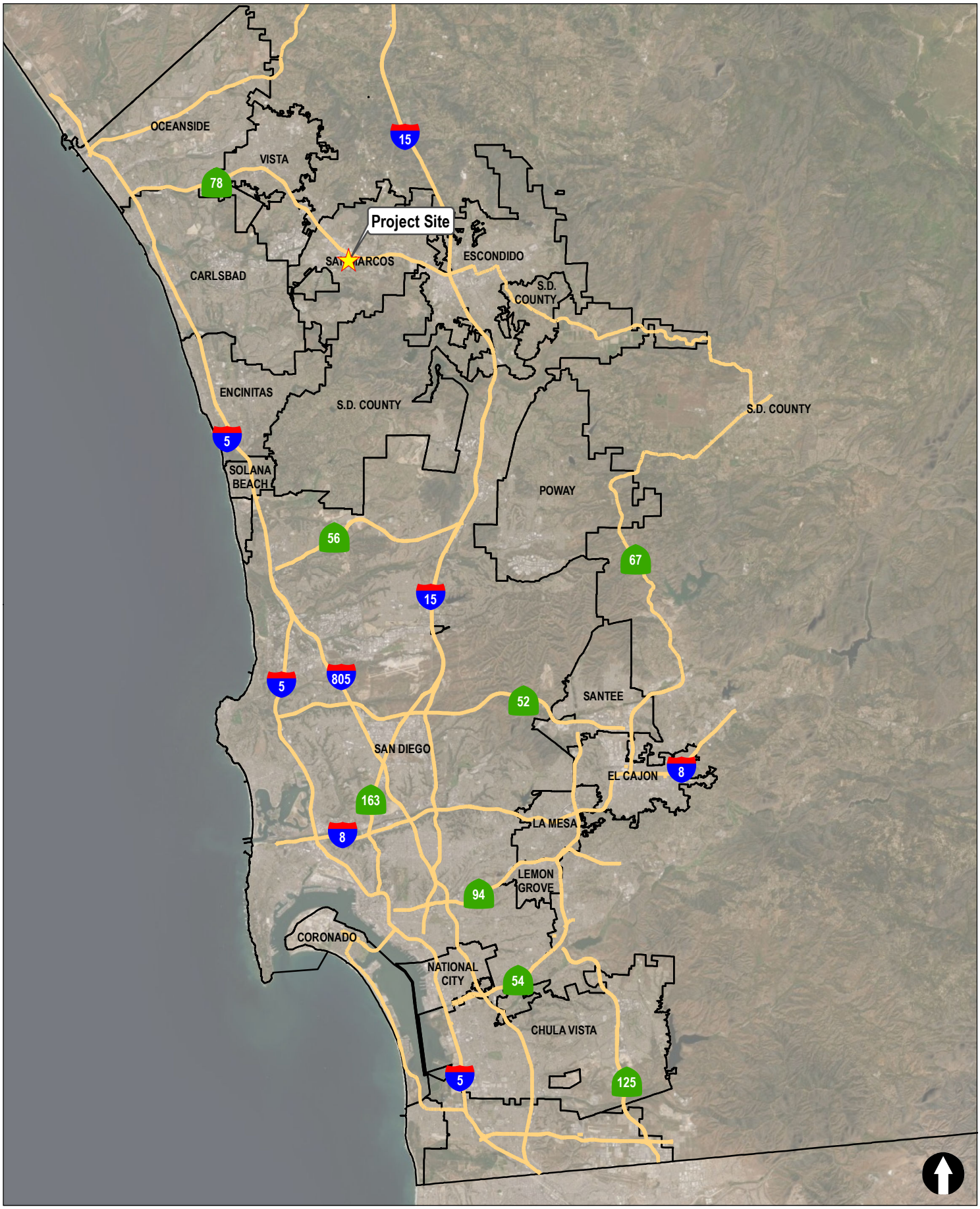

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Figure 2-1

Vicinity Map

Bent Avenue Coffee

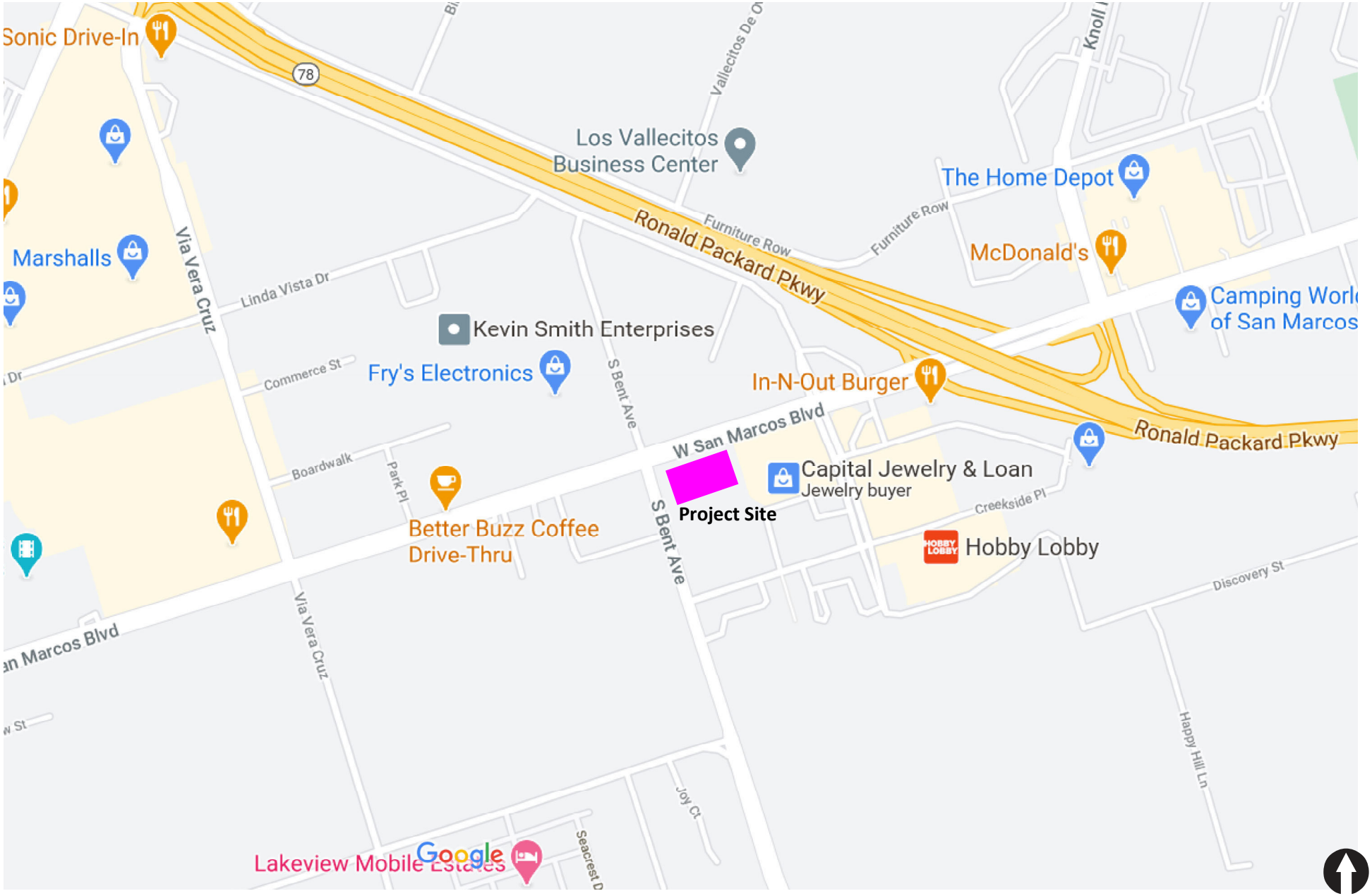

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Figure 2-2

Project Area Map

BENT AVENUE COFFEE

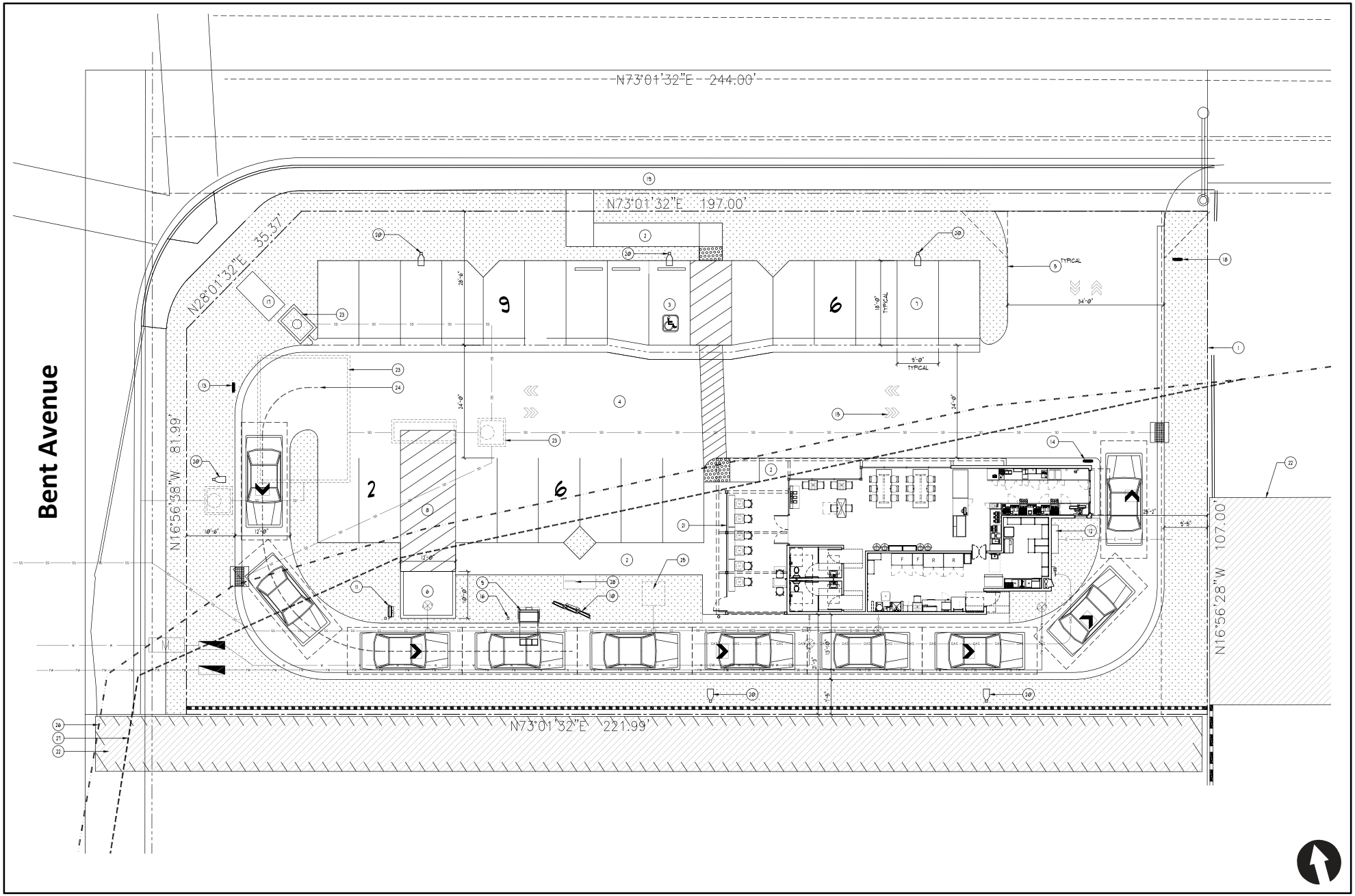

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Figure 2-3

Site Plan

BENT AVENUE COFFEE

3.0 EXISTING CONDITIONS

Effective evaluation of the traffic impacts associated with the proposed project requires an understanding of the existing transportation system within the project area. ***Figure 3–1*** shows an existing conditions diagram, including signalized intersections and lane configurations. The study area includes the following intersections and street segments based on the anticipated distribution of the project traffic:

Intersections:

1. Grand Avenue / Bent Avenue
2. San Marcos Boulevard / Via Vera Cruz
3. San Marcos Boulevard / Bent Avenue
4. San Marcos Boulevard / Future Project Driveway
5. San Marcos Boulevard / Grand Avenue
6. San Marcos Boulevard / SR-78 EB Ramps
7. San Marcos Boulevard / SR-78 WB Ramps / Knoll Road

Segments:

San Marcos Boulevard

- Via Vera Cruz to Bent Avenue
- Bent Avenue to Future Project Driveway
- Future Project Driveway to Grand Avenue
- Grand Avenue to SR-78 Eastbound Ramps

Bent Avenue

- Grand Avenue to San Marcos Boulevard

3.1 Existing Street Network

The principal roadways in the project study area are described briefly below. Roadway classification was determined from a review of the *City of San Marcos Mobility Element* and information gathered from field observations.

Bent Avenue is constructed as a 2-lane undivided roadway between Grand Avenue and Discovery Street. A TWLT lane is provided between Grand Avenue and San Marcos Boulevard. The posted speed limit is 35 mph. On-street parking is prohibited. Class II bike lanes are provided between Grand Avenue and San Marcos Boulevard. Bent Avenue is an unclassified major road.

Via Vera Cruz is constructed as a 4-lane roadway between Grand Avenue and Linda Vista Drive with a TWLT lane or turn pockets depending on the location. Between Linda Vista Drive and San Marcos Boulevard, it is constructed as a 4-lane undivided roadway with a TWLT lane. Between San Marcos Boulevard and Discovery Street, it is constructed as a 2-lane undivided roadway. The posted speed limit is 40 mph between Grand Avenue & San Marcos Boulevard and 30 mph south of San Marcos Boulevard. On-street parking is prohibited. Class II bike lanes are provided between Grand

Avenue and San Marcos Boulevard. Via Vera Cruz is classified as a 4-lane Arterial between Grand Avenue and Discovery Street.

Grand Avenue is constructed as a 4-lane undivided roadway with a TWLT lane between Las Posas Road and San Marcos Boulevard. The posted speed limit is 45 mph between Las Posas Road and San Marcos Boulevard. On-street parking is prohibited. Only 350' of Class II bike lanes are provided on the west side of Grand Avenue, north of San Marcos Boulevard. Grand Avenue is classified as a 4-lane Arterial between Las Posas Road and Via Vera Cruz and as a Complete Street between Via Vera Cruz and San Marcos Boulevard.

San Marcos Boulevard is constructed as a 4-lane divided roadway between Pacific Street and Bent Street and a 6-lane divided roadway between Bent Avenue and Grand Avenue. The posted speed limit is 40-45 mph. On-street parking is prohibited. Class II bike lanes are provided between Pacific Street and Grand Avenue. San Marcos Boulevard is classified as a Multi-way Boulevard between Pacific Street and Bent Avenue and as a 6-lane Arterial between Bent and Grand Avenue.

3.2 Existing Traffic Volumes

Table 3–1 summarizes the available average daily traffic volumes (ADTs) from counts conducted in May 2018. Counts at the study intersections, including bicycle and pedestrian counts, were conducted in November 2017 and May 2018 between 7:00-9:00 AM and 4:00-6:00 PM. Traffic counts were conducted while schools in the vicinity were in session.

Figure 3–2 shows the Existing Traffic Volumes. ***Appendix A*** contains the manual count sheets.

TABLE 3–1
EXISTING TRAFFIC VOLUMES

Street Segment	ADT[a]	Date
San Marcos Boulevard		
Via Vera Cruz to Bent Avenue	36,900	2018
Bent Avenue to Future Project Driveway	40,600	2018
Future Project Driveway to Grand Avenue	40,600	2018
Grand Avenue to SR-78 Eastbound Ramps	54,500	2018
Bent Avenue		
Grand Avenue to San Marcos Boulevard	5,100	2018

Footnotes:

a. Average Daily Traffic Volumes (rounded up to the nearest 100).

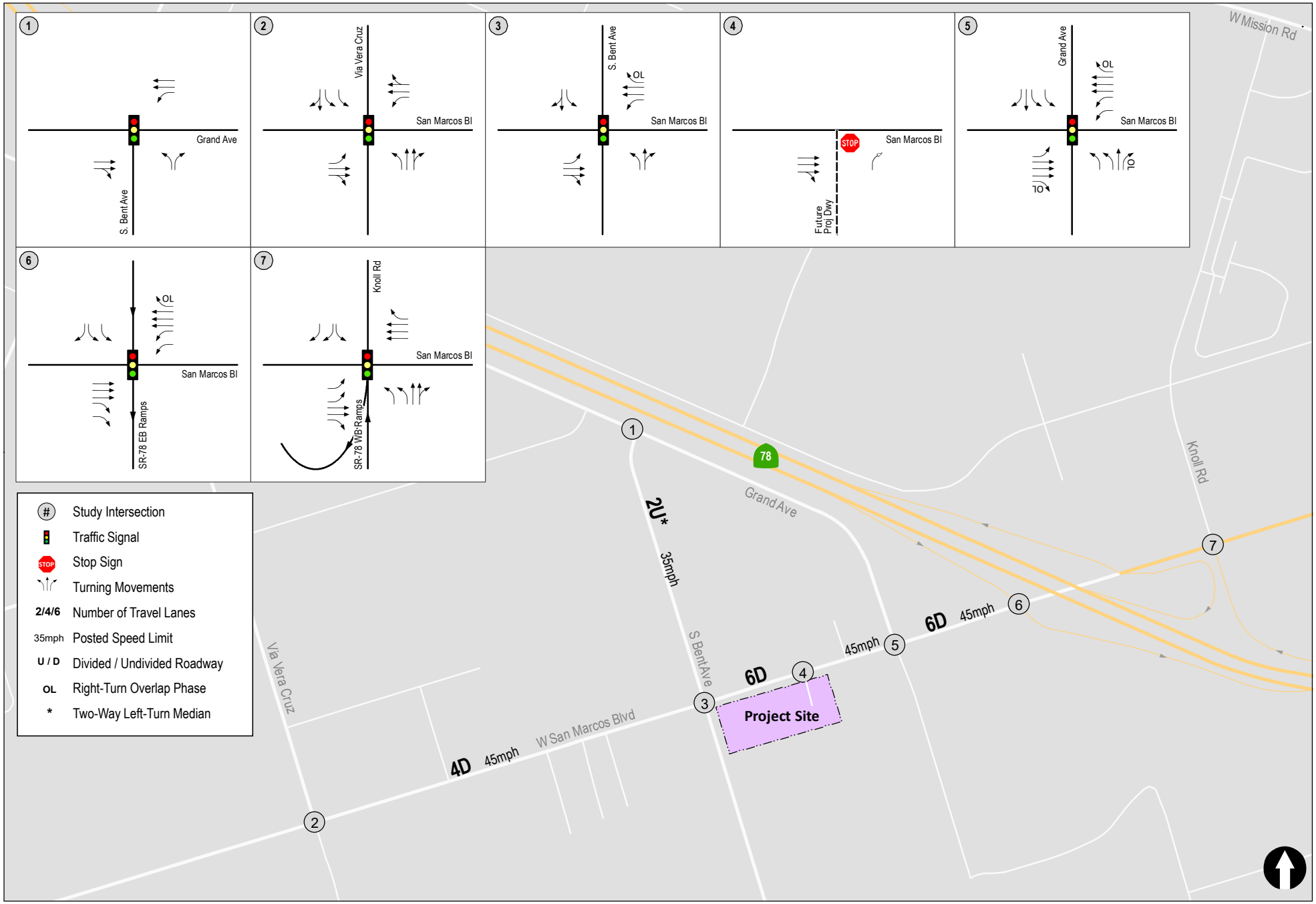

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Figure 3-1

Existing Conditions Diagram

Bent Avenue Coffee

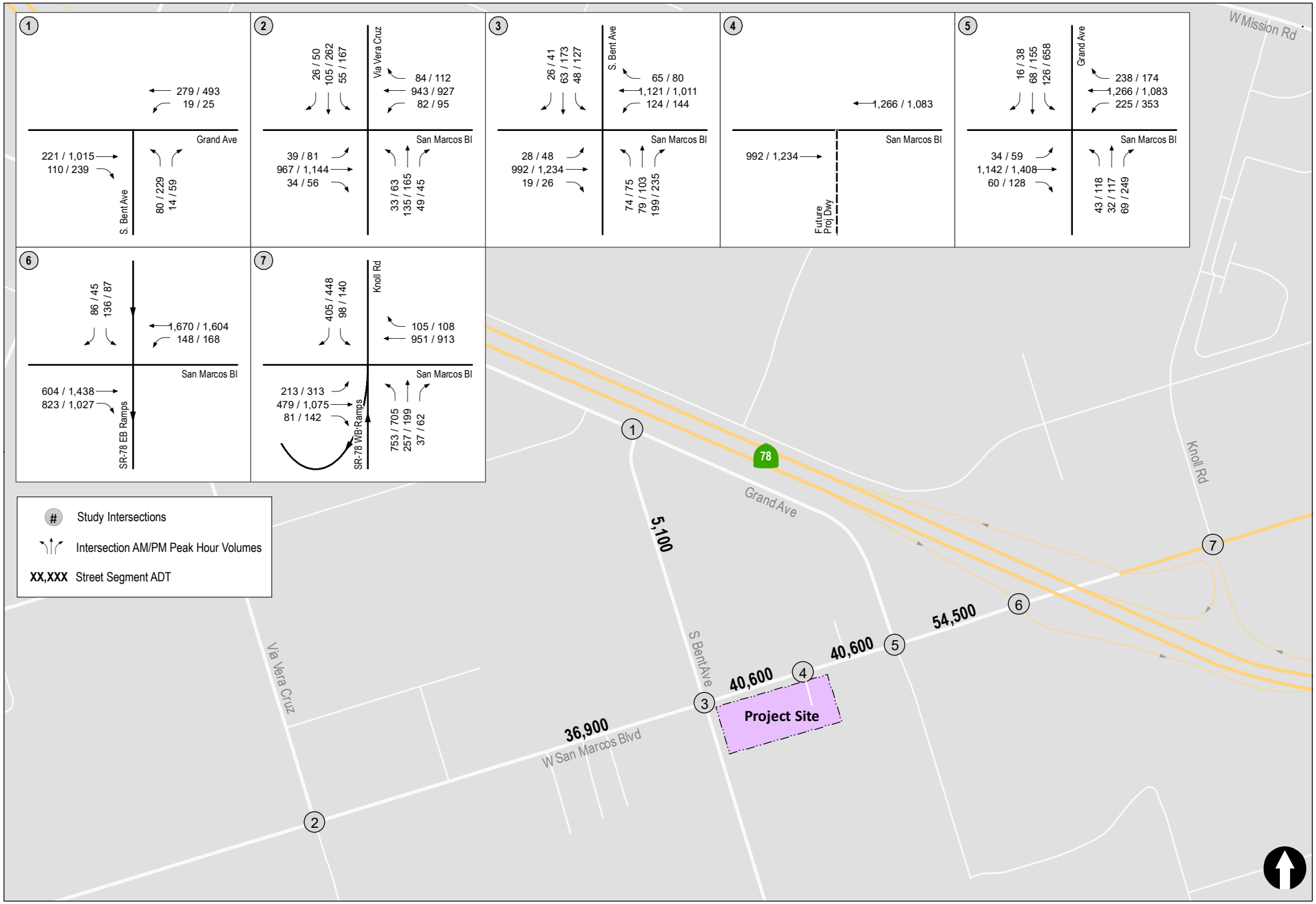

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Figure 3-2

Existing Traffic Volumes

Bent Avenue Coffee

4.0 ANALYSIS APPROACH AND METHODOLOGY

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Level of service designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments.

4.1 Intersections

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined utilizing the methodology found in Chapter 19 of the *Highway Capacity Manual 6th Edition (HCM 6),* with the assistance of the *Synchro 10* computer software. The delay values (represented in seconds) were qualified with a corresponding intersection Level of Service (LOS).

Unsignalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and Levels of Service (LOS) was determined based upon the procedures found in Chapter 20 and Chapter 21 of the *HCM 6* with the assistance of the *Synchro 10* computer software.

4.2 Street Segments

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of San Marcos's *Roadway Classification, Level of Service, and ADT Table*. This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The City of San Marcos's *Roadway Classification, Level of Service, and ADT Table* is attached in ***Appendix B***.

5.0 LEVEL OF SERVICE STANDARDS

The City of San Marcos strives to maintain intersection and roadway segment operations based on LOS standards outlined in the General Plan Mobility Element. If the addition of the traffic generated from a proposed project results in any one of the following, improvements should be identified to increase performance to acceptable or pre-project conditions under each scenario:

- Triggers an intersection operating at acceptable LOS to operate at unacceptable LOS and increases the delay by more than 2.0 seconds.
- Increases the delay for a study intersection that is already operating at unacceptable LOS by more than 2.0 seconds.
- Triggers a roadway segment operating at acceptable LOS to operate at unacceptable LOS and increases the volume/capacity (V/C) ratio by more than 0.02.
- Increases the V/C ratio for a study roadway segment that is already operating at unacceptable LOS by more than 0.02.

6.0 ANALYSIS OF EXISTING CONDITIONS

6.1 Peak Hour Intersection Levels of Service

Table 6–1 summarizes the peak hour intersection operations under Existing conditions. As seen in *Table 6–1*, the study intersections are calculated to currently operate at LOS D or better.

Appendix C contains the Existing intersection analysis worksheets.

6.2 Daily Street Segment Levels of Service

Table 6–2 summarizes the segment operations under Existing conditions. As seen in *Table 6–2*, the following study segments are calculated to currently operate at LOS E:

- San Marcos Boulevard, from Via Vera Cruz to Bent Avenue (LOS E)
- San Marcos Boulevard, from Grand Avenue to SR-78 Ramps (LOS E)

TABLE 6–1
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay[a]	LOS[b]
1. Grand Avenue / Bent Avenue	Signal	AM PM	7.8 17.8	A B
2. San Marcos Boulevard / Via Vera Cruz	Signal	AM PM	26.0 39.9	C D
3. San Marcos Boulevard / Bent Avenue	Signal	AM PM	34.4 44.2	C D
4. San Marcos Boulevard / Future Project Driveway	-[c]	AM PM	- -	- -
5. San Marcos Boulevard / Grand Avenue	Signal	AM PM	21.8 38.2	C D
6. San Marcos Boulevard / SR-78 EB Ramps	Signal	AM PM	10.0 10.9	A B
7. San Marcos Boulevard / SR-78 WB Ramps / Knoll Road	Signal	AM PM	28.1 26.0	C C

Footnotes:
a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Intersection does not exist under Existing conditions.

SIGNALIZED

DELAY/LOS THRESHOLDS

Delay	LOS
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F

TABLE 6–2
EXISTING STREET SEGMENT OPERATIONS

Street Segment	Classification	Capacity (LOS E) [a]	ADT [b]	LOS [c]	V/C [d]
San Marcos Boulevard					
Via Vera Cruz to Bent Avenue	4-Lane Major Arterial	40,000	**36,900**	**E**	**0.923**
Bent Avenue to Future Project Driveway	6-Lane Prime Arterial	60,000	40,600	C	0.677
Future Project Driveway to Grand Avenue	6-Lane Prime Arterial	60,000	40,600	C	0.677
Grand Avenue to SR-78 EB Ramps	6-Lane Prime Arterial	60,000	**54,500**	**E**	**0.908**
Bent Avenue					
Grand Avenue to San Marcos Boulevard	2-Lane Collector w/ TWLTL[e]	15,000	5,100	B	0.340

Footnotes:

a. Capacities based on based on the City of San Marcos' Urban Street Design Criteria (see *Appendix B*).

b. Average Daily Traffic Volumes.

c. Level of Service.

d. Volume to Capacity.

e. Two-Way Left-Turn Lane

7.0 CUMULATIVE PROJECTS

There are other planned projects within the vicinity which could potentially add traffic to the roadways and intersections in the study area. As such, the cumulative projects listed in ***Appendix D*** were included in the traffic analysis. Land use assumptions contained in the SANDAG Series 12 Model within the project area were also reviewed, and cumulative projects which were not already included in the model were added.

In order to account for other unforeseen cumulative projects and regional traffic growth, traffic forecasts from the SANDAG Series 12 Model were utilized to forecast near-term traffic volumes. This approach is consistent with 2019 traffic study conducted by LLG for the Panera Bread project, located immediately across San Marcos Boulevard from the Project site.

Figure 7–1 illustrates the peak hour and ADT segment volumes under the Near-Term scenario.

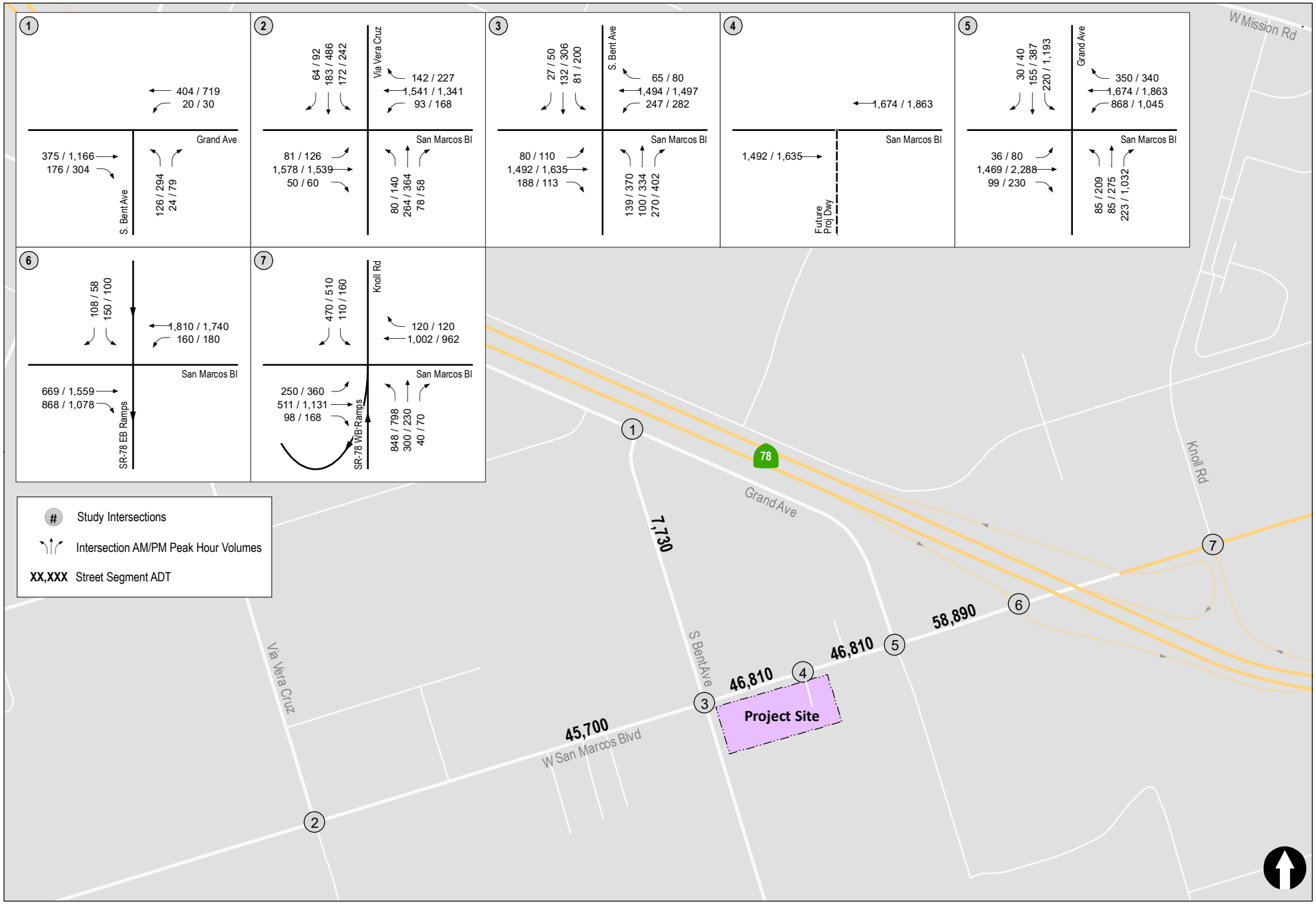

Figure 7-1

Near-Term without Project Traffic Volumes

Bent Avenue Coffee

LINSCOTT LAW & GREENSPAN engineers

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8.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

8.1 Trip Generation

8.1.1 *Trip Rates*

The trip generation rates for coffee shops with a drive-through are not available in SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002*. Therefore, the trip generation rates for the Project were based on ITE *Trip Generation Manual (10th Edition).*

8.1.2 *Pass-by Trips*

Pass-by trips are a subset of trip generation that primarily applies to commercial/retail developments. They are project trips made by people already on the road who stop at a business as they are driving by while on their way to another destination. For example, if on the way to work, one stops at a coffee shop, the trip to the coffee shop would be considered a *Pass-by* trip. A trip from home to a coffee shop and then back home is a *Primary* or new trip.

Coffee shops with a drive-through generate a high number of pass-by trips. Based on information provided in the ITE *Trip Generation Manual*, the average pass-by trip percentage for a coffee shop with drive-through window is approximately 89%. However, in order to provide a conservative analysis, a pass-by percentage of 50% was assumed, with the remaining 50% considered primary (new) trips.

8.1.3 *Project Trips*

Table 8–1 tabulates the total Project traffic generation. The Project is calculated to generate a total of 1,746 ADT with 189 AM peak hour trips (96 inbound / 93 outbound) and 92 PM peak hour trips (46 inbound and 46 outbound). Of the total trips, 50% are considered pass-by trips, with the remaining 50% considered new trips. The Project is calculated to generate 873 new ADT with 94 new AM peak hour trips (48 inbound / 46 outbound) and 46 new PM peak hour trips (23 inbound and 23 outbound).

8.2 Trip Distribution and Assignment

The traffic generated by the proposed Project was distributed and assigned based on anticipated traffic patterns to and from the site and the Project's proximity to state highways and arterials. Given the proposed right-in / right-out only driveway on San Marcos Boulevard, inbound trips coming from the east were assumed to make a U-turn at the intersection of Bent Avenue to access the site. Similarly, a portion of the outbound trips ultimately traveling westbound on San Marcos Boulevard were assumed to make a U-turn at Grand Avenue.

Figure 8–1 shows the Project traffic distribution. ***Figure 8–2*** shows the Project traffic volumes. ***Figure 8–3*** shows the Near-Term + Project traffic volumes.

TABLE 8–1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate[a]	Volume	Rate	In:Out Split	Volume In	Volume Out	Rate	In:Out Split	Volume In	Volume Out
Coffee Shop (with drive-through)	2,128 SF	820.38 /KSF	1,746	88.99	51:49	96	93	43.38	50:50	46	46
Pass-by Trips (50%)			(873)			(48)	(47)			(23)	(23)
Total New Trips			**873**			**48**	**46**			**23**	**23**

Footnotes:

a. Trip generation rates are based on the 10th edition of the Trip Generation Manual, Institute of Transportation Engineers (ITE)

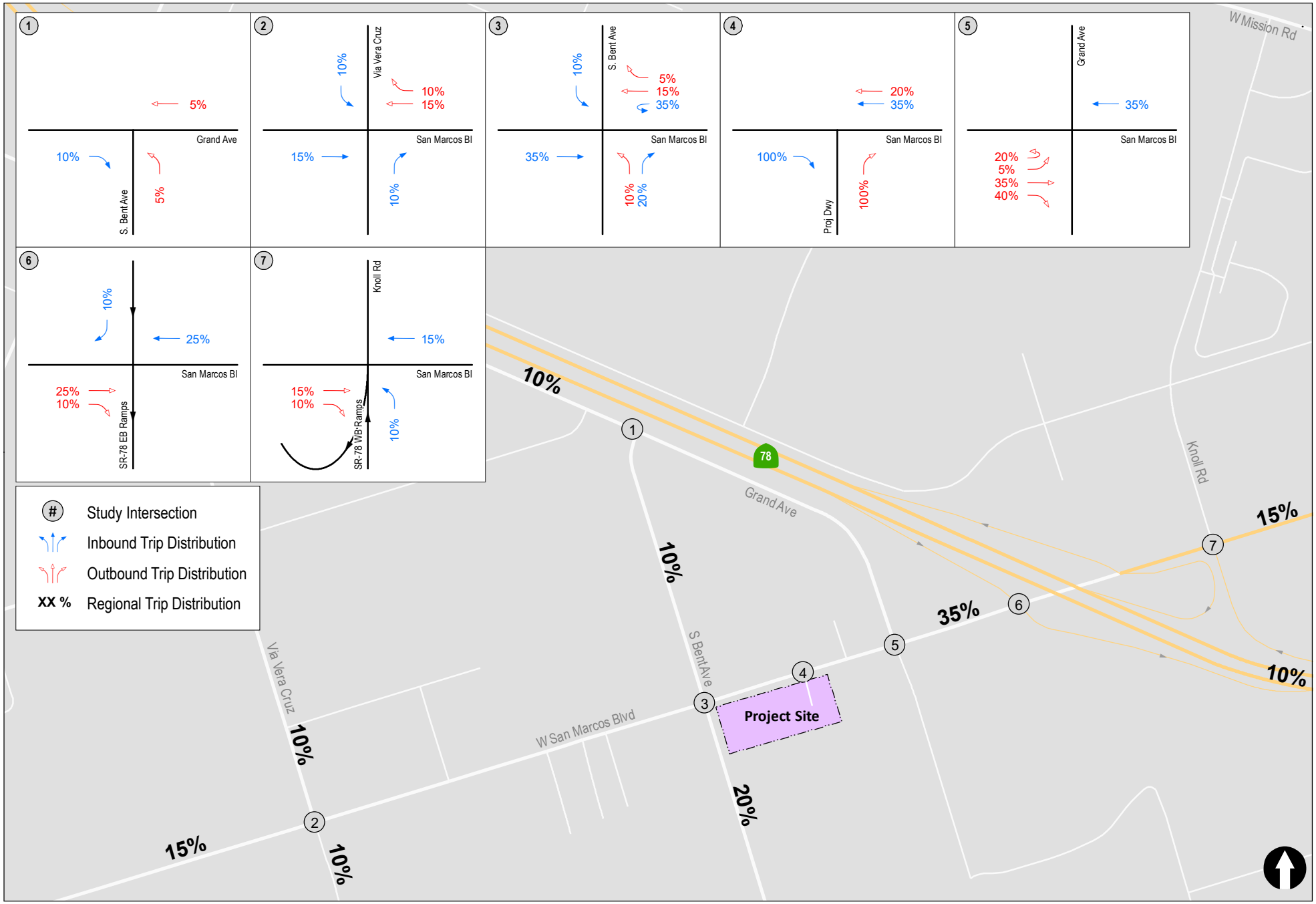

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Figure 8-1

Project Traffic Distribution

Bent Avenue Coffee

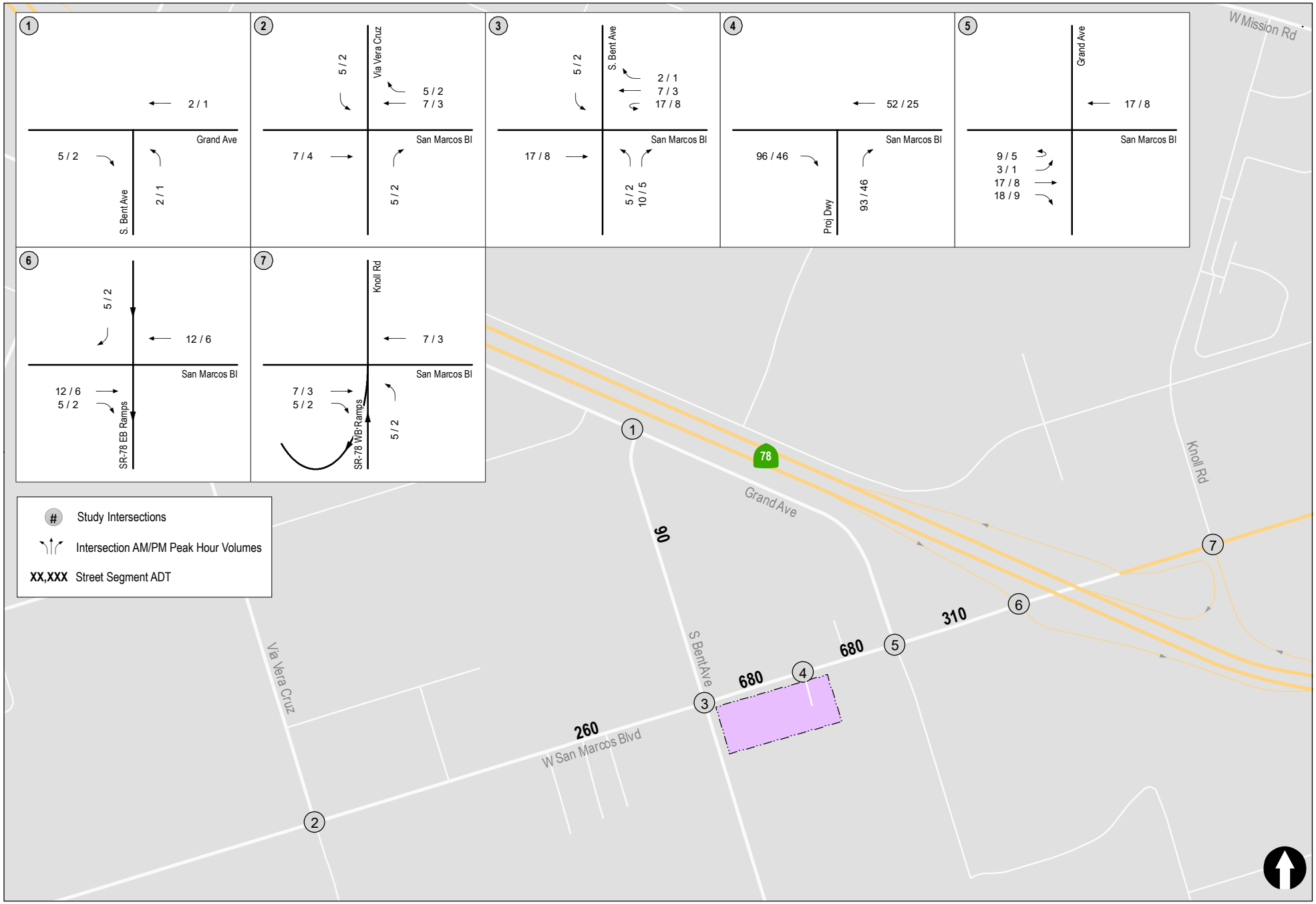

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Figure 8-2

Project Traffic Volumes

Bent Avenue Coffee

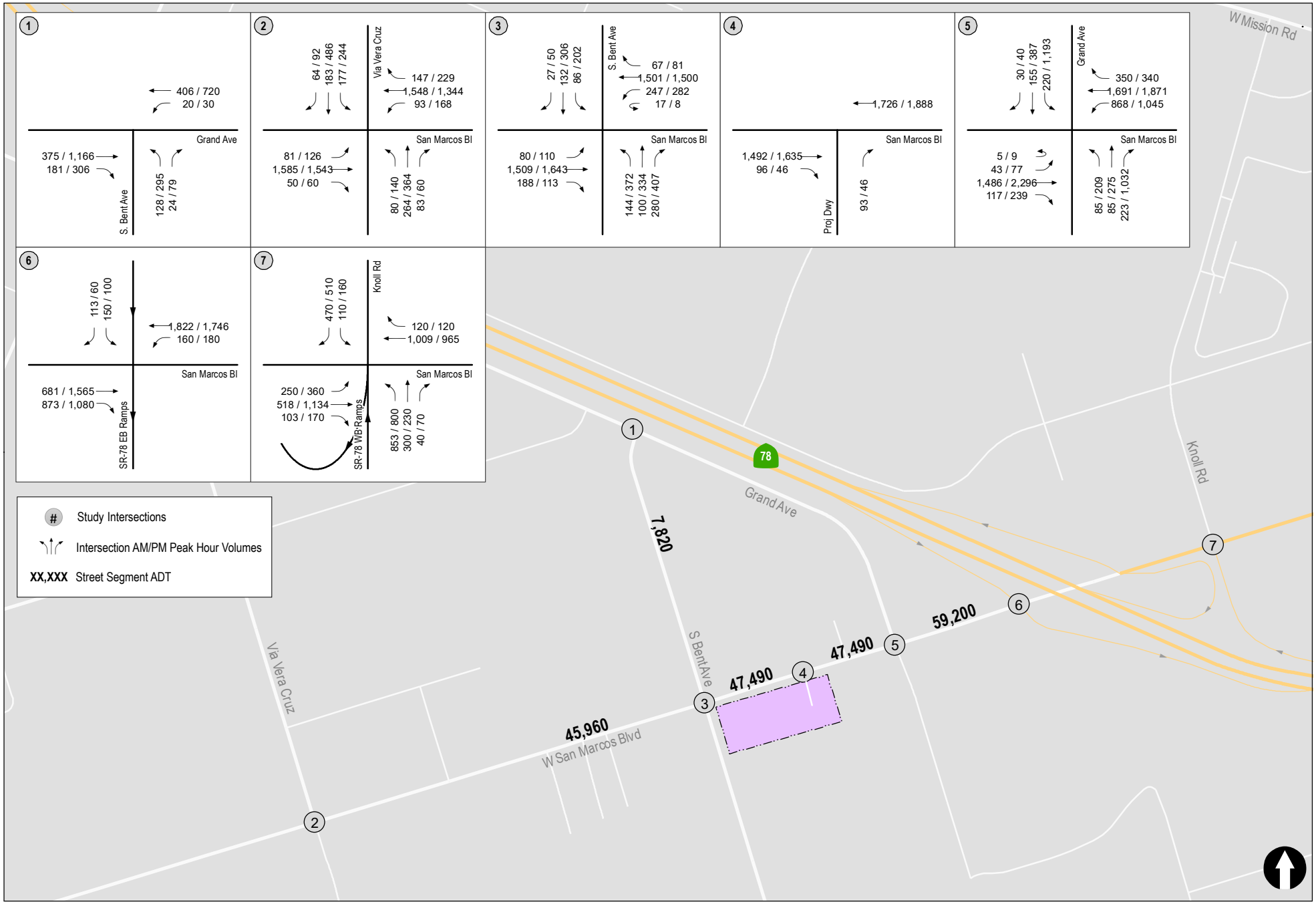

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Figure 8-3

Near-Term + Project Traffic Volumes

Bent Avenue Coffee

9.0 ANALYSIS OF NEAR-TERM SCENARIOS

The following section presents the analysis of study area intersections and street segments under Near-Term conditions without and with the proposed Project.

9.1 Near-Term Without Project

9.1.1 *Intersection Analysis*

Table 9–1 summarizes the intersection operations under the Near-Term without Project condition. As seen in *Table 9–1*, the following study intersections are calculated to operate at LOS F:

- San Marcos Boulevard / Via Vera Cruz (LOS F during the PM peak hour)
- San Marcos Boulevard / Bent Avenue (LOS F during both the AM and PM peak hours)
- San Marcos Boulevard / Grand Avenue (LOS F during the PM peak hour)

Appendix E contains the Near-Term without Project intersection analysis calculation worksheets.

9.1.2 *Segment Operations*

Table 9–2 summarizes the segment operations under the Near-Term without Project condition. As seen in *Table 9–2*, the following study segments are calculated to operate at LOS E or F:

- San Marcos Boulevard, from Via Vera Cruz to Bent Avenue (LOS F)
- San Marcos Boulevard, from Grand Avenue to SR-78 Ramps (LOS E)

9.2 Near-Term + Project

9.2.1 *Intersection Analysis*

Table 9–1 summarizes the intersection operations under the Near-Term + Project condition. As seen in *Table 9–1*, with the addition of Project traffic, the following study intersections are calculated to continue to operate at LOS F:

- San Marcos Boulevard / Via Vera Cruz (LOS F during the PM peak hour)
- San Marcos Boulevard / Bent Avenue (LOS F during both the AM and PM peak hours)
- San Marcos Boulevard / Grand Avenue (LOS F during the PM peak hour)

Based on the established Level of Service Standards outlined in *Section 5*, the Project is calculated to result in a substantial effect to the San Marcos Boulevard / Bent Avenue intersection. There is a plan to improve this intersection by restriping the northbound leg along Bent Avenue to provide a dedicated right-turn lane. This improvement is associated with the Bent Avenue Bridge Capital Improvement Project (CIP).

Table 9–3 summarizes the San Marcos Boulevard / Bent Avenue intersection operations under Near-Term + Project + Restriping conditions. As seen in *Table 9–3*, the future restriping of the northbound leg of this intersection will increase performance to pre-project conditions.

Appendix F contains the Near-Term + Project intersection analysis calculation worksheets.

9.2.2 *Segment Operations*

Table 9–2 summarizes the segment operations under the Near-Term + Project condition. As seen in *Table 9–2*, with the addition of Project traffic, the following study segments are calculated to continue to operate at LOS E or F:

- San Marcos Boulevard, from Via Vera Cruz to Bent Avenue (LOS F)
- San Marcos Boulevard, from Grand Avenue to SR-78 Ramps (LOS E)

Based on the established Level of Service Standards outlined in *Section 5*, the Project is not calculated to result in substantial effects to the study segments and therefore, no improvements are required.

TABLE 9–1
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Near-Term Without Project		Near-Term With Project		Δ [c]	Substantial Effect?
			Delay [a]	LOS [b]	Delay	LOS		
1. Grand Avenue / Bent Avenue	Signal	AM	8.9	A	8.9	A	0.0	No
		PM	23.4	C	23.6	C	0.2	No
2. San Marcos Boulevard / Via Vera Cruz	Signal	AM	39.0	D	39.6	D	0.6	No
		PM	**110.2**	**F**	**110.9**	**F**	**0.7**	**No**
3. San Marcos Boulevard / Bent Avenue	Signal	AM	**94.6**	**F**	**100.3**	**F**	**5.7**	**Yes**
		PM	**133.4**	**F**	**136.5**	**F**	**3.1**	**Yes**
4. San Marcos Boulevard / Project Driveway	MSSC[d]	AM	-	-	27.9	D	-	No
		PM	-	-	24.2	C	-	No
5. San Marcos Boulevard / Grand Avenue	Signal	AM	48.9	D	49.5	D	0.6	No
		PM	**206.8**	**F**	**206.8**	**F**	**0.0**	**No**
6. San Marcos Boulevard / SR-78 EB Ramps	Signal	AM	10.9	B	11.1	B	0.2	No
		PM	11.9	B	11.9	B	0.0	No
7. San Marcos Boulevard / SR-78 WB Ramps / Knoll Road	Signal	AM	29.0	C	29.0	C	0.0	No
		PM	27.7	C	27.7	C	0.0	No

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Δ denotes the increase in delay due to Project.
d. MSSC = Minor Street Stop Controlled intersection. Worst-Case movement approach delay and LOS reported. Intersection does not exist under "without Project" conditions.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 9–2
NEAR-TERM STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS E) [a]	Near-Term Without Project			Near-Term With Project			Δ[e]	Substantial Effect?
		ADT [b]	LOS [c]	V/C [d]	ADT	LOS	V/C		
San Marcos Boulevard									
Via Vera Cruz to Bent Avenue	40,000	**45,700**	**F**	**1.143**	**45,960**	**F**	**1.149**	**0.006**	**No**
Bent Avenue to Grand Avenue	60,000	46,810	D	0.780	47,490	D	0.792	0.012	No
Project Driveway to	60,000	46,810	D	0.780	47,490	D	0.792	0.012	No
Grand Avenue to SR-78 EB Ramps	60,000	**58,890**	**E**	**0.982**	**59,200**	**E**	**0.987**	**0.005**	**No**
Bent Avenue									
Grand Avenue to San Marcos Boulevard	15,000	7,730	C	0.515	7,820	C	0.521	0.006	No

Footnotes:

a. Capacities based on City of San Marcos's Roadway Classification Table
b. Average Daily Traffic Volumes.
c. Level of Service.
d. Volume to Capacity.
e. Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.

TABLE 9–3
POST IMPROVEMENT INTERSECTION ANALYSIS

Intersection	Control Type	Peak Hour	Near-Term Without Project		Near-Term With Project		Near-Term With Project + Restriping	
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS
3. San Marcos Boulevard / Bent Avenue [c]	Signal	AM	94.6	F	100.3	F	91.6	F
		PM	133.4	F	136.5	F	105.7	F

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. The northbound approach of the San Marcos Boulevard / Bent Avenue intersection will be restriped to provide a dedicated left-turn lane, a dedicated thru lane, and a dedicated right-turn lane.

SIGNALIZED

DELAY/LOS THRESHOLDS

Delay	LOS
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F

10.0 ANALYSIS OF LONG-TERM SCENARIOS

10.1 Long-Term (Year 2035) Baseline Conditions & Traffic Volumes

For the purposes of this traffic study, no network additions were assumed in the long-term analysis.

In order to forecast future traffic volumes for long-term (Year 2035) conditions, the SANDAG Series 12 Model was utilized. This approach is consistent with 2019 traffic study conducted by LLG for the Panera Bread project, located immediately across San Marcos Boulevard from the Project site. The forecasted ADT volumes were then used to calculate peak hour volumes based partially on the existing relationship between ADT and peak hour volumes.

Several other traffic engineering principles and factors such as the K-factor (the proportion of daily volume that occurs during the peak period) and D-factor (the directional split of the traffic volumes) were also considered in the forecast analysis (see ***Appendix G*** for definitions). The forecast volumes were also checked for consistency between intersections, where no driveways or roadways exist between intersections, and were compared to existing volumes for accuracy.

Figure 10–1 shows the Long-Term without Project traffic volumes. ***Figure 10–2*** shows the Long-Term + Project traffic volumes.

10.2 Long-Term Without Project

10.2.1 *Intersection Analysis*

Table 10–1 summarizes the intersection operations under the Long-Term without Project conditions. As seen in *Table 10–1*, the following study intersections are calculated to operate at LOS E or F:

- San Marcos Boulevard / Via Vera Cruz (LOS F during the PM peak hour)
- San Marcos Boulevard / Bent Avenue (LOS F during both the AM and PM peak hours)
- San Marcos Boulevard / Grand Avenue (LOS E during the AM and LOS F during the PM peak hour)

Appendix H contains the Long-Term without Project intersection analyses calculation worksheets.

10.2.2 *Segment Operations*

Table 10–2 summarizes the segment operations under the Long-Term without Project condition. As seen in *Table 10–2*, the following study segments are calculated to operate at LOS F:

- San Marcos Boulevard, from Via Vera Cruz to Bent Avenue
- San Marcos Boulevard, from Grand Avenue to SR-78 Ramps

10.3 Long-Term + Project

10.3.1 *Intersection Analysis*

Table 10–1 summarizes the intersection operations under the Long-Term + Project condition. As seen in *Table 10–1*, with the addition of Project traffic, the following study intersections are calculated to continue to operate at LOS E or F:

- San Marcos Boulevard / Via Vera Cruz (LOS F during the PM peak hour)
- San Marcos Boulevard / Bent Avenue (LOS F during both the AM and PM peak hours)
- San Marcos Boulevard / Grand Avenue (LOS E during the AM and LOS F during the PM peak hour)

Based on the established Level of Service Standards outlined in *Section 5*, the Project is calculated to result in a substantial effect to the San Marcos Boulevard / Bent Avenue intersection. There is a plan to improve this intersection by restriping the northbound leg along Bent Avenue to provide a dedicated right-turn lane. This improvement is associated with the Bent Avenue Bridge Capital Improvement Project (CIP).

Table 10–3 summarizes the San Marcos Boulevard / Bent Avenue intersection operations under Long-Term + Project + Restriping conditions. As seen in *Table 10–3*, the future restriping of the northbound leg of this intersection will increase performance to pre-project conditions.

Appendix I contains the Long-Term + Project intersection analyses calculation worksheets.

10.3.2 *Segment Operations*

Table 10–2 summarizes the segment operations under the Long-Term + Project condition. As seen in *Table 10–2*, with the addition of Project traffic, the following study segments are calculated to continue to operate at LOS F:

- San Marcos Boulevard, from Via Vera Cruz to Bent Avenue
- San Marcos Boulevard, from Grand Avenue to SR-78 Ramps

Based on the established Level of Service Standards outlines in *Section 5*, the Project is not calculated to result in substantial effects to the study segments and therefore, no improvements are required.

TABLE 10–1
LONG-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Long-Term		Long-Term With Project		Δ[c]	Substantial Effect?
			Delay[a]	LOS[b]	Delay	LOS		
1. Grand Avenue / Bent Avenue	Signal	AM	10.9	B	11.0	B	0.1	No
		PM	34.8	C	35.0	C	0.2	No
2. San Marcos Boulevard / Via Vera Cruz	Signal	AM	51.4	D	52.1	D	0.7	No
		PM	**102.1**	**F**	**102.5**	**F**	**0.4**	**No**
3. San Marcos Boulevard / Bent Avenue	Signal	AM	**111.7**	**F**	**118.1**	**F**	**6.4**	**Yes**
		PM	**201.7**	**F**	**204.9**	**F**	**3.2**	**Yes**
4. San Marcos Boulevard / Project Driveway	MSSC[d]	AM	-	-	30.7	D	-	No
		PM	-	-	26.1	D	-	No
5. San Marcos Boulevard / Grand Avenue	Signal	AM	**56.9**	**E**	**58.0**	**E**	**1.1**	**No**
		PM	**235.3**	**F**	**235.4**	**F**	**0.1**	**No**
6. San Marcos Boulevard / SR-78 EB Ramps	Signal	AM	12.5	B	12.6	B	0.1	No
		PM	13.8	B	13.8	B	0.0	No
7. San Marcos Boulevard / SR-78 WB Ramps / Knoll Road	Signal	AM	30.4	C	30.4	C	0.0	No
		PM	30.9	C	30.9	C	0.0	No

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. Δ denotes the increase in delay due to Project.
d. MSSC = Minor Street Stop Controlled intersection. Worst-Case movement approach delay and LOS reported. Intersection does not exist under "without Project" conditions.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

TABLE 10–2
LONG-TERM STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS E) [a]	Long-Term			Long-Term With Project			Δ[e]	Substantial Effect?
		ADT[b]	LOS[c]	V/C[d]	ADT	LOS	V/C		
San Marcos Boulevard									
Via Vera Cruz to Bent Avenue	42,000	**48,320**	**F**	**1.150**	**48,580**	**F**	**1.157**	**0.007**	**No**
Bent Avenue Project Driveway	60,000	48,290	D	0.805	48,970	D	0.816	0.011	No
Project Driveway to Grand Avenue	60,000	48,290	D	0.805	48,970	D	0.816	0.011	No
Grand Avenue to SR-78 EB Ramps	60,000	**63,910**	**F**	**1.065**	**64,220**	**F**	**1.070**	**0.005**	**No**
Bent Avenue									
Grand Avenue to San Marcos Boulevard	15,000	8,830	C	0.589	8,920	C	0.595	0.006	No

Footnotes:

a. Capacity based on roadway classification operating at LOS E.

b. Average Daily Traffic.

c. Level of Service.

d. Volume to Capacity.

e. Δ denotes a project-induced increase in the Volume to Capacity (V/C) ratio.

TABLE 10–3
POST IMPROVEMENT INTERSECTION ANALYSIS

Intersection	Control Type	Peak Hour	Long-Term Without Project		Long-Term With Project		Long-Term With Project + Restriping	
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS
3. San Marcos Boulevard / Bent Avenue [c]	Signal	AM	111.7	F	118.1	F	105.0	F
		PM	201.7	F	204.9	F	168.3	F

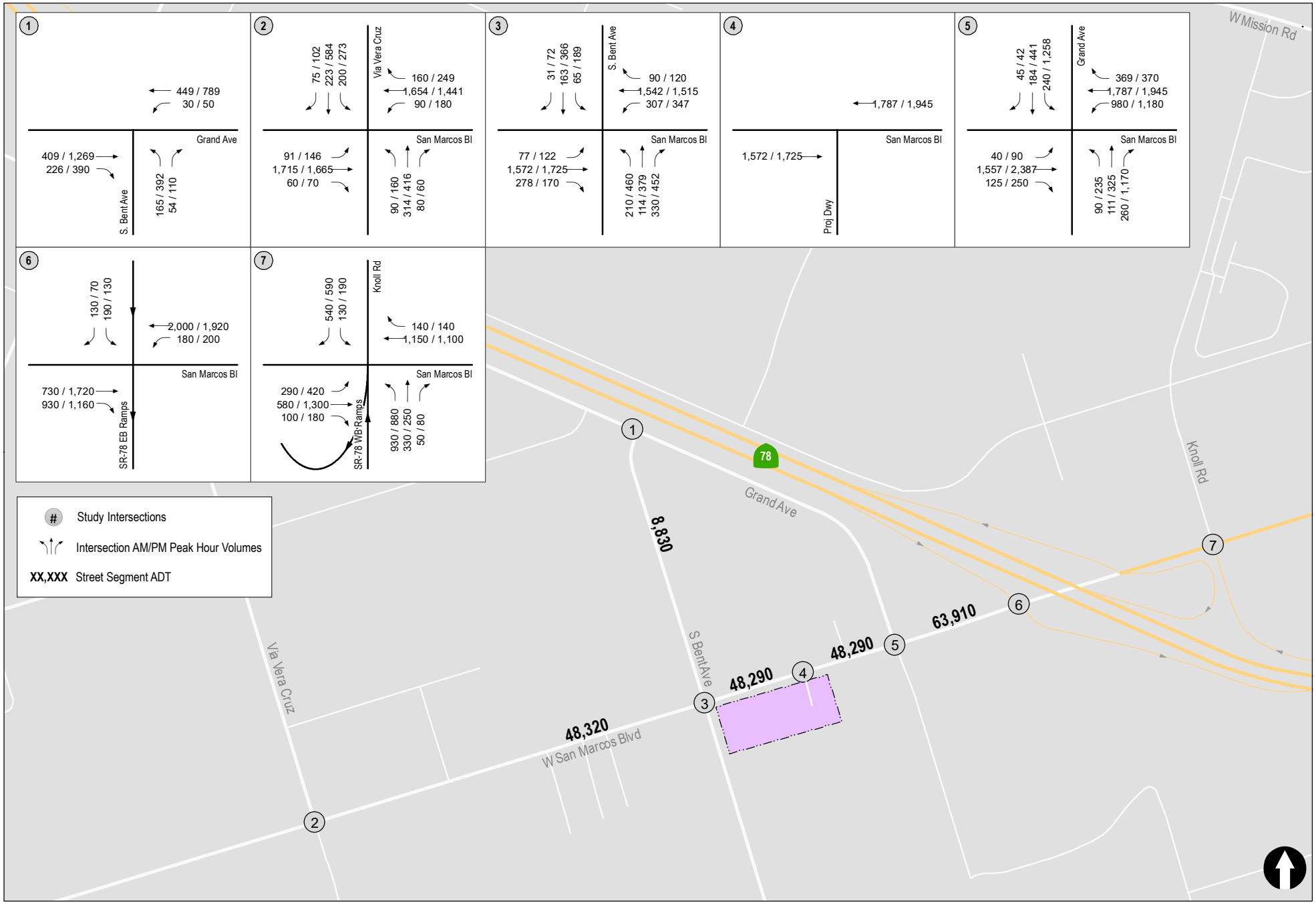
Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. The northbound approach of the San Marcos Boulevard / Bent Avenue intersection will be restriped to provide a dedicated left-turn lane, a dedicated thru lane, and a dedicated right-turn lane.

SIGNALIZED

DELAY/LOS THRESHOLDS

Delay	LOS
0.0 ≤ 10.0	A
10.1 to 20.0	B
20.1 to 35.0	C
35.1 to 55.0	D
55.1 to 80.0	E
≥ 80.1	F



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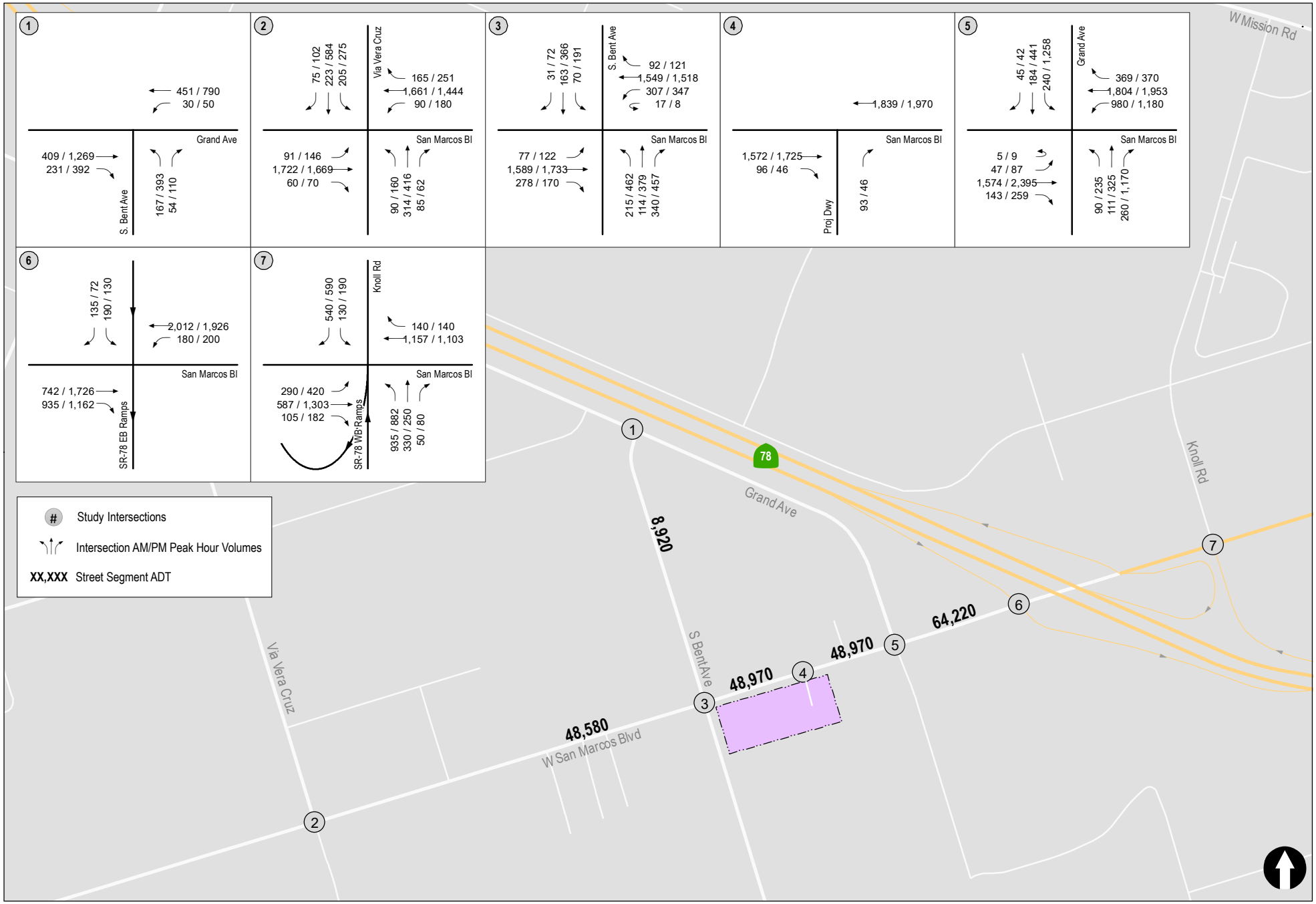
Date: 10/14/2020
Time: 2:06 PM

Figure 10-1

Long-Term Traffic Volumes

Bent Avenue Coffee



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Date: 1/21/2021
Time: 10:31 AM

Figure 10-2

Long-Term + Project Traffic Volumes

Bent Avenue Coffee

11.0 VEHICLE MILES TRAVELED ASSESSMENT

Based on the City of San Marcos *Transportation Impact Analysis Guidelines*, approved November 16, 2020, the requirement to prepare a detailed transportation Vehicle Miles Traveled (VMT) analysis applies to all land development projects except for those that meet at least one of the provided screening criteria. A project that meets at least one of the screening criteria listed below would be considered to have a less-than-significant impact due to the project or location characteristics.

1. Small Projects (less than 110 daily vehicle trips)
2. Affordable Housing (100% deed restricted)
3. Local Serving Retail and Public Facilities (50,000 square feet gross floor area or less)
4. Adjacency to High-Quality Transit
5. Map-Based Screening (projects located in VMT efficient areas)

The Project is the development of a 2,128 SF coffee shop, which is considered a retail use. Therefore, screening criteria number three (3) listed above is applicable. The guidelines state that "Retail projects that are 50,000 square feet gross floor area or less can be presumed to have a less-than-significant transportation impact and would not require a detailed VMT analysis". As such, a VMT analysis is not warranted for this Project.

12.0 ACCESS AND OTHER ISSUES

12.1 Site Access

Access to the site is proposed via one right-in/right-out only driveway on San Marcos Boulevard. Access via Bent Avenue is not proposed. The Project driveway is calculated to operate acceptably at LOS D or better during the Near-Term and Long-Term peak hours as shown in *Tables 9-1* and *10-1,* respectively.

12.2 Parking

The Project proposes a 2,128 SF coffee shop with a drive-through, including 1,797 SF of indoor space and a 331 SF outdoor patio. The *City of San Marcos Municipal Code Title 20 Zoning Ordinance* provides guidance on the minimum off-street parking requirements for a variety of land uses. The "*Restaurant, Take-Out, between 1,001 and 4,000 SF*" and "*Outdoor Dining*", categories are the land uses applicable to the Project.

The 1,797 SF of indoor space requires a minimum of 1 space per 3 seats or 1 space / 100 SF gross floor area, whichever is greater, plus 3 employee spaces. Since the number of seats is unknown at this time, the gross floor area was used to calculate the minimum required parking, which equates to 21 parking spaces (((1,797 SF / 100) + 3) = 21 spaces). The 331 SF of outdoor patio space requires a minimum of 1 space / 150 SF gross floor area, which equates to 2 parking spaces (331 SF / 150 = 2 spaces). Therefore, in total, a minimum of 23 parking spaces are required. The Project will provide a total of 23 parking spaces, and will therefore be in compliance with the City's minimum parking requirement.

12.3 Drive-Through Queuing Operations

The Project's proposed drive-through lane would circulate from west to east, delivering outbound vehicles to the San Marcos Boulevard driveway. The site plan, provided in this study as *Figure 2-3*, shows approximately ten positions in the formal queue before the circulation of the parking lot is affected. Approximately seven additional vehicles could be accommodated within the parking lot before spilling out onto San Marcos Boulevard, for a total drive-through storage of 17 vehicles.

In order to estimate the amount of potential drive thru queuing at this store, observations were conducted for two days each at two existing Starbucks stores. The observed 85th percentile queue (the typical design queue) was 11 vehicles. Since 17 vehicles can be queued on-site before reaching San Marcos Boulevard, adequate queue space is provided on-site

13.0 ACTIVE TRANSPORTATION REVIEW

13.1 Existing Bicycle Network

Currently, Class II bike lanes are provided on the following study street segments:

- Via Vera Cruz, north of San Marcos Boulevard (both sides);
- Bent Avenue, from Grand Avenue to San Marcos Boulevard (both sides);
- Grand Avenue, south of San Marcos Boulevard (west side); and
- San Marcos Boulevard, west of Via Vera Cruz to Grand Avenue, and east of Knoll Road (both sides).

13.2 Existing Pedestrian Conditions

Pedestrian sidewalks are generally provided throughout the study area. Pedestrian crossings are provided in all directions at the intersections of San Marcos Boulevard / Via Vera Cruz and San Marcos Boulevard / Bent Avenue. Pedestrian crossings are prohibited at the following locations:

- Grand Avenue / Bent Avenue (across the east and west legs);
- San Marcos Boulevard / Grand Avenue (across the east leg);
- San Marcos Boulevard / SR-78 EB Ramps (across the east, west, and south legs); and
- San Marcos Boulevard / SR-78 WB Ramps (across the west and south legs).

13.2.1 *Pedestrian Access*

The Project will construct a sidewalk along the project frontage with Bent Avenue. There is an existing sidewalk along the project frontage on San Marcos Boulevard, and an accessible path of travel is proposed to connect the restaurant to the San Marcos Boulevard sidewalk.

13.3 Existing Transit Conditions

Transit service is provided to the project area via the Route 347 Bus Route. Route 347 provides bus service between Cal State San Marcos and Palomar College, with stops within the study along San Marcos Boulevard, Via Vera Cruz and Bent Avenue. The route operates hourly between the hours of 5:00AM and 8:00PM, Monday through Friday, and between 7:30AM and 7:30PM on Saturday.

14.0 CONCLUSIONS

The intersection and segment analysis provided in this study shows that the analyzed facilities are consistent with the City of San Marcos LOS Standards with the exception of the San Marcos Boulevard / Bent Avenue intersection. The future restriping of the northbound leg of this intersection along Bent Avenue to provide a dedicated right-turn lane, which is associated with the Bent Avenue Bridge Capital Improvement Project (CIP), will increase performance to pre-project conditions.

Based on the Project's "locally serving" retail classification, the Project is presumed to have a less-than-significant transportation impact and does not require a detailed VMT analysis.

LINSCOTT LAW & GREENSPAN engineers

TECHNICAL APPENDICES

BENT AVENUE COFFEE

San Marcos, California
January 28, 2021

LLG Ref. 3-20-3244

Linscott, Law & Greenspan, Engineers
4542 Ruffner Street
Suite 100
San Diego, CA 92111
858.300.8800 T
858.300.8810 F
www.llgengineers.com

APPENDIX A

INTERSECTION AND SEGMENT COUNT SHEETS

#2

Prepared by National Data & Surveying Services

Via Vera Cruz & San Marcos Blvd

Peak Hour Turning Movement Count

ID: 18-04201-001
City: San Marcos

Day: Thursday
Date: 05/24/2018

PEAK HOURS
AM: 08:00 AM - 09:00 AM
NOON: NONE
PM: 04:30 PM - 05:30 PM

COUNT PERIODS
AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Via Vera Cruz — SOUTHBOUND

AM	26	105	55	0	258	AM
NOON	0	0	0	0	0	NOON
PM	50	262	167	0	348	PM

San Marcos Blvd — EASTBOUND

AM	NOON	PM	
1002	0	1050	⇦
0	0	10	↰ 0
39	0	71	↑ 1
967	0	1144	→ 2
34	0	56	↳ 0
AM	NOON	PM	

San Marcos Blvd — WESTBOUND

PM	NOON	AM	
112	0	84	0 ↱
927	0	943	2 ←
74	0	72	1 ↰
21	0	10	0 ↰
1377	0	1081	⇨
PM	NOON	AM	

Via Vera Cruz — NORTHBOUND

PM	392	0	63	165	45	PM
NOON	0	0	0	0	0	NOON
AM	211	0	33	135	49	AM

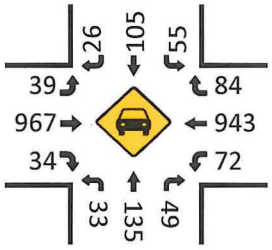
0 ↰ 1 ↰ 2 ↑ 0 ↱

CONTROL

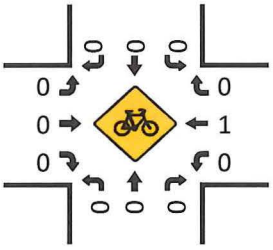
Signalized

TEV	2552 AM	0 NOON	3167 PM
PHF	0.96		0.98

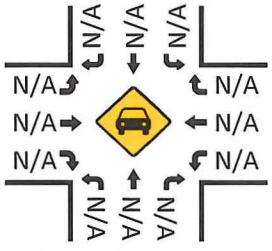
Total Vehicles (AM)



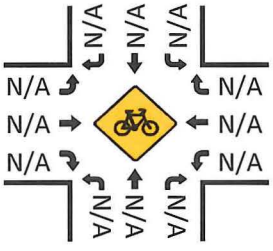
Bikes (AM)



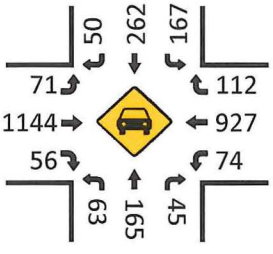
Total Vehicles (Noon)



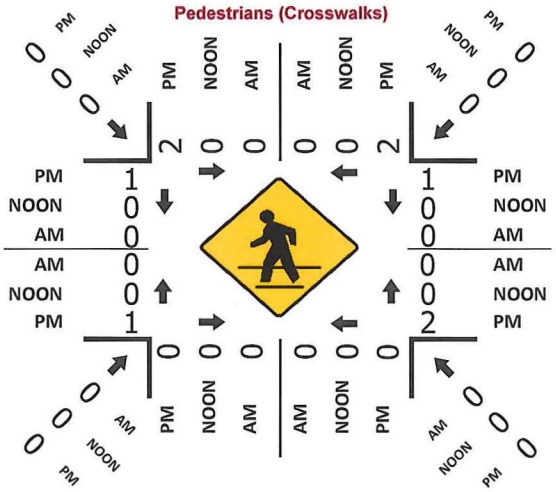
Bikes (NOON)



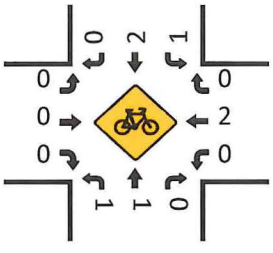
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Via Vera Cruz & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-001
Date: 5/24/2018

Total

NS/EW Streets:	Via Vera Cruz				Via Vera Cruz				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	2	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	3	14	13	0	6	12	3	0	2	172	6	0	6	265	10	1	513
7:15 AM	4	27	10	0	4	15	9	0	5	185	2	1	11	289	17	2	581
7:30 AM	9	26	6	0	7	26	4	0	2	185	3	0	10	271	13	1	563
7:45 AM	9	37	6	0	9	44	5	0	15	193	11	0	28	211	16	2	586
8:00 AM	8	31	5	0	11	24	4	0	7	271	15	0	18	225	13	3	635
8:15 AM	7	28	19	0	12	35	9	0	9	213	3	0	29	229	22	3	618
8:30 AM	8	35	16	0	11	28	6	0	11	249	11	0	13	254	23	2	667
8:45 AM	10	41	9	0	21	18	7	0	12	234	5	0	12	235	26	2	632
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	58	239	84	0	81	202	47	0	63	1702	56	1	127	1979	140	16	4795
APPROACH %'s :	15.22%	62.73%	22.05%	0.00%	24.55%	61.21%	14.24%	0.00%	3.46%	93.41%	3.07%	0.05%	5.61%	87.49%	6.19%	0.71%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	33	135	49	0	55	105	26	0	39	967	34	0	72	943	84	10	2552
PEAK HR FACTOR :	0.825	0.823	0.645	0.000	0.655	0.750	0.722	0.000	0.813	0.892	0.567	0.000	0.621	0.928	0.808	0.833	0.957
	0.904				0.830				0.887				0.949				

NS/EW Streets:	Via Vera Cruz				Via Vera Cruz				San Marcos Blvd				San Marcos Blvd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	2	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	21	28	9	0	53	63	15	0	11	261	20	3	12	216	28	5	745
4:15 PM	17	32	9	0	40	73	11	0	15	264	20	1	25	232	25	4	768
4:30 PM	18	30	11	0	40	57	12	0	23	302	12	1	20	245	27	9	807
4:45 PM	11	47	8	0	37	58	12	0	18	314	15	2	19	228	27	3	799
5:00 PM	20	38	11	0	47	79	10	0	16	272	15	2	15	224	30	3	782
5:15 PM	14	50	15	0	43	68	16	0	14	256	14	5	20	230	28	6	779
5:30 PM	20	32	7	0	33	76	14	0	6	284	16	1	22	213	34	6	764
5:45 PM	21	39	12	0	55	84	11	0	8	268	21	4	51	184	17	5	780
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	142	296	82	0	348	558	101	0	111	2221	133	19	184	1772	216	41	6224
APPROACH %'s :	27.31%	56.92%	15.77%	0.00%	34.56%	55.41%	10.03%	0.00%	4.47%	89.41%	5.35%	0.76%	8.31%	80.07%	9.76%	1.85%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	63	165	45	0	167	262	50	0	71	1144	56	10	74	927	112	21	3167
PEAK HR FACTOR :	0.788	0.825	0.750	0.000	0.888	0.829	0.781	0.000	0.772	0.911	0.933	0.500	0.925	0.946	0.933	0.583	0.981
	0.864				0.881				0.918				0.942				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Via Vera Cruz & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-001
Date: 5/24/2018

Bikes

NS/EW Streets:	Via Vera Cruz				Via Vera Cruz				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	2	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	1	1	0	0	0	6	0	0	8
APPROACH %'s :									50.00%	50.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250
													0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1.5	0.5	0	2	1	0	0	1	2	0	0	1	2	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3
4:30 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:00 PM	0	0	0	0	1	1	0	0	0	0	0	0	0	1	0	0	3
5:15 PM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1	2	0	0	1	2	0	0	1	2	1	0	0	2	0	1	13
APPROACH %'s :	33.33%	66.67%	0.00%	0.00%	33.33%	66.67%	0.00%	0.00%	25.00%	50.00%	25.00%	0.00%	0.00%	66.67%	0.00%	33.33%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	1	1	0	0	1	2	0	0	0	0	0	0	0	2	0	0	7
PEAK HR FACTOR :	0.25	0.250	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.583
		0.500				0.375								0.500			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Via Vera Cruz & San Marcos Blvd **Project ID:** 181204-001
City: San Marcos **Date:** 5/24/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Via Vera Cruz		Via Vera Cruz		San Marcos Blvd		San Marcos Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	2	1	0	0	0	1	2	1	7
7:30 AM	0	1	0	3	0	0	1	0	5
7:45 AM	0	2	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	2	4	0	3	0	1	3	1	14
APPROACH %'s :	33.33%	66.67%	0.00%	100.00%	0.00%	100.00%	75.00%	25.00%	
PEAK HR :	**08:00 AM - 09:00 AM**								TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0
PEAK HR FACTOR :									

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	1	1	1	0	0	0	0	0	3
4:15 PM	1	0	3	0	0	1	0	1	6
4:30 PM	1	1	0	0	1	0	0	0	3
4:45 PM	0	0	0	0	0	1	0	0	1
5:00 PM	1	1	0	0	1	0	0	1	4
5:15 PM	0	0	0	0	0	0	1	0	1
5:30 PM	0	1	1	0	2	1	0	1	6
5:45 PM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	4	4	5	0	4	3	1	3	24
APPROACH %'s :	50.00%	50.00%	100.00%	0.00%	57.14%	42.86%	25.00%	75.00%	
PEAK HR :	**04:30 PM - 05:30 PM**								TOTAL
PEAK HR VOL :	2	2	0	0	2	1	1	1	9
PEAK HR FACTOR :	0.500	0.500			0.500	0.250	0.250	0.250	0.563
	0.500				0.750		0.500		

#3

Prepared by National Data & Surveying Services

Bent Ave & San Marcos Blvd

Peak Hour Turning Movement Count

ID: 18-04201-002
City: San Marcos

Day: Thursday
Date: 05/24/2018

PEAK HOURS

AM: 08:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 05:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Bent Ave — SOUTHBOUND

AM	26	63	48	0	163	AM
NOON	0	0	0	0	0	NOON
PM	41	173	127	0	216	PM

San Marcos Blvd — EASTBOUND

AM	NOON	PM	
1230	0	1142	⇦
9	0	15	↰ 0
19	0	33	↑ 1
992	0	1234	→ 2
19	0	26	↱ 0
AM	NOON	PM	

San Marcos Blvd — WESTBOUND

PM	NOON	AM	
80	0	65	1 ↱
1011	0	1121	2 ←
103	0	93	1 ↰
41	0	31	0 ↰
1637	0	1270	⇨
PM	NOON	AM	

Bent Ave — NORTHBOUND

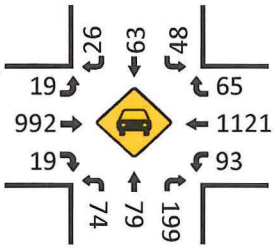
PM	302	0	75	103	235	PM
NOON	0	0	0	0	0	NOON
AM	175	0	74	79	199	AM

Bent Ave

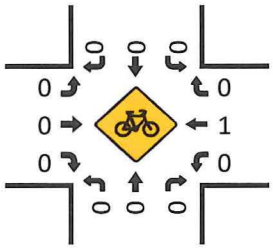
CONTROL: Signalized

TEV	2838	0	3297
	AM	NOON	PM
PHF	0.97		0.98

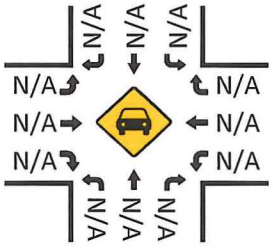
Total Vehicles (AM)



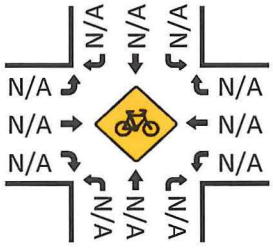
Bikes (AM)



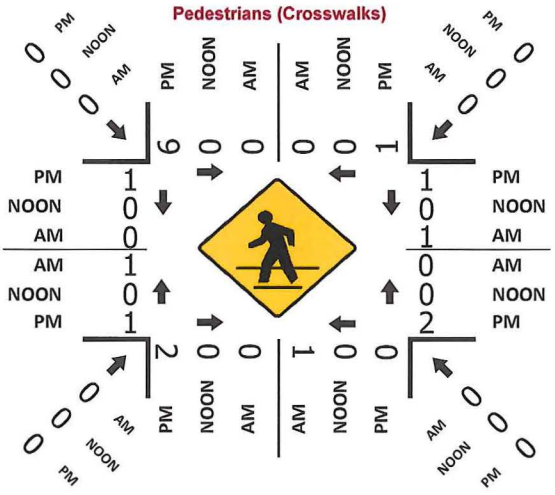
Total Vehicles (Noon)



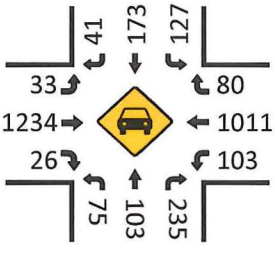
Bikes (NOON)



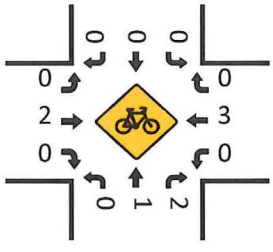
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Bent Ave & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-002
Date: 5/24/2018

Total

NS/EW Streets:	Bent Ave				Bent Ave				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	8	9	37	0	3	11	2	0	1	164	2	4	22	294	5	6	568
7:15 AM	13	8	46	0	7	4	4	0	4	204	4	1	12	306	2	2	617
7:30 AM	21	9	40	0	9	13	4	0	2	170	5	1	11	302	7	4	598
7:45 AM	16	22	55	0	7	13	0	0	1	211	12	2	27	254	6	5	631
8:00 AM	26	14	41	0	15	24	5	0	6	256	1	2	26	268	15	6	705
8:15 AM	17	25	50	0	8	10	3	0	4	236	1	0	32	257	17	13	673
8:30 AM	17	18	60	0	15	10	11	0	4	238	10	4	12	303	19	7	728
8:45 AM	14	22	48	0	10	19	7	0	5	262	7	3	23	293	14	5	732
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	132	127	377	0	74	104	36	0	27	1741	42	17	165	2277	85	48	5252
APPROACH %'s :	20.75%	19.97%	59.28%	0.00%	34.58%	48.60%	16.82%	0.00%	1.48%	95.29%	2.30%	0.93%	6.41%	88.43%	3.30%	1.86%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	74	79	199	0	48	63	26	0	19	992	19	9	93	1121	65	31	2838
PEAK HR FACTOR :	0.712	0.790	0.829	0.000	0.800	0.656	0.591	0.000	0.792	0.947	0.475	0.563	0.727	0.925	0.855	0.596	0.969
	0.926				0.778				0.938				0.960				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	16	20	72	0	32	36	9	0	7	290	3	5	23	256	22	10	801
4:15 PM	22	31	66	0	34	45	9	0	9	299	5	4	30	243	27	11	835
4:30 PM	18	29	58	0	24	43	10	0	7	318	10	3	26	270	14	8	838
4:45 PM	19	23	39	0	37	49	13	0	10	327	8	3	24	242	17	12	823
5:00 PM	25	28	60	0	27	38	13	0	8	297	4	5	19	224	18	10	776
5:15 PM	17	20	73	0	37	46	13	0	5	296	8	7	22	245	20	8	817
5:30 PM	21	28	79	0	23	40	7	0	10	295	8	4	35	246	21	14	831
5:45 PM	27	25	43	0	16	42	9	0	16	334	8	4	32	230	24	10	820
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	165	204	490	0	230	339	83	0	72	2456	54	35	211	1956	163	83	6541
APPROACH %'s :	19.21%	23.75%	57.04%	0.00%	35.28%	51.99%	12.73%	0.00%	2.75%	93.85%	2.06%	1.34%	8.74%	81.06%	6.76%	3.44%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	75	103	235	0	127	173	41	0	33	1234	26	15	103	1011	80	41	3297
PEAK HR FACTOR :	0.852	0.831	0.816	0.000	0.858	0.883	0.788	0.000	0.825	0.943	0.650	0.750	0.858	0.936	0.741	0.854	0.984
	0.868				0.861				0.940				0.971				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Bent Ave & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-002
Date: 5/24/2018

Bikes

NS/EW Streets:	Bent Ave				Bent Ave				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	1	0	0	1	0	0	0	5	0	0	7
APPROACH %'s :					0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250
													0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	1	0	0	1	1	0	0	1	2	0	0	1	2	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	1	2	0	0	0	0	0	0	1	0	0	0	1	0	0	5
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	1	0	0	3
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	1	2	0	0	0	0	0	1	4	0	0	0	4	0	0	12
APPROACH %'s :	0.00%	33.33%	66.67%	0.00%					20.00%	80.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	1	2	0	0	0	0	0	0	2	0	0	0	3	0	0	8
PEAK HR FACTOR :	0.00	0.250	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.500	0.000	0.000	0.000	0.375	0.000	0.000	0.400
			0.250								0.500				0.375		

National Data & Surveying Services

Intersection Turning Movement Count

Location: Bent Ave & San Marcos Blvd **Project ID:** 18-5420-002
City: San Marcos **Date:** 5/24/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Bent Ave		Bent Ave		San Marcos Blvd		San Marcos Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	1	0	0	0	0	0	0	1
7:15 AM	0	1	0	0	0	0	0	0	1
7:30 AM	0	3	0	0	0	0	0	0	3
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	1	0	1	1	0	3
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	5	0	1	0	1	1	0	8
APPROACH %'s :	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	100.00%	0.00%	
PEAK HR :	**08:00 AM - 09:00 AM**								TOTAL
PEAK HR VOL :	0	0	0	1	0	1	1	0	3
PEAK HR FACTOR :				0.250		0.250	0.250		0.250
			0.250		0.250		0.250		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	4	1	0	0	1	1	1	1	9
4:15 PM	0	0	2	0	0	0	0	0	2
4:30 PM	2	0	0	0	1	0	0	0	3
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	1	0	1	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	1	0	0	1	0	0	0	0	2
5:45 PM	2	0	0	0	0	0	1	0	3
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	10	1	3	1	2	1	2	1	21
APPROACH %'s :	90.91%	9.09%	75.00%	25.00%	66.67%	33.33%	66.67%	33.33%	
PEAK HR :	**04:00 PM - 05:00 PM**								TOTAL
PEAK HR VOL :	6	1	2	0	2	1	1	1	14
PEAK HR FACTOR :	0.375	0.250	0.250		0.500	0.250	0.250	0.250	0.389
	0.350		0.250		0.375		0.250		

#4

Prepared by National Data & Surveying Services

Grand Ave & San Marcos Blvd

Peak Hour Turning Movement Count

ID: 18-04201-003
City: San Marcos

Day: Thursday
Date: 05/24/2018

PEAK HOURS		COUNT PERIODS
08:00 AM - 09:00 AM	AM	07:00 AM - 09:00 AM
NONE	NOON	NONE
04:00 PM - 05:00 PM	PM	04:00 PM - 06:00 PM

Grand Ave — SOUTHBOUND

	Right	Thru	Left	U-Turn	Exit
AM	16	68	126	0	290
NOON	0	0	0	0	0
PM	38	155	658	0	330
Lanes	1	1	2	0	

San Marcos Blvd — WESTBOUND

	Lanes	PM	NOON	AM
Right	1	174	0	238
Thru	3	1083	0	1266
Left	2	353	0	225
U-Turn	0	0	0	0
Exit		2315	0	1337

San Marcos Blvd — EASTBOUND

	AM	NOON	PM	Lanes
Exit	1339	0	1259	
U-Turn	14	0	20	0
Left	20	0	39	1
Thru	1142	0	1408	3
Right	60	0	128	1

Grand Ave — NORTHBOUND

	Exit	U-Turn	Left	Thru	Right
Lanes		0	2	1	1
PM	636	0	118	117	249
NOON	0	0	0	0	0
AM	353	0	43	32	69

CONTROL

Signalized

	AM	NOON	PM
TEV	3319	0	4540
PHF	0.93		0.98

Total Vehicles (AM)

Approach			
Southbound	16	68	126
Eastbound	20	1142	60
Westbound	238	1266	225
Northbound	43	32	69

Total Vehicles (Noon)

Approach			
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach			
Southbound	38	155	658
Eastbound	39	1408	128
Westbound	174	1083	353
Northbound	118	117	249

Bikes (AM)

Approach			
Southbound	0	0	0
Eastbound	0	0	0
Westbound	0	1	0
Northbound	0	0	0

Bikes (NOON)

Approach			
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Bikes (PM)

Approach			
Southbound	0	0	1
Eastbound	0	3	0
Westbound	0	2	0
Northbound	2	1	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (west half)	1	0	6
North leg (east half)	7	0	2
West leg (north half)	5	0	3
West leg (south half)	2	0	2
East leg (north half)	0	0	0
East leg (south half)	0	0	0
South leg (west half)	0	0	3
South leg (east half)	0	0	0
NW diagonal	0	0	0
NE diagonal	0	0	0
SW diagonal	0	0	0
SE diagonal	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-003
Date: 5/24/2018

Total

NS/EW Streets:	Grand Ave				Grand Ave				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1	1	0	2	1	1	0	1	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	8	6	11	0	28	7	0	0	0	195	4	3	42	321	37	0	662
7:15 AM	4	12	12	0	28	3	0	0	4	252	8	2	42	323	46	0	736
7:30 AM	3	6	24	0	29	11	2	0	3	195	7	2	38	300	55	0	675
7:45 AM	5	7	23	0	36	10	2	0	4	274	7	2	50	305	72	0	797
8:00 AM	9	8	9	0	35	22	3	0	6	269	14	4	60	284	69	0	792
8:15 AM	10	3	21	0	22	12	3	0	3	304	14	0	45	335	60	0	832
8:30 AM	7	12	13	0	37	18	6	0	7	264	9	3	69	307	54	0	806
8:45 AM	17	9	26	0	32	16	4	0	4	305	23	7	51	340	55	0	889
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	63	63	139	0	247	99	20	0	31	2058	86	23	397	2515	448	0	6189
APPROACH %'s :	23.77%	23.77%	52.45%	0.00%	67.49%	27.05%	5.46%	0.00%	1.41%	93.63%	3.91%	1.05%	11.82%	74.85%	13.33%	0.00%	
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	43	32	69	0	126	68	16	0	20	1142	60	14	225	1266	238	0	3319
PEAK HR FACTOR :	0.632	0.667	0.663	0.000	0.851	0.773	0.667	0.000	0.714	0.936	0.652	0.500	0.815	0.931	0.862	0.000	0.933
	0.692				0.861				0.912				0.969				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1	1	0	2	1	1	0	1	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	30	23	73	0	161	39	10	0	5	345	32	3	93	263	44	0	1121
4:15 PM	35	29	55	0	178	34	9	0	7	368	36	4	89	277	36	0	1157
4:30 PM	25	34	55	0	154	36	8	0	17	335	33	5	98	295	49	0	1144
4:45 PM	28	31	66	0	165	46	11	0	10	360	27	8	73	248	45	0	1118
5:00 PM	25	26	46	0	161	50	10	0	8	369	29	7	89	245	42	0	1107
5:15 PM	34	32	71	0	169	43	4	0	4	377	35	7	94	240	37	0	1147
5:30 PM	26	28	60	0	143	43	10	0	10	382	30	8	79	291	44	0	1154
5:45 PM	29	34	65	0	135	50	10	0	12	356	42	2	99	247	37	0	1118
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	232	237	491	0	1266	341	72	0	73	2892	264	44	714	2106	334	0	9066
APPROACH %'s :	24.17%	24.69%	51.15%	0.00%	75.40%	20.31%	4.29%	0.00%	2.23%	88.36%	8.07%	1.34%	22.64%	66.77%	10.59%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	118	117	249	0	658	155	38	0	39	1408	128	20	353	1083	174	0	4540
PEAK HR FACTOR :	0.843	0.860	0.853	0.000	0.924	0.842	0.864	0.000	0.574	0.957	0.889	0.625	0.901	0.918	0.888	0.000	0.981
	0.960				0.958				0.961				0.911				

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-003
Date: 5/24/2018

Bikes

NS/EW Streets:	Grand Ave				Grand Ave				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1	1	0	2	1	1	0	1	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
7:30 AM	0	0	0	0	0	1	1	0	0	0	0	0	0	2	0	0	4
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	1	1	0	0	1	0	0	0	6	0	0	9
APPROACH %'s :					0.00%	50.00%	50.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	**08:00 AM - 09:00 AM**																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.250
														0.250			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1	1	0	2	1	1	0	1	3	1	0	2	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	1	0	0	0	1	0	0	0	0	1	0	0	0	2	0	0	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	2	1	0	0	1	0	0	0	0	3	1	0	0	3	0	0	11
APPROACH %'s :	66.67%	33.33%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	75.00%	25.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	**04:00 PM - 05:00 PM**																TOTAL
PEAK HR VOL :	2	1	0	0	1	0	0	0	0	3	0	0	0	2	0	0	9
PEAK HR FACTOR :	0.50	0.250	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.375	0.000	0.000	0.000	0.250	0.000	0.000	0.450
		0.375				0.250				0.375				0.250			

National Data & Surveying Services

Intersection Turning Movement Count

Location: Grand Ave & San Marcos Blvd **Project ID:** 18-5220-002
City: San Marcos **Date:** 5/24/2018

Pedestrians (Crosswalks)

NS/EW Streets:	Grand Ave		Grand Ave		San Marcos Blvd		San Marcos Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	1	0	0	0	0	0	0	1
7:15 AM	0	2	1	0	0	0	0	1	4
7:30 AM	0	3	1	0	0	0	0	1	5
7:45 AM	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	1	1
8:15 AM	0	2	0	0	0	0	0	1	3
8:30 AM	1	1	0	0	0	0	2	1	5
8:45 AM	0	4	0	0	0	0	0	2	6
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	14	2	0	0	0	2	7	26
APPROACH %'s :	6.67%	93.33%	100.00%	0.00%			22.22%	77.78%	
PEAK HR :	**08:00 AM - 09:00 AM**								TOTAL
PEAK HR VOL :	1	7	0	0	0	0	2	5	15
PEAK HR FACTOR :	0.250	0.438					0.250	0.625	0.625
	0.500						0.583		

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	6	0	0	0	0	0	1	0	7
4:15 PM	0	0	1	0	0	0	0	0	1
4:30 PM	3	1	0	0	0	0	1	1	6
4:45 PM	0	1	2	0	0	0	0	2	5
5:00 PM	3	5	2	1	0	0	2	5	18
5:15 PM	3	0	0	1	0	0	3	0	7
5:30 PM	1	0	0	0	0	0	0	0	1
5:45 PM	2	1	2	0	0	0	0	1	6
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	18	8	7	2	0	0	7	9	51
APPROACH %'s :	69.23%	30.77%	77.78%	22.22%			43.75%	56.25%	
PEAK HR :	**04:00 PM - 05:00 PM**								TOTAL
PEAK HR VOL :	9	2	3	0	0	0	2	3	19
PEAK HR FACTOR :	0.375	0.500	0.375				0.500	0.375	0.679
	0.458		0.375				0.625		

#5

Prepared by National Data & Surveying Services

SR-78 EB Ramps & San Marcos Blvd

Peak Hour Turning Movement Count

ID: 18-04201-004
City: San Marcos

Day: Thursday
Date: 05/24/2018

PEAK HOURS	COUNT PERIODS
08:00 AM - 09:00 AM	07:00 AM - 09:00 AM
NONE	NONE
04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

SR-78 EB Ramps — SOUTHBOUND

AM	86	0	136	0	0	AM
NOON	0	0	0	0	0	NOON
PM	45	0	87	0	0	PM
	1	0	2	0		

San Marcos Blvd — EASTBOUND

AM	NOON	PM	
1756	0	1649	
0	0	0	0
0	0	0	0
604	0	1438	3
823	0	1027	2
AM	NOON	PM	

CONTROL

Signalized

TEV	3467 AM	0 NOON	4369 PM
PHF	0.97		0.98

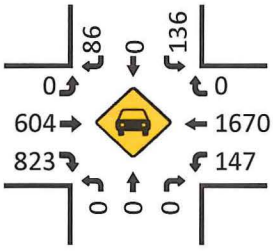
San Marcos Blvd — WESTBOUND

PM	NOON	AM	
0	0	0	0
1604	0	1670	3
165	0	147	2
3	0	1	0
1528	0	741	
PM	NOON	AM	

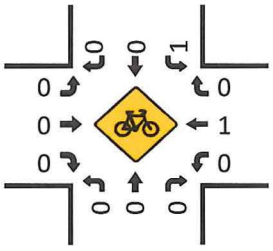
SR-78 EB Ramps — NORTHBOUND

PM	1192	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	970	0	0	0	0	AM
		0	0	0	0	

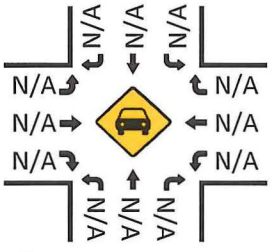
Total Vehicles (AM)



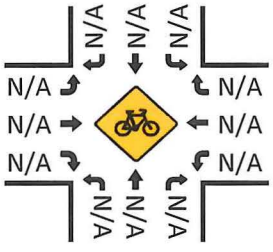
Bikes (AM)



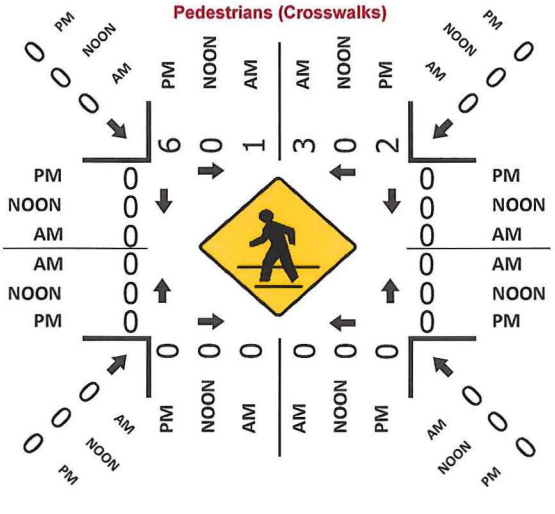
Total Vehicles (NOON)



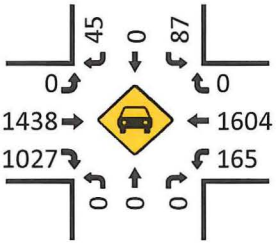
Bikes (NOON)



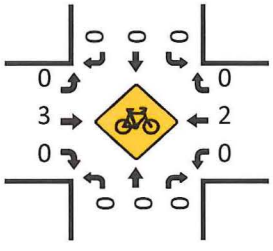
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-78 EB Ramps & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-004
Date: 5/24/2018

Total

NS/EW Streets:	SR-78 EB Ramps				SR-78 EB Ramps				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	0	3	2	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	41	0	16	0	0	108	145	0	37	386	0	0	733
7:15 AM	0	0	0	0	32	0	16	0	0	152	167	0	43	420	0	0	830
7:30 AM	0	0	0	0	49	0	19	0	0	121	139	0	42	387	0	0	757
7:45 AM	0	0	0	0	32	0	16	0	0	173	176	0	31	416	0	0	844
8:00 AM	0	0	0	0	39	0	24	0	0	140	192	0	39	405	0	1	840
8:15 AM	0	0	0	0	35	0	18	0	0	161	203	0	27	408	0	0	852
8:30 AM	0	0	0	0	35	0	23	0	0	147	208	0	37	448	0	0	898
8:45 AM	0	0	0	0	27	0	21	0	0	156	220	0	44	409	0	0	877
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	290	0	153	0	0	1158	1450	0	300	3279	0	1	6631
APPROACH %'s :					65.46%	0.00%	34.54%	0.00%	0.00%	44.40%	55.60%	0.00%	8.38%	91.59%	0.00%	0.03%	
PEAK HR :	**08:00 AM - 09:00 AM**																TOTAL
PEAK HR VOL :	0	0	0	0	136	0	86	0	0	604	823	0	147	1670	0	1	3467
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.872	0.000	0.896	0.000	0.000	0.938	0.935	0.000	0.835	0.932	0.000	0.250	0.965
					0.881				0.949				0.937				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	0	3	2	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	20	0	9	0	0	356	248	0	46	398	0	0	1077
4:15 PM	0	0	0	0	22	0	14	0	0	372	266	0	37	399	0	2	1112
4:30 PM	0	0	0	0	26	0	12	0	0	329	260	0	39	418	0	0	1084
4:45 PM	0	0	0	0	19	0	10	0	0	381	253	0	43	389	0	1	1096
5:00 PM	0	0	0	0	30	0	10	0	0	323	256	0	44	380	0	2	1045
5:15 PM	0	0	0	0	33	0	11	0	0	385	272	0	27	354	0	4	1086
5:30 PM	0	0	0	0	32	0	14	0	0	339	272	0	40	400	0	1	1098
5:45 PM	0	0	0	0	26	0	22	0	0	324	277	0	24	387	0	5	1065
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	208	0	102	0	0	2809	2104	0	300	3125	0	15	8663
APPROACH %'s :					67.10%	0.00%	32.90%	0.00%	0.00%	57.17%	42.83%	0.00%	8.72%	90.84%	0.00%	0.44%	
PEAK HR :	**04:00 PM - 05:00 PM**																TOTAL
PEAK HR VOL :	0	0	0	0	87	0	45	0	0	1438	1027	0	165	1604	0	3	4369
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.837	0.000	0.804	0.000	0.000	0.944	0.965	0.000	0.897	0.959	0.000	0.375	0.982
					0.868				0.966				0.969				

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-78 EB Ramps & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-004
Date: 5/24/2018

Bikes

NS/EW Streets:	SR-78 EB Ramps				SR-78 EB Ramps				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	0	3	2	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1	0	0	0	0	1	0	0	0	5	0	0	7
APPROACH %'s :					100.00%	0.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	**08:00 AM - 09:00 AM**																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.500
					0.250									0.250			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	0	0	0	0	2	0	1	0	0	3	2	0	2	3	0	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	4	0	0	0	3	0	0	7
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	**04:00 PM - 05:00 PM**																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	5
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.750	0.000	0.000	0.000	0.250	0.000	0.000	0.417
										0.750				0.250			

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-78 EB Ramps & San Marcos Blvd **Project ID:** 18-04200-004
City: San Marcos **Date:** 5/24/2018

Pedestrians (Crosswalks)

NS/EW Streets:	SR-78 EB Ramps		SR-78 EB Ramps		San Marcos Blvd		San Marcos Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	3	0	0	0	0	0	0	3
7:15 AM	0	3	0	0	0	0	0	0	3
7:30 AM	0	5	0	0	0	0	0	0	5
7:45 AM	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	1	2	0	0	0	0	0	0	3
8:30 AM	0	1	0	0	0	0	0	0	1
8:45 AM	0	0	0	0	0	0	0	0	0
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	1	15	0	0	0	0	0	0	16
APPROACH %'s :	6.25%	93.75%							
PEAK HR :	**08:00 AM - 09:00 AM**								TOTAL
PEAK HR VOL :	1	3	0	0	0	0	0	0	4
PEAK HR FACTOR :	0.250	0.375							0.333
	0.333								

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	4	0	0	0	0	0	0	0	4
4:15 PM	1	0	0	0	0	0	0	0	1
4:30 PM	1	0	0	0	0	0	0	0	1
4:45 PM	0	2	0	0	0	0	0	0	2
5:00 PM	1	2	0	0	0	0	0	0	3
5:15 PM	3	0	0	0	0	0	0	0	3
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	2	1	0	0	1	0	0	0	4
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	12	5	0	0	1	0	0	0	18
APPROACH %'s :	70.59%	29.41%			100.00%	0.00%			
PEAK HR :	**04:00 PM - 05:00 PM**								TOTAL
PEAK HR VOL :	6	2	0	0	0	0	0	0	8
PEAK HR FACTOR :	0.375	0.250							0.500
	0.500								

Prepared by National Data & Surveying Services

SR-78 WB/Knoll Rd & San Marcos Blvd

Peak Hour Turning Movement Count

ID: 18-04201-005
City: San Marcos

Day: Thursday
Date: 05/24/2018

Peak Hours		Count Periods
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:00 PM - 05:00 PM	04:00 PM - 06:00 PM

SR-78 WB/Knoll Rd — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departing
AM	405	0	98	0	575
NOON	0	0	0	0	0
PM	448	0	140	0	620
Lanes	2	0	1	0	

San Marcos Blvd — EASTBOUND

	AM	NOON	PM	Lanes
Departing	2109	0	2066	
U-Turn	0	0	0	0
Left	213	0	313	2
Thru	479	0	1075	2
Right	81	0	142	1

San Marcos Blvd — WESTBOUND

	PM	NOON	AM	Lanes
Right	108	0	105	1
Thru	913	0	951	3
Left	0	0	0	0
U-Turn	0	0	0	0
Departing	1277	0	614	

SR-78 WB/Knoll Rd — NORTHBOUND

	Departing	U-Turn	Left	Thru	Right
Lanes		0	2	1.5	0.5
PM	142	0	705	199	62
NOON	0	0	0	0	0
AM	81	0	753	257	37

CONTROL

Signalized

	AM	NOON	PM
TEV	3379	0	4105
PHF	0.96		0.98

Total Vehicles (AM)

Approach	Left	Thru	Right	U-Turn
Southbound	98	0	405	
Eastbound	213	479	81	
Westbound	0	951	105	
Northbound	753	257	37	

Total Vehicles (Noon)

All movements: N/A

Total Vehicles (PM)

Approach	Left	Thru	Right
Southbound	140	0	448
Eastbound	313	1075	142
Westbound	0	913	108
Northbound	705	199	62

Bikes (AM)

Approach	Left	Thru	Right
Southbound	0	0	0
Eastbound	0	1	0
Westbound	0	1	0
Northbound	0	0	0

Bikes (NOON)

All movements: N/A

Bikes (PM)

Approach	Left	Thru	Right
Southbound	1	0	1
Eastbound	0	3	0
Westbound	0	2	0
Northbound	0	0	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (west side / east side)	0 / 3	0 / 0	7 / 5
West leg (north / south)	0 / 0	0 / 0	0 / 0
East leg (north / south)	0 / 0	0 / 0	2 / 1
South leg (west / east)	0 / 0	0 / 0	0 / 0
NW corner (diagonal)	0	0	0
NE corner (diagonal)	0	0	0
SW corner (diagonal)	0	0	0
SE corner (diagonal)	0	0	0

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-78 WB/Knoll Rd & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-005
Date: 5/24/2018

Total

NS/EW Streets:	SR-78 WB/Knoll Rd				SR-78 WB/Knoll Rd				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1.5	0.5	0	1	0	2	0	2	2	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	206	69	7	0	20	0	86	0	42	84	22	0	0	194	19	0	749
7:15 AM	174	49	8	0	24	0	125	0	56	99	22	0	0	232	27	0	816
7:30 AM	175	68	7	0	19	0	128	0	69	82	28	0	0	207	28	0	811
7:45 AM	155	67	8	0	31	0	129	0	63	115	25	0	0	263	21	0	877
8:00 AM	182	55	7	0	20	0	82	0	42	122	20	0	0	264	29	0	823
8:15 AM	201	80	12	0	23	0	94	0	57	108	19	0	0	207	15	0	816
8:30 AM	215	55	10	0	24	0	100	0	51	134	17	0	0	217	40	0	863
8:45 AM	194	50	10	0	22	0	112	0	42	110	20	0	0	213	29	0	802
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1502	493	69	0	183	0	856	0	422	854	173	0	0	1797	208	0	6557
APPROACH %'s :	72.77%	23.89%	3.34%	0.00%	17.61%	0.00%	82.39%	0.00%	29.12%	58.94%	11.94%	0.00%	0.00%	89.63%	10.37%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	753	257	37	0	98	0	405	0	213	479	81	0	0	951	105	0	3379
PEAK HR FACTOR :	0.876	0.803	0.771	0.000	0.790	0.000	0.785	0.000	0.845	0.894	0.810	0.000	0.000	0.901	0.656	0.000	0.963
	0.893				0.786				0.952				0.901				

NS/EW Streets:	SR-78 WB/Knoll Rd				SR-78 WB/Knoll Rd				San Marcos Blvd				San Marcos Blvd				
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1.5	0.5	0	1	0	2	0	2	2	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	163	42	15	0	32	0	127	0	77	264	40	0	0	231	22	0	1013
4:15 PM	197	62	20	0	36	0	101	0	73	262	37	0	0	198	31	0	1017
4:30 PM	165	37	13	0	36	0	116	0	78	268	36	0	0	251	27	0	1027
4:45 PM	180	58	14	0	36	0	104	0	85	281	29	0	0	233	28	0	1048
5:00 PM	168	46	13	0	32	0	121	0	72	255	32	0	0	209	40	0	988
5:15 PM	125	33	5	0	38	0	98	1	78	285	37	0	0	238	34	0	972
5:30 PM	145	36	8	0	32	0	106	0	67	273	41	0	0	250	25	0	983
5:45 PM	130	34	7	0	31	0	117	0	75	271	33	0	0	235	35	0	968
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	1273	348	95	0	273	0	890	1	605	2159	285	0	0	1845	242	0	8016
APPROACH %'s :	74.18%	20.28%	5.54%	0.00%	23.45%	0.00%	76.46%	0.09%	19.84%	70.81%	9.35%	0.00%	0.00%	88.40%	11.60%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	705	199	62	0	140	0	448	0	313	1075	142	0	0	913	108	0	4105
PEAK HR FACTOR :	0.895	0.802	0.775	0.000	0.972	0.000	0.882	0.000	0.921	0.956	0.888	0.000	0.000	0.909	0.871	0.000	0.979
	0.866				0.925				0.968				0.918				

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-78 WB/Knoll Rd & San Marcos Blvd
City: San Marcos
Control: Signalized

Project ID: 18-04201-005
Date: 5/24/2018

Bikes

NS/EW Streets:	SR-78 WB/Knoll Rd				SR-78 WB/Knoll Rd				San Marcos Blvd				San Marcos Blvd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1.5	0.5	0	1	0	2	0	2	2	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
7:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	3
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
8:15 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	0	0	0	0	0	2	0	0	0	6	0	0	8
APPROACH %'s :									0.00%	100.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	07:45 AM - 08:45 AM																TOTAL
PEAK HR VOL :	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
PEAK HR FACTOR :	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.000	0.000	0.250	0.000	0.000	0.500
									0.250				0.250				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	1.5	0.5	0	1	0	2	0	2	2	1	0	0	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
4:30 PM	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	2
4:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	2	0	0	4
5:00 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	0	0	0	0	1	0	3	0	1	3	0	0	0	2	0	0	10
APPROACH %'s :					25.00%	0.00%	75.00%	0.00%	25.00%	75.00%	0.00%	0.00%	0.00%	100.00%	0.00%	0.00%	
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	0	0	0	1	0	1	0	0	3	0	0	0	2	0	0	7
PEAK HR FACTOR :	0.00	0.000	0.000	0.000	0.250	0.000	0.250	0.000	0.000	0.750	0.000	0.000	0.000	0.250	0.000	0.000	0.438
						0.500				0.750				0.250			

National Data & Surveying Services

Intersection Turning Movement Count

Location: SR-78 WB/Knoll Rd & San Marcos Blvd **Project ID:** 18-04200-005
City: San Marcos **Date:** 5/24/2018

Pedestrians (Crosswalks)

NS/EW Streets:	SR-78 WB/Knoll Rd		SR-78 WB/Knoll Rd		San Marcos Blvd		San Marcos Blvd		
AM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
7:00 AM	0	2	0	0	1	0	0	0	3
7:15 AM	0	1	0	0	0	0	0	0	1
7:30 AM	0	2	0	0	0	0	0	0	2
7:45 AM	0	1	0	0	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	2	0	0	0	0	0	0	2
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	3	0	0	0	0	0	0	3
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	0	11	0	0	1	0	0	0	12
APPROACH %'s :	0.00%	100.00%			100.00%	0.00%			
PEAK HR :	**07:45 AM - 08:45 AM**								TOTAL
PEAK HR VOL :	0	3	0	0	0	0	0	0	3
PEAK HR FACTOR :		0.375							0.375
	0.375								

PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
4:00 PM	4	2	0	0	0	0	0	0	6
4:15 PM	2	0	0	0	0	1	0	0	3
4:30 PM	1	2	0	0	0	0	0	0	3
4:45 PM	0	1	0	0	1	1	0	0	3
5:00 PM	0	0	0	0	1	0	0	0	1
5:15 PM	6	0	0	0	0	4	0	0	10
5:30 PM	0	0	0	0	6	2	0	0	8
5:45 PM	3	1	0	0	0	1	0	0	5
	EB	WB	EB	WB	NB	SB	NB	SB	TOTAL
TOTAL VOLUMES :	16	6	0	0	8	9	0	0	39
APPROACH %'s :	72.73%	27.27%			47.06%	52.94%			
PEAK HR :	**04:00 PM - 05:00 PM**								TOTAL
PEAK HR VOL :	7	5	0	0	1	2	0	0	15
PEAK HR FACTOR :	0.438	0.625			0.250	0.500			0.625
	0.500				0.375				

Street	SEGMENTS		2019 ADT
	From:	To:	
ARMORLITE DR	LAS POSAS RD	BINGHAM DR	4084
AUTUMN DRIVE	KNOLL RD	PICO AVE	2001
BARHAM DR	LA MOREE RD (W)	RT 78 OFF RAMP	17071
BARHAM DR	RT 78 RAMP OFF RAMP	WOODLAND PKWY	21538
BARHAM DR	WOODLAND PKWY	RT 78 ON RAMP	16958
BARHAM DR	RT 78 ON RAMP	BENNETT CT	12217
BENNETT AVE	MISSION RD	KNOB HILL RD	6953
BENNETT AVE	KNOB HILL RD	ROCK SPRINGS RD	6602
BENT AVE	GRAND AVE	SAN MARCOS BLVD	5120
BENT AVE	SAN MARCOS BLVD	DISCOVERY ST	10305
BORDEN RD	TWIN OAKS VALLEY RD	COMET CIRCLE	13881
BORDEN RD	COMET CIRCLE	LAS POSAS RD	9490
BORDEN RD	WOODWARD ST	VINEYARD RD	8303
BORDEN RD	WOODWARD ST	TWIN OAKS VALLEY RD	11821
BORDEN RD	VINEYARD RD	MULBERRY DR	10008
BORDEN RD	MULBERRY DR	ROSE RANCH/RICHLAND	11921
BORDEN RD	ROSE RANCH/RICHLAND	WOODLAND PKWY	13978
BOUGHER RD	KNOB HILL RD	MISSION RD	2005
BOULDERIDGE DR	RANCHO SANTA FE RD	MELROSE DR	3344
CAPALINA DR	RANCHO SANTA FE RD	PACIFIC ST	4104
CENTER DR	AVENIDA RICARDO	NORDAHL RD	19962
CORONADO HILLS	LA MOREE RD	WASHINGTONIA DR	785
CRAVEN RD	TWIN OAKS VALLEY RD	SANTA BARBARA	18845
CRAVEN RD	SANTA BARBARA DR	DISCOVERY ST	18590
DEER SPRINGS RD	TWIN OAKS VALLEY RD	NORTH CITY LIMIT	22354
DESCANSO AVE/N. PACIFIC ST	LAS POSAS RD	MISSION RD	3926
DESCANSO AVE	LAS FLORES DR	RANCHO SANTA FE RD	7168
DESCANSO AVE	LAS FLORES DR	OLEANDER AVE	6582
DESCANSO AVE	RANCHO SANTA FE RD	PAWNEE ST	2174
DISCOVERY ST	SAN MARCOS BLVD	320' N/O SAN PABLO DR	13133
DISCOVERY ST	LA SOMBRA DR	VIA VERA CRUZ	12200
DISCOVERY ST	VIA VERA CRUZ	BENT AVE	13038
DOUBLE PEAK DR	SAN ELIJO RD	TUCANA DR	1769
DOUBLE PEAK DR	TUCANA DR	DOUBLE PEAK PARK	373
ELFIN FOREST RD (WB)	CALISTOGA WAY	NB SAN ELIJO RD	3588
ELFIN FOREST RD (EB)	CALISTOGA WAY	NB SAN ELIJO RD	3287

Street	SEGMENTS		2019 ADT
	From:	To:	
ELFIN FOREST RD (WB)	NB SAN ELIJO RD	SB SAN ELIJO RD	7589
ELFIN FOREST RD (EB)	NB SAN ELIJO RD	SB SAN ELIJO RD	2156
ELFIN FOREST RD (WB)	SB SAN ELIJO RD	ARCHER RD	3106
ELFIN FOREST RD (EB)	SB SAN ELIJO RD	ARCHER RD	3133
FULTON RD	BENNETT AVE	WOODLAND PKWY	1574
FULTON RD	WOODLAND PKWY	RICHLAND RD	1518
GRAND AVE	RANCHO SANTA FE RD	PACIFIC ST	9676
GRAND AVE	PACIFIC ST	LAS POSAS RD	12044
GRAND AVE	VIA VERA CRUZ	BENT AVE	10244
GRAND AVE	BENT AVE	SAN MARCOS BLVD	11382
GRAND AVE	SAN MARCOS BLVD	CREEKSIDE DR	9301
KNOB HILL RD	BOUGHER RD	BENNETT AVE	1692
KNOB HILL RD	BENNETT AVE	NORDAHL RD	4635
KNOLL RD	MISSION RD	LOS VALLECITOS BLVD	9888
KNOLL RD	LOS VALLECITOS BLVD	SAN MARCOS BLVD	14744
LA CIENEGA RD	TWIN OAKS VALLEY RD	MULBERRY DR	3023
LA MOREE RD (W)	BARHAM DR	CORONADO HILLS DR	3750
LA MOREE RD (E)	BARHAM DR	CORONADO HILLS DR	3491
LA MIRADA DR	RANCHO SANTA FE RD	PACIFIC ST	2843
LA MIRADA DR	PACIFIC ST	LAS POSAS RD	3154
LAS FLORES DR	RANCHO SANTA FE RD	VIA LA VENTA	1924
LAS POSAS RD	AVENIDA LEON	BORDEN RD	4629
LAS POSAS RD	BORDEN RD	AVENIDA AZUL	14196
LAS POSAS RD	AVENIDA AZUL	MISSION RD	22488
LAS POSAS RD	SR-78 WB	GRAND AVE	38306
LAS POSAS RD	GRAND AVE	LINDA VISTA DR	15886
LAS POSAS RD	LINDA VISTA DR	SAN MARCOS BLVD	10951
LINDA VISTA DR (W)	POINSETTIA AVE	TILLEY LN	11592
LINDA VISTA DR	HILLHAVEN DR	TILLEY LN	1652
LINDA VISTA DR	TILLEY LN	RANCHO SANTA FE RD	11714
LINDA VISTA DR	RANCHO SANTA FE RD	PACIFIC ST	12458
LINDA VISTA DR	PACIFIC ST	LAS POSAS RD	9208
LINDA VISTA DR	LAS POSAS RD	VIA VERA CRUZ	5796
LINDA VISTA DR	VIA VERA CRUZ	GRAND AVE	4084
LOS VALLECITOS BLVD	LAS POSAS RD	BINGHAM DR	5832
LOS VALLECITOS BLVD	BINGHAM DR	KNOLL RD	6647

Street	SEGMENTS		2019 ADT
	From:	To:	
MELROSE DR	RANCHO SANTA FE RD	BOULDERIDGE DR	13603
MELROSE DR	BOULDERIDGE DR	SAN ELIJO RD	13375
MISSION RD	KNOLL RD	PICO AVE	17083
MISSION RD	PICO AVE	WOODWARD/SM BLVD	14080
MISSION RD	WOODWARD/SM BLVD	MULBERRY DR	23546
MISSION RD	MULBERRY DR	WOODLAND PKWY	19957
MISSION RD	WOODLAND PKWY	BOUGHER RD	21255
MISSION RD	BOUGHER RD	BENNETT AVE/RANCHEROS	16858
MISSION RD	BENNETT AVE/RANCHEROS	BARHAM DR	17568
MONTIEL RD	NORDAHL RD	DEODAR RD	7825
MULBERRY DR	OLIVE ST	LA CIENEGA RD	2635
MULBERRY DR	LA CIENEGA RD	ROSE RANCH RD	4101
MULBERRY DR	ROSE RANCH RD	BORDEN RD	3893
MULBERRY DR	BORDEN RD	MISSION RD	11409
NORDAHL RD	ROCK SPRINGS RD	KNOB HILL RD	9986
NORDAHL RD	KNOB HILL RD	CENTER DR	14832
NORDAHL RD	CENTER DR	MONTIEL RD	19462
OLEANDER AVE	POINSETTIA AVE	SMILAX RD	8542
OLEANDER AVE	SMILAX RD	ALAMITOS WAY	7023
OLIVE ST	TWIN OAKS VALLEY RD	MULBERRY DR	2864
PACIFIC ST	GRAND AVE	LA MIRADA DR	4504
PACIFIC ST	LA MIRADA DR	LINDA VISTA DR	5036
PACIFIC ST	LINDA VISTA DR	SAN MARCOS BLVD	2457
PICO AVE	MISSION RD	SAN MARCOS BLVD	6143
QUESTHAVEN RD	SAN ELIJO RD	BRIGHTWOOD DR	6412
QUESTHAVEN RD	BRIGHTWOOD DR	TANGLEWOOD DR	3120
RANCHEROS DR	SAN MARCOS BLVD	VALPREDA RD	9748
RANCHEROS DR	VALPREDA RD	ROUTE 78 RAMPS	10225
RANCHEROS DR	ROUTE 78 RAMPS	WOODLAND PKWY	18270
RANCHEROS DR	WOODLAND PKWY	MISSION RD	4774
RANCHO SANTA FE RD	SR-78 EB	GRAND AVE	32068
RANCHO SANTA FE RD	GRAND AVE	LINDA VISTA DR	30828
RANCHO SANTA FE RD	LINDA VISTA DR	SECURITY PL	30286
RANCHO SANTA FE RD	SECURITY PL	SAN MARCOS BLVD	26121
RANCHO SANTA FE RD	SAN MARCOS BLVD	LAKE SAN MARCOS DR	33423
RANCHO SANTA FE RD	LAKE SAN MARCOS DR	ISLAND DR	29275

Street	SEGMENTS		2019 ADT
	From:	To:	
RANCHO SANTA FE RD	ISLAND DR	MELROSE DR	31160
RANCHO SANTA FE RD	MELROSE DR	SAN ELIJO RD	28106
RICHLAND RD	ROCK SPRINGS RD	MISSION RD	1877
RICHLAND RD	BORDEN RD	FULTON RD	1923
RICHLAND RD	FULTON RD	ROCK SPRINGS RD	2192
ROCK SPRINGS RD	RICHLAND RD	WOODLAND PKWY	3286
ROCK SPRINGS RD	WOODLAND PKWY	BENNETT AVE	6704
ROSE RANCH RD	MULBERRY DR	BORDEN RD	3318
SAN ELIJO RD	EQUESTRIAN (DOUBLE PEAK)	DOUBLE PEAK DR	23332
SAN ELIJO RD	DOUBLE PEAK DR	QUESTHAVEN RD	22673
SAN ELIJO RD	QUESTHAVEN RD	SCHOOLHOUSE WAY	23017
SAN ELIJO RD (SB)	SCHOOLHOUSE WAY	WB ELFIN FOREST RD	12169
SAN ELIJO RD (NB)	SCHOOLHOUSE WAY	WB ELFIN FOREST RD	12465
SAN ELIJO RD (SB)	WB ELFIN FOREST RD	EB ELFIN FOREST RD	14245
SAN ELIJO RD (NB)	WB ELFIN FOREST RD	EB ELFIN FOREST RD	14988
SAN ELIJO RD	EB ELFIN FOREST RD	FALLSVIEW RD	31395
SAN ELIJO RD	FALLSVIEW RD	MELROSE DR	31957
SAN ELIJO RD	MELROSE DR	RANCHO SANTA FE RD	21488
SAN MARCOS BLVD	RANCHO SANTA FE RD	DISCOVERY ST	42183
SAN MARCOS BLVD	DISCOVERY ST	LAS POSAS RD	39837
SAN MARCOS BLVD	LAS POSAS RD	VIA VERA CRUZ	32216
SAN MARCOS BLVD	VIA VERA CRUZ	BENT AVE	36537
SAN MARCOS BLVD	BENT AVE	GRAND AVE	40662
SAN MARCOS BLVD	GRAND AVE	SR-78 EB	53790
SAN MARCOS BLVD	SR-78 EB	KNOLL RD	42476
SAN MARCOS BLVD	KNOLL RD	PICO AVE	25948
SAN MARCOS BLVD	PICO AVE	TWIN OAKS VALLEY RD	25865
SAN MARCOS BLVD	TWIN OAKS VALLEY RD	RANCHEROS DR	23476
SAN MARCOS BLVD	RANCHEROS DR	MISSION RD	16698
SAN MARCOS BLVD	RANCHO SANTA FE RD	VIEWPOINT DR	32937
SAN MARCOS BLVD	VIEWPOINT DR	BUSINESS PARK DR	32878
SECURITY PL/KNGHTS RLM	RANCHO SANTA FE RD	SAN MARCOS BLVD	3536
SMILAX RD	S SANTA FE AVE	MIMOSA AVE	7641
SMILAX RD	MIMOSA AVE	OLEANDER AVE	7583
SOUTH SANTA FE	SMILAX RD	LAS FLORES DR	15351
SOUTH SANTA FE	LAS FLORES DR	RANCHO SANTA FE RD	16909

Street	SEGMENTS		2019 ADT
	From:	To:	
TWIN OAKS VALLEY RD	TWIN OAKS VALLEY RD (N)	BUENA CREEK RD	19928
TWIN OAKS VALLEY RD	TWIN OAKS VALLEY RD (N)	LA CIENEGA RD	15332
TWIN OAKS VALLEY RD	LA CIENEGA RD	BORDEN RD	19290
TWIN OAKS VALLEY RD	BORDEN RD	SAN MARCOS BLVD	26499
TWIN OAKS VALLEY RD	SAN MARCOS BLVD	SR-78 WB	41000
VIA VERA CRUZ	GRAND AVE	SAN MARCOS BLVD	9654
VINEYARD RD	MULBERRY DR	BORDEN RD	3533
VINEYARD RD	BORDEN RD	WOODWARD ST	3919
WOODLAND PKWY	BORDEN RD/EL NTE PKY	ROCK SPRINGS RD	10280
WOODLAND PKWY	ROCK SPRINGS RD	MISSION RD	14761
WOODLAND PKWY	MISSION RD	RANCHEROS DR	18473
WOODLAND PKWY	RANCHEROS DR	BARHAM DR	19380
WOODWARD ST	MISSION RD	BORDEN RD	8131
WOODWARD ST	BORDEN RD	MULBERRY DR	5675

APPENDIX B

CITY OF SAN MARCOS ROADWAY CLASSIFICATION TABLE

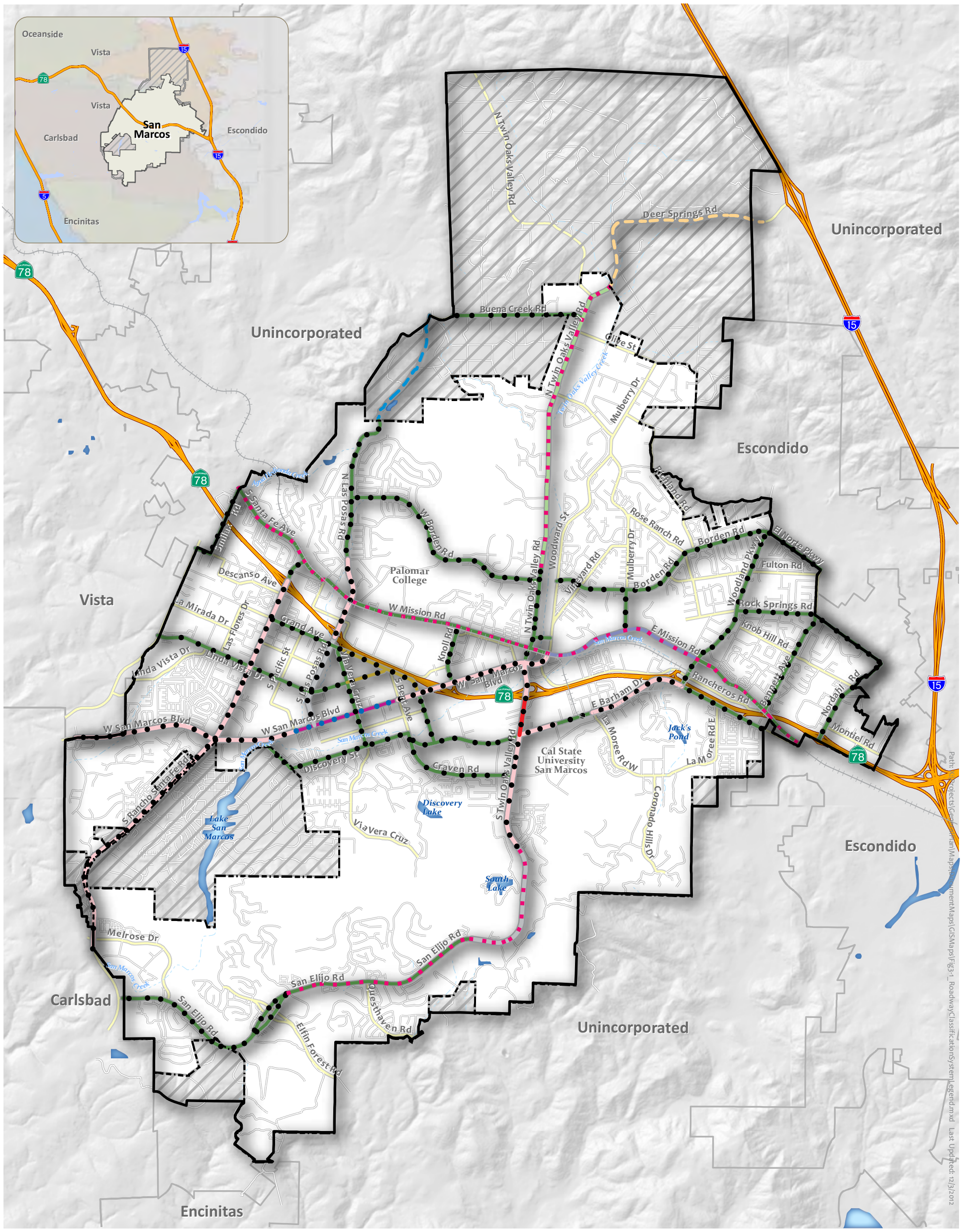
Table 3.16-2
Daily Roadway Segment Capacity

Street Typology	Typical Lane Configuration	Vehicular Level of Service				
		LOS A	LOS B	LOS C	LOS D	LOS E
Existing Roadway Classifications / Standards						
Prime Arterial	7 to 8 lanes	29,200	40,800	58,300	64,200	70,000
Prime Arterial	6 lanes	25,000	35,000	50,000	55,000	60,000
Major Arterial	5 lanes	18,000	25,000	35,000	40,000	45,000
Major Arterial	4 lanes	15,000	21,000	30,000	35,000	40,000
Secondary Arterial	5 lanes	12,500	17,500	25,000	31,300	37,500
Secondary Arterial	4 lanes	10,000	14,000	20,000	25,000	30,000
Secondary Arterial	3 lanes	7,500	10,500	15,000	18,000	22,500
Collector	2 lanes plus TWLTL	5,000	7,000	10,000	13,000	15,000
Collector	2 lanes	2,500	3,500	5,000	6,500	8,000
General Plan Complete Street Typology Standards						
Arterial	8 lanes	29,200	40,800	58,300	64,200	70,000
Arterial	6 lanes	25,000	35,000	50,000	55,000	60,000
Arterial with Class II or Class III Bike Lanes	4 lanes	15,000	21,000	30,000	35,000	40,000
Arterial with enhanced Bike facilities	4 lanes	15,000	21,000	30,000	35,000	40,000
Multi-Way Boulevard	4 lanes for through trips, two lanes for local serving trips [1]	16,800	25,200	31,500	37,800	42,000
Industrial Collector	4 lanes	10,000	14,000	20,000	25,000	30,000
Collector & Main Street	2 lanes plus TWLTL	5,000	7,000	10,000	13,000	15,000
Collector & Main Street	2 lanes [2]	2,500	3,000	5,000	6,500	8,000
Freeway	Mixed-Flow Lane [3]	-	-	1,760	1,980	2,200
Freeway	HOV Lanes [3]	-	-	1,440	1,620	1,800

Note: These are general capacities for planning purposes. Specific operational characteristics, such as signal coordination, can enhance operations significantly.

1. LOS thresholds were calculated based on V/C ratios of the daily threshold volumes for the corresponding roadway classification. Multi-way boulevard capacity assumes a similar capacity as a 4-lane arterial plus an additional 1,000 ADT capacity per lane for the local service roadway.
2. With fronting commercial or residential property
3. Per lane capacities presented.

Source: SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, 2000.



3 MOBILITY ELEMENT

FIGURE 3-1

City of San Marcos

Roadway Classifications

San Marcos City Limits
Sphere of Influence
Planning Area
Major Hydrologic Features
Creeks
Railroad
Freeway
Highway
Major Road
Minor Road

Roadway Classifications
- 2 Lanes with Right-of-Way consistent with County of San Diego's General Plan
- 4 Lanes with Right-of-Way consistent with County of San Diego's General Plan
- Arterial Enhanced
- Complete Street
- 4 Lanes (Rural)
- 4 Lanes
- 4 Lanes +
- Multi-Way Boulevard
- 6 Lanes
- 6 Lanes +

Street Typology*
- Arterial with Class II or III Bicycle Facilities and Sidewalks
- Arterial with Enhanced Bicycle/Pedestrian Facilities
- Multi-Way

* See the Street Design Manual for additional street typology assignments

SOURCES OF DATA:
City of San Marcos 12/12

APPENDIX C

EXISTING ANALYSIS WORKSHEETS

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	221	110	19	279	80	14
Future Volume (veh/h)	221	110	19	279	80	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	260	129	22	328	94	16
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1305	624	47	2487	141	126
Arrive On Green	0.57	0.57	0.03	0.70	0.08	0.08
Sat Flow, veh/h	2395	1100	1781	3647	1781	1585
Grp Volume(v), veh/h	198	191	22	328	94	16
Grp Sat Flow(s),veh/h/ln	1777	1625	1781	1777	1781	1585
Q Serve(g_s), s	2.7	2.8	0.6	1.5	2.5	0.5
Cycle Q Clear(g_c), s	2.7	2.8	0.6	1.5	2.5	0.5
Prop In Lane		0.68	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	1007	921	47	2487	141	126
V/C Ratio(X)	0.20	0.21	0.47	0.13	0.67	0.13
Avail Cap(c_a), veh/h	1007	921	182	2487	182	162
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	5.2	5.2	23.5	2.4	21.9	20.9
Incr Delay (d2), s/veh	0.4	0.5	7.1	0.1	5.9	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.8	0.3	0.3	1.2	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.6	5.7	30.5	2.5	27.7	21.4
LnGrp LOS	A	A	C	A	C	C
Approach Vol, veh/h	389			350	110	
Approach Delay, s/veh	5.6			4.3	26.8	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	6.5	33.5				40.0	8.9
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 5	24.0				34.2	5.0
Max Q Clear Time (g_c+I1), s	2.6	4.8				3.5	4.5
Green Ext Time (p_c), s	0.0	2.3				2.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	967	34	82	943	84	33	135	49	55	105	26
Future Volume (veh/h)	39	967	34	82	943	84	33	135	49	55	105	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		0.95	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	1007	35	85	982	88	34	141	51	57	109	27
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	2006	70	99	1969	176	50	303	104	122	186	46
Arrive On Green	0.03	0.57	0.57	0.06	0.60	0.60	0.03	0.12	0.12	0.04	0.13	0.13
Sat Flow, veh/h	1781	3499	122	1781	3292	295	1781	2554	876	3456	1430	354
Grp Volume(v), veh/h	41	511	531	85	530	540	34	96	96	57	0	136
Grp Sat Flow(s),veh/h/ln	1781	1777	1843	1781	1777	1810	1781	1777	1653	1728	0	1784
Q Serve(g_s), s	2.7	20.7	20.7	5.7	20.5	20.5	2.3	6.0	6.5	1.9	0.0	8.6
Cycle Q Clear(g_c), s	2.7	20.7	20.7	5.7	20.5	20.5	2.3	6.0	6.5	1.9	0.0	8.6
Prop In Lane	1.00		0.07	1.00		0.16	1.00		0.53	1.00		0.20
Lane Grp Cap(c), veh/h	55	1019	1057	99	1063	1083	50	211	196	122	0	232
V/C Ratio(X)	0.74	0.50	0.50	0.85	0.50	0.50	0.68	0.45	0.49	0.47	0.00	0.59
Avail Cap(c_a), veh/h	76	1019	1057	99	1063	1083	89	392	365	153	0	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.7	15.3	15.3	56.2	13.8	13.8	57.8	49.3	49.5	56.8	0.0	49.2
Incr Delay (d2), s/veh	22.1	1.8	1.7	47.6	1.7	1.6	14.6	1.5	1.9	2.7	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	8.6	8.9	3.9	8.4	8.6	1.2	2.8	2.8	0.9	0.0	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.7	17.1	17.0	103.7	15.5	15.5	72.4	50.8	51.4	59.5	0.0	51.5
LnGrp LOS	E	B	B	F	B	B	E	D	D	E	A	D
Approach Vol, veh/h		1083			1155			226			193	
Approach Delay, s/veh		19.4			22.0			54.3			53.9	
Approach LOS		B			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.2	75.3	9.4	22.1	10.2	78.3	10.8	20.7
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	6.7	55.5	6.0	26.3	5.1	57.1	5.3	26.5
Max Q Clear Time (g_c+I1), s	7.7	22.7	4.3	10.6	4.7	22.5	3.9	8.5
Green Ext Time (p_c), s	0.0	8.3	0.0	0.6	0.0	8.8	0.0	0.9

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	992	19	124	1121	65	74	79	199	48	63	26
Future Volume (veh/h)	28	992	19	124	1121	65	74	79	199	48	63	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	1023	20	128	1156	67	76	81	205	49	65	27
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	1603	31	154	1815	846	97	94	237	74	244	101
Arrive On Green	0.03	0.45	0.45	0.09	0.51	0.51	0.05	0.21	0.21	0.04	0.20	0.20
Sat Flow, veh/h	1781	3562	70	1781	3554	1527	1781	456	1154	1781	1239	515
Grp Volume(v), veh/h	29	510	533	128	1156	67	76	0	286	49	0	92
Grp Sat Flow(s),veh/h/ln	1781	1777	1854	1781	1777	1527	1781	0	1610	1781	0	1754
Q Serve(g_s), s	1.9	26.6	26.6	8.5	28.3	2.5	5.1	0.0	20.6	3.3	0.0	5.3
Cycle Q Clear(g_c), s	1.9	26.6	26.6	8.5	28.3	2.5	5.1	0.0	20.6	3.3	0.0	5.3
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.72	1.00		0.29
Lane Grp Cap(c), veh/h	46	800	835	154	1815	846	97	0	330	74	0	345
V/C Ratio(X)	0.63	0.64	0.64	0.83	0.64	0.08	0.78	0.00	0.87	0.66	0.00	0.27
Avail Cap(c_a), veh/h	76	800	835	171	1815	846	148	0	403	74	0	380
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.9	25.5	25.5	54.0	21.3	12.6	56.0	0.0	46.1	56.7	0.0	40.9
Incr Delay (d2), s/veh	13.4	3.9	3.7	26.1	1.7	0.2	13.9	0.0	15.3	19.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	11.9	12.4	4.9	11.9	0.9	2.6	0.0	9.6	1.9	0.0	2.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.2	29.3	29.2	80.1	23.0	12.8	69.9	0.0	61.4	76.2	0.0	41.3
LnGrp LOS	E	C	C	F	C	B	E	A	E	E	A	D
Approach Vol, veh/h		1072			1351			362			141	
Approach Delay, s/veh		30.4			27.9			63.2			53.4	
Approach LOS		C			C			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	60.0	12.5	30.6	9.6	67.3	11.5	31.6
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	11.5	47.5	10.0	* 26	5.1	53.0	5.0	30.0
Max Q Clear Time (g_c+I1), s	10.5	28.6	7.1	7.3	3.9	30.3	5.3	22.6
Green Ext Time (p_c), s	0.0	6.8	0.0	0.4	0.0	9.5	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

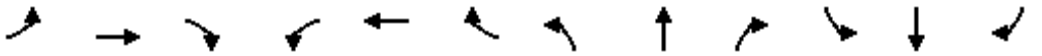
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	992	0	0	1266	0	0
Future Vol, veh/h	992	0	0	1266	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1078	0	0	1376	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	539
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	417
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	417
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	1142	60	225	1266	238	43	32	69	126	68	16
Future Volume (veh/h)	34	1142	60	225	1266	238	43	32	69	126	68	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.93
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	1228	65	242	1361	256	46	34	74	135	73	17
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	53	2869	924	300	3141	1039	113	124	243	192	175	139
Arrive On Green	0.03	0.56	0.56	0.09	0.62	0.62	0.03	0.07	0.07	0.06	0.09	0.09
Sat Flow, veh/h	1781	5106	1552	3456	5106	1545	3456	1870	1585	3456	1870	1481
Grp Volume(v), veh/h	37	1228	65	242	1361	256	46	34	74	135	73	17
Grp Sat Flow(s),veh/h/ln	1781	1702	1552	1728	1702	1545	1728	1870	1585	1728	1870	1481
Q Serve(g_s), s	2.5	16.6	2.1	8.3	16.8	7.8	1.6	2.1	5.0	4.6	4.4	1.3
Cycle Q Clear(g_c), s	2.5	16.6	2.1	8.3	16.8	7.8	1.6	2.1	5.0	4.6	4.4	1.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	53	2869	924	300	3141	1039	113	124	243	192	175	139
V/C Ratio(X)	0.70	0.43	0.07	0.81	0.43	0.25	0.41	0.27	0.30	0.70	0.42	0.12
Avail Cap(c_a), veh/h	74	2869	924	360	3141	1039	147	454	522	317	546	432
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.7	15.2	10.3	53.8	12.1	7.8	56.9	53.3	45.1	55.7	51.3	49.9
Incr Delay (d2), s/veh	15.7	0.5	0.1	9.6	0.4	0.5	2.3	1.2	0.7	4.6	1.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	6.4	0.8	4.0	6.3	2.6	0.7	1.0	2.0	2.1	2.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.4	15.6	10.4	63.4	12.5	8.3	59.2	54.4	45.8	60.3	52.9	50.3
LnGrp LOS	E	B	B	E	B	A	E	D	D	E	D	D
Approach Vol, veh/h		1330			1859			154			225	
Approach Delay, s/veh		17.0			18.5			51.7			57.1	
Approach LOS		B			B			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	74.4	10.4	18.2	10.5	80.8	13.7	15.0
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	12.5	40.4	5.1	35.0	5.0	* 48	11.0	* 29
Max Q Clear Time (g_c+I1), s	10.3	18.6	3.6	6.4	4.5	18.8	6.6	7.0
Green Ext Time (p_c), s	0.2	9.7	0.0	0.4	0.0	13.6	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	21.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	604	823	148	1670	0	0	0	0	136	0	86
Future Volume (veh/h)	0	604	823	148	1670	0	0	0	0	136	0	86
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	623	848	153	1722	0				140	0	89
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2207	1206	309	3259	0				338	0	155
Arrive On Green	0.00	0.43	0.43	0.09	0.64	0.00				0.10	0.00	0.10
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	623	848	153	1722	0				140	0	89
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	3.9	12.1	2.1	9.0	0.0				1.9	0.0	2.6
Cycle Q Clear(g_c), s	0.0	3.9	12.1	2.1	9.0	0.0				1.9	0.0	2.6
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2207	1206	309	3259	0				338	0	155
V/C Ratio(X)	0.00	0.28	0.70	0.49	0.53	0.00				0.41	0.00	0.57
Avail Cap(c_a), veh/h	0	2207	1206	410	3259	0				417	0	191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.0	11.3	21.2	4.8	0.0				20.7	0.0	21.1
Incr Delay (d2), s/veh	0.0	0.3	3.4	0.5	0.6	0.0				0.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	3.5	0.8	1.9	0.0				0.7	0.0	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.3	14.8	21.7	5.4	0.0				21.0	0.0	22.3
LnGrp LOS	A	A	B	C	A	A				C	A	C
Approach Vol, veh/h		1471			1875						229	
Approach Delay, s/veh		12.4			6.8						21.5	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.1	27.9		10.9		38.0
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 5.8	19.7		5.9		31.2
Max Q Clear Time (g_c+I1), s	4.1	14.1		4.6		11.0
Green Ext Time (p_c), s	0.0	1.7		0.1		5.9

Intersection Summary	
HCM 6th Ctrl Delay	10.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	479	81	0	951	105	753	257	37	98	0	405
Future Volume (veh/h)	213	479	81	0	951	105	753	257	37	98	0	405
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.95	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	222	499	0	0	991	109	784	268	39	102	0	422
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	449	1899		0	1749	524	889	460	66	197	0	0
Arrive On Green	0.13	0.53	0.00	0.00	0.34	0.34	0.26	0.15	0.15	0.11	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1529	3456	3098	444	1781	102	
Grp Volume(v), veh/h	222	499	0	0	991	109	784	152	155	102	39.4	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1529	1728	1777	1765	1781	D	
Q Serve(g_s), s	5.5	7.0	0.0	0.0	14.6	4.6	20.1	7.3	7.5	5.0		
Cycle Q Clear(g_c), s	5.5	7.0	0.0	0.0	14.6	4.6	20.1	7.3	7.5	5.0		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.25	1.00		
Lane Grp Cap(c), veh/h	449	1899		0	1749	524	889	264	262	197		
V/C Ratio(X)	0.49	0.26		0.00	0.57	0.21	0.88	0.58	0.59	0.52		
Avail Cap(c_a), veh/h	514	1899		0	1749	524	1986	676	671	228		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	37.2	11.6	0.0	0.0	24.7	21.4	32.8	36.5	36.6	38.6		
Incr Delay (d2), s/veh	0.3	0.3	0.0	0.0	1.3	0.9	1.2	0.7	0.8	0.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.3	2.7	0.0	0.0	5.9	1.8	8.3	3.2	3.3	2.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.6	11.9	0.0	0.0	26.0	22.3	34.0	37.2	37.4	39.4		
LnGrp LOS	D	B		A	C	C	C	D	D	D		
Approach Vol, veh/h		721	A		1100			1091				
Approach Delay, s/veh		19.8			25.7			34.9				
Approach LOS		B			C			C				

Timer - Assigned Phs	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	56.0	29.8		17.7	38.3	16.3	19.8
Change Period (Y+Rc), s	6.8	6.1		* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	49.2	52.9		* 14	29.8	11.8	35.0
Max Q Clear Time (g_c+I1), s	9.0	22.1		7.5	16.6	7.0	9.5
Green Ext Time (p_c), s	2.4	1.6		0.2	4.4	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1015	239	25	493	229	59
Future Volume (veh/h)	1015	239	25	493	229	59
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1080	254	27	524	244	63
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1511	353	55	2339	259	231
Arrive On Green	0.53	0.53	0.03	0.66	0.15	0.15
Sat Flow, veh/h	2930	662	1781	3647	1781	1585
Grp Volume(v), veh/h	674	660	27	524	244	63
Grp Sat Flow(s),veh/h/ln	1777	1722	1781	1777	1781	1585
Q Serve(g_s), s	15.7	16.0	0.8	3.3	7.5	1.9
Cycle Q Clear(g_c), s	15.7	16.0	0.8	3.3	7.5	1.9
Prop In Lane		0.38	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	947	918	55	2339	259	231
V/C Ratio(X)	0.71	0.72	0.49	0.22	0.94	0.27
Avail Cap(c_a), veh/h	947	918	291	2339	259	231
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	9.7	9.7	26.2	3.8	23.3	20.9
Incr Delay (d2), s/veh	4.5	4.8	6.7	0.2	40.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	5.8	0.4	0.8	5.8	0.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.2	14.6	33.0	4.0	63.5	21.5
LnGrp LOS	B	B	C	A	E	C
Approach Vol, veh/h	1334			551	307	
Approach Delay, s/veh	14.4			5.4	54.9	
Approach LOS	B			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	6.9	35.1				42.0	13.0
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 9	22.0				36.2	8.0
Max Q Clear Time (g_c+I1), s	2.8	18.0				5.3	9.5
Green Ext Time (p_c), s	0.0	2.9				3.9	0.0

Intersection Summary	
HCM 6th Ctrl Delay	17.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	1144	56	95	927	112	63	165	45	167	262	50
Future Volume (veh/h)	81	1144	56	95	927	112	63	165	45	167	262	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	83	1167	57	97	946	114	64	168	46	170	267	51
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	1702	83	120	1620	195	82	476	126	225	297	57
Arrive On Green	0.05	0.49	0.49	0.07	0.51	0.51	0.05	0.17	0.17	0.07	0.20	0.20
Sat Flow, veh/h	1781	3441	168	1781	3184	384	1781	2752	727	3456	1515	289
Grp Volume(v), veh/h	83	602	622	97	528	532	64	106	108	170	0	318
Grp Sat Flow(s),veh/h/ln	1781	1777	1832	1781	1777	1791	1781	1777	1702	1728	0	1805
Q Serve(g_s), s	6.0	33.7	33.8	7.0	27.0	27.0	4.6	6.8	7.3	6.3	0.0	22.4
Cycle Q Clear(g_c), s	6.0	33.7	33.8	7.0	27.0	27.0	4.6	6.8	7.3	6.3	0.0	22.4
Prop In Lane	1.00		0.09	1.00		0.21	1.00		0.43	1.00		0.16
Lane Grp Cap(c), veh/h	95	879	906	120	904	911	82	308	295	225	0	354
V/C Ratio(X)	0.88	0.69	0.69	0.81	0.58	0.58	0.78	0.35	0.37	0.76	0.00	0.90
Avail Cap(c_a), veh/h	95	879	906	160	904	911	123	403	386	332	0	416
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	61.1	25.1	25.1	59.8	22.3	22.3	61.4	47.3	47.4	59.8	0.0	51.0
Incr Delay (d2), s/veh	55.2	4.3	4.2	19.6	2.8	2.7	16.4	0.7	0.8	5.5	0.0	19.8
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	4.2	15.1	15.5	3.8	11.8	11.9	2.5	3.1	3.2	2.9	0.0	12.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.3	29.5	29.4	79.4	25.1	25.1	77.8	47.9	48.2	65.3	0.0	70.9
LnGrp LOS	F	C	C	E	C	C	E	D	D	E	A	E
Approach Vol, veh/h		1307			1157			278			488	
Approach Delay, s/veh		34.9			29.6			54.9			68.9	
Approach LOS		C			C			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.3	70.8	12.0	32.0	13.4	72.6	15.0	29.0
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	11.7	50.3	9.0	30.0	6.9	55.1	12.5	29.5
Max Q Clear Time (g_c+I1), s	9.0	35.8	6.6	24.4	8.0	29.0	8.3	9.3
Green Ext Time (p_c), s	0.0	7.2	0.0	0.9	0.0	8.0	0.2	1.1

Intersection Summary	
HCM 6th Ctrl Delay	39.9
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1234	26	144	1011	80	75	103	235	127	173	41
Future Volume (veh/h)	48	1234	26	144	1011	80	75	103	235	127	173	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	49	1259	27	147	1032	82	77	105	240	130	177	42
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	63	1588	34	167	1795	907	97	98	225	153	341	81
Arrive On Green	0.04	0.45	0.45	0.19	1.00	1.00	0.05	0.20	0.20	0.09	0.23	0.23
Sat Flow, veh/h	1781	3554	76	1781	3554	1526	1781	492	1124	1781	1450	344
Grp Volume(v), veh/h	49	629	657	147	1032	82	77	0	345	130	0	219
Grp Sat Flow(s),veh/h/ln	1781	1777	1853	1781	1777	1526	1781	0	1616	1781	0	1794
Q Serve(g_s), s	4.1	45.5	45.6	12.0	0.0	0.0	6.4	0.0	30.0	10.8	0.0	16.0
Cycle Q Clear(g_c), s	4.1	45.5	45.6	12.0	0.0	0.0	6.4	0.0	30.0	10.8	0.0	16.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.70	1.00		0.19
Lane Grp Cap(c), veh/h	63	794	828	167	1795	907	97	0	323	153	0	422
V/C Ratio(X)	0.77	0.79	0.79	0.88	0.58	0.09	0.79	0.00	1.07	0.85	0.00	0.52
Avail Cap(c_a), veh/h	160	794	828	184	1795	907	220	0	323	208	0	422
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.7	35.5	35.6	60.1	0.0	0.0	70.1	0.0	60.0	67.6	0.0	50.0
Incr Delay (d2), s/veh	17.8	8.0	7.7	33.4	1.3	0.2	13.5	0.0	69.0	20.7	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	21.4	22.3	6.5	0.3	0.0	3.3	0.0	18.5	5.8	0.0	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.6	43.5	43.3	93.5	1.3	0.2	83.6	0.0	129.0	88.3	0.0	51.1
LnGrp LOS	F	D	D	F	A	A	F	A	F	F	A	D
Approach Vol, veh/h		1335			1261			422			349	
Approach Delay, s/veh		45.1			12.0			120.7			65.0	
Approach LOS		D			B			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.6	73.0	14.2	42.2	11.8	81.8	19.4	37.0
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	15.5	61.0	18.5	* 30	13.5	63.0	17.5	30.0
Max Q Clear Time (g_c+I1), s	14.0	47.6	8.4	18.0	6.1	2.0	12.8	32.0
Green Ext Time (p_c), s	0.1	7.2	0.1	0.9	0.0	10.5	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	44.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

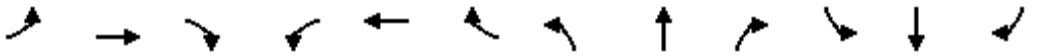
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1234	0	0	1083	0	0
Future Vol, veh/h	1234	0	0	1083	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1341	0	0	1177	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	671
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	342
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	342
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	1408	128	353	1083	174	118	117	249	658	155	38
Future Volume (veh/h)	59	1408	128	353	1083	174	118	117	249	658	155	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	1437	131	360	1105	178	120	119	254	671	158	39
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	2044	695	414	2420	1067	165	156	322	737	471	386
Arrive On Green	0.09	0.80	0.80	0.12	0.47	0.47	0.05	0.08	0.08	0.21	0.25	0.25
Sat Flow, veh/h	1781	5106	1546	3456	5106	1539	3456	1870	1585	3456	1870	1534
Grp Volume(v), veh/h	60	1437	131	360	1105	178	120	119	254	671	158	39
Grp Sat Flow(s),veh/h/ln	1781	1702	1546	1728	1702	1539	1728	1870	1585	1728	1870	1534
Q Serve(g_s), s	5.0	19.2	2.8	15.4	21.8	6.1	5.1	9.3	12.5	28.4	10.4	2.9
Cycle Q Clear(g_c), s	5.0	19.2	2.8	15.4	21.8	6.1	5.1	9.3	12.5	28.4	10.4	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	2044	695	414	2420	1067	165	156	322	737	471	386
V/C Ratio(X)	0.79	0.70	0.19	0.87	0.46	0.17	0.73	0.76	0.79	0.91	0.34	0.10
Avail Cap(c_a), veh/h	143	2044	695	518	2420	1067	242	156	322	852	471	386
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.9	10.9	7.8	64.9	26.5	8.3	70.4	67.3	56.7	57.6	45.8	43.1
Incr Delay (d2), s/veh	16.2	2.1	0.6	11.4	0.6	0.3	5.9	19.8	12.4	12.6	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	4.3	1.0	7.4	9.1	2.1	2.4	5.3	10.3	13.7	4.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	12.9	8.4	76.3	27.0	8.6	76.4	87.1	69.1	70.3	46.3	43.2
LnGrp LOS	F	B	A	E	C	A	E	F	E	E	D	D
Approach Vol, veh/h		1628			1643			493			868	
Approach Delay, s/veh		15.2			35.8			75.2			64.7	
Approach LOS		B			D			E			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.5	67.1	13.7	44.8	13.4	78.1	39.0	19.5
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	22.5	51.0	10.5	35.0	12.0	* 62	37.0	* 13
Max Q Clear Time (g_c+I1), s	17.4	21.2	7.1	12.4	7.0	23.8	30.4	14.5
Green Ext Time (p_c), s	0.6	13.9	0.1	0.9	0.0	11.0	1.5	0.0

Intersection Summary	
HCM 6th Ctrl Delay	38.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1438	1027	168	1604	0	0	0	0	87	0	45
Future Volume (veh/h)	0	1438	1027	168	1604	0	0	0	0	87	0	45
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	1467	1048	171	1637	0				89	0	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2418	1321	303	3424	0				284	0	130
Arrive On Green	0.00	0.47	0.47	0.09	0.67	0.00				0.08	0.00	0.08
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	1467	1048	171	1637	0				89	0	46
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	11.1	16.5	2.5	8.1	0.0				1.3	0.0	1.4
Cycle Q Clear(g_c), s	0.0	11.1	16.5	2.5	8.1	0.0				1.3	0.0	1.4
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2418	1321	303	3424	0				284	0	130
V/C Ratio(X)	0.00	0.61	0.79	0.56	0.48	0.00				0.31	0.00	0.35
Avail Cap(c_a), veh/h	0	2418	1321	331	3424	0				470	0	216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.1	11.6	22.8	4.2	0.0				22.6	0.0	22.6
Incr Delay (d2), s/veh	0.0	1.1	5.0	0.8	0.5	0.0				0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.5	4.9	1.0	1.7	0.0				0.5	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	11.3	16.5	23.7	4.6	0.0				22.8	0.0	23.2
LnGrp LOS	A	B	B	C	A	A				C	A	C
Approach Vol, veh/h		2515			1808						135	
Approach Delay, s/veh		13.5			6.5						22.9	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6			
Phs Duration (G+Y+Rc), s	10.3	31.5		10.4		41.8			
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8			
Max Green Setting (Gmax), s	* 5	24.3		7.1		35.0			
Max Q Clear Time (g_c+I1), s	4.5	18.5		3.4		10.1			
Green Ext Time (p_c), s	0.0	3.4		0.1		5.8			

Intersection Summary	
HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	1075	142	0	913	108	705	199	62	140	0	448
Future Volume (veh/h)	313	1075	142	0	913	108	705	199	62	140	0	448
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	319	1097	0	0	932	110	719	203	63	143	0	457
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	442	2047		0	1977	594	821	288	87	204	0	0
Arrive On Green	0.13	0.58	0.00	0.00	0.39	0.39	0.24	0.11	0.11	0.11	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1533	3456	2689	812	1781	143	
Grp Volume(v), veh/h	319	1097	0	0	932	110	719	132	134	143	41.6	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1533	1728	1777	1724	1781	D	
Q Serve(g_s), s	8.3	17.8	0.0	0.0	12.8	4.4	18.8	6.7	7.0	7.2		
Cycle Q Clear(g_c), s	8.3	17.8	0.0	0.0	12.8	4.4	18.8	6.7	7.0	7.2		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.47	1.00		
Lane Grp Cap(c), veh/h	442	2047		0	1977	594	821	190	184	204		
V/C Ratio(X)	0.72	0.54		0.00	0.47	0.19	0.88	0.70	0.73	0.70		
Avail Cap(c_a), veh/h	582	2047		0	1977	594	2141	663	644	323		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.3	12.2	0.0	0.0	21.5	19.0	34.4	40.4	40.5	40.0		
Incr Delay (d2), s/veh	1.7	1.0	0.0	0.0	0.8	0.7	1.2	1.7	2.0	1.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.6	6.8	0.0	0.0	5.1	1.7	7.8	3.0	3.1	3.2		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.0	13.2	0.0	0.0	22.3	19.7	35.6	42.1	42.6	41.6		
LnGrp LOS	D	B		A	C	B	D	D	D	D		
Approach Vol, veh/h		1416	A		1042			985				
Approach Delay, s/veh		19.5			22.1			37.5				
Approach LOS		B			C			D				

Timer - Assigned Phs	2	3	5	6	7	8
Phs Duration (G+Y+Rc), s	60.8	28.4	17.7	43.1	16.8	16.1
Change Period (Y+Rc), s	6.8	6.1	* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	54.0	58.1	* 16	32.5	17.0	35.0
Max Q Clear Time (g_c+I1), s	19.8	20.8	10.3	14.8	9.2	9.0
Green Ext Time (p_c), s	6.4	1.5	0.3	4.6	0.1	1.0

Intersection Summary	
HCM 6th Ctrl Delay	26.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX D

CUMULATIVE PROJECTS LIST

City of San Marcos Cumulative Projects List - Updated 10/25/18

Project			Location	Land Use	Intensity	Unit	Buildout Year
1	Approved	Corner @ 2 Oaks	SW corner of San Marcos Blvd & N Twin Oaks Valley Rd	Office/retail	13,499	SF	2019
				Restaurant	6,500	SF	2019
				Townhouse Condominiums	118	DU	
2	Approved	University District Block K	Campus Wy	Mult-family Condos	68	DU	
3	Approved	Kaiser Permanente Master Plan	Craven Rd	Medical Office/Hospital	70,700	SF	
4	Approved	Fenton North	Craven Rd	Office/Commerical/Residential	41	ACRES	
5	Proposed	Main Square	SE corner of San Marcos Blvd & McMahr Rd	Apartments	428	DU	2019
				Commercial	90,000	SF	2019
6	Approved	The Promenade at Creekside (Phase 2)	SE corner of Grand Ave & Creekside Dr	Commercial	11,000	SF	2019
7	Approved	San Elijo Hills	San Elijo Rd	Single-Family DU (remaining units)	100	DU	
				Townhomes	24	DU	
8	Approved	Pacific Commercial	NE corner of Grand Ave & Pacific St	Commercial Center	29,236	SF	2019
9	Approved	Pacific Industrial	Pacific St	Industrial Building	22,159	SF	2019
10	Approved	Brookfield Residential	S Twin Oaks Valley Rd	Single-Family Residential	346	DU	2019
11	Proposed	Brookfield Residential	S Twin Oaks Valley Rd	Active Park	38.43	AC	
12	Approved	Brookfield Residential	S Twin Oaks Valley Rd	Multi-family Residential	220	DU	2021
13	Approved	San Marcos Highlands Highlands	North end of N Las Posas Rd	Single-Family Residential	189	DU	
14	Approved	El Dorado II Specific Plan	SW corner of Richmar Ave & Pleasant Wy	Apartment	120	DU	
				Specialty Retail	7,000	SF	
				Community Center	1,850	SF	
15	Approved	Orlando Company (Vidler Estates)	N Twin Oaks Valley Rd	Single-Family Residential	19	DU	2019
16	Approved	San Marcos 13	Oleander Ave	Single-Family Residential	14	DU	2019
17	Approved	Villa Serena	Richmar Ave & Marcos St	Apartments	148	DU	
18	Approved	San Elijo Hills Town Center	San Elijo Rd & Elfin Forest Rd	Attached Condominiums	12	DU	
				Commercial	22,900	SF	
19	Approved	Montiel Rd Partners	Montiel Rd	9-lot Subdivision -SFR	9	DU	2019
20	Proposed	Sandy Lane Estates	Sandy Ln	9-lot Subdivision -SFR	9	DU	2019
21	Approved	SJ Asset Management	Woodward St	Senior Housing	50	DU	2019
22	Approved	Meadowlark Canyon LLC	San Marcos Blvd	Single-Family Residential	33	DU	
23	Approved	JR Legacy II, LLC/Global Carte	Montiel Rd	Hotel	132	Room	2019
24	Proposed	Mariposa II- Affirmed Housing	Richmar Ave & Los Olivos Dr	Apartments	100	DU	2019
25	Approved	Murai-Sab	N Las Posas Rd	Single-Family Residential	89	DU	2019
26	Proposed	Copper Hills Specific Plan	San Elijo Rd	Commercial/Light Industrial Park	139,000	SF	
				Attached Condominiums	120	DU	
				Detached Condominiums	42	DU	
				Apartments	189	DU	

City of San Marcos Cumulative Projects List - Updated 10/25/18

27	Proposed	Pacifica San Marcos	S. Rancho Santa Fe Rd & Creek St	Apartments	31	DU	2020
				Commercial	4,375	SF	2020
28	Approved	Fenton South	Future Discovery St	Single-Family Residential	230	DU	
29	Approved	Windy Pointe Phase II	Windy Pointe Dr	Light Industrial Park	52,738	SF	2021
30	Approved	Fitzpatrick	Fitzpatrick Road	Apartments	78	DU	2019
				Single-Family Residential	2	DU	2019
31	Approved	Southlake Park Phase 1	Twin Oaks Valley Rd, South of Village	Parking Lot, Fishing Dock	1.5	AC	2018
32	Approved	MacDonald Group	San Marcos Blvd (Former Sears site)	Apartments	82	Units	2020
				Commercial	5000	SF	2020
33	Proposed	Mission 24	1210 E. Mission Road (at Avenida Chapala)	MF Condominiums	24	DU	2021
34	Proposed	Mission 316 West	Mission Rd at Woordward St (east side)	MF Condominiums	67	DU	
35	Proposed	Lanikai	Mission Rd at Woordward St (west side)	Senior Living Complex	115	Units	2020
36	Proposed	Mesa Rim		Commercial	28000	SF	
37	Proposed	Artis Senior Housing	San Elijo Rd at Paseo Plomo	Senior Living Complex	64	Bed	
38	Proposed	Sunrise	Barham Drive (neasr east City limit)	MF Condominiums	192	DU	2021
39	Proposed	Jump Ball LLC	W. San Marcos Blvd at Bent Ave	Drive-thru Restaurant	3,233	SF	
40	Proposed	Hunter Industries	Opal Street	Manufacutring/Office	67,657	SF	

Project 4: University Specific Plan form Based Code.
Project 10: 50% built.
Project 17: 148 Apartments replace 136 existing apartments.
Project 31: 100 Apartments replace 40 existing apartments.

Other Projects to consider outside of City jurisdiction/land use authority:
California State University San Marcos (CSUSM) Master Plan
Palomar College Master Plan
Newland Sierra (County project)

APPENDIX E

NEAR-TERM ANALYSIS WORKSHEETS

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	375	176	20	404	126	24
Future Volume (veh/h)	375	176	20	404	126	24
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	441	207	24	475	148	28
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1190	552	51	2321	202	180
Arrive On Green	0.51	0.51	0.03	0.65	0.11	0.11
Sat Flow, veh/h	2419	1079	1781	3647	1781	1585
Grp Volume(v), veh/h	336	312	24	475	148	28
Grp Sat Flow(s),veh/h/ln	1777	1628	1781	1777	1781	1585
Q Serve(g_s), s	5.3	5.4	0.6	2.5	3.7	0.7
Cycle Q Clear(g_c), s	5.3	5.4	0.6	2.5	3.7	0.7
Prop In Lane		0.66	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	910	833	51	2321	202	180
V/C Ratio(X)	0.37	0.37	0.47	0.20	0.73	0.16
Avail Cap(c_a), veh/h	910	833	193	2321	347	308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.8	6.8	22.1	3.2	19.8	18.5
Incr Delay (d2), s/veh	1.2	1.3	6.6	0.2	5.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.6	0.3	0.5	1.7	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.9	8.1	28.7	3.4	24.9	18.9
LnGrp LOS	A	A	C	A	C	B
Approach Vol, veh/h	648			499	176	
Approach Delay, s/veh	8.0			4.6	23.9	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	6.5	29.5				36.0	10.2
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 5	20.0				30.2	9.0
Max Q Clear Time (g_c+I1), s	2.6	7.4				4.5	5.7
Green Ext Time (p_c), s	0.0	3.4				3.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	1578	50	93	1541	142	80	264	78	172	183	64
Future Volume (veh/h)	81	1578	50	93	1541	142	80	264	78	172	183	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	1644	52	97	1605	148	83	275	81	179	191	67
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	1906	60	116	1807	165	102	418	120	219	215	75
Arrive On Green	0.06	0.54	0.54	0.13	1.00	1.00	0.06	0.16	0.16	0.06	0.16	0.16
Sat Flow, veh/h	1781	3512	111	1781	3286	300	1781	2693	773	3456	1306	458
Grp Volume(v), veh/h	84	829	867	97	859	894	83	179	177	179	0	258
Grp Sat Flow(s),veh/h/ln	1781	1777	1846	1781	1777	1809	1781	1777	1689	1728	0	1764
Q Serve(g_s), s	7.0	60.0	60.8	8.0	0.0	0.0	6.9	14.2	14.8	7.7	0.0	21.5
Cycle Q Clear(g_c), s	7.0	60.0	60.8	8.0	0.0	0.0	6.9	14.2	14.8	7.7	0.0	21.5
Prop In Lane	1.00		0.06	1.00		0.17	1.00		0.46	1.00		0.26
Lane Grp Cap(c), veh/h	104	964	1002	116	977	995	102	276	262	219	0	290
V/C Ratio(X)	0.81	0.86	0.87	0.83	0.88	0.90	0.81	0.65	0.68	0.82	0.00	0.89
Avail Cap(c_a), veh/h	105	964	1002	125	977	995	107	309	294	219	0	319
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.8	29.4	29.6	64.4	0.0	0.0	69.9	59.5	59.8	69.4	0.0	61.3
Incr Delay (d2), s/veh	36.2	9.9	10.0	34.5	11.1	12.6	34.6	4.0	5.2	21.0	0.0	23.8
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	4.2	27.7	29.2	4.5	3.0	3.5	4.2	6.7	6.8	4.0	0.0	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.1	39.3	39.5	98.9	11.1	12.6	104.5	63.5	65.0	90.4	0.0	85.1
LnGrp LOS	F	D	D	F	B	B	F	E	E	F	A	F
Approach Vol, veh/h		1780			1850			439			437	
Approach Delay, s/veh		42.6			16.4			71.8			87.3	
Approach LOS		D			B			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	87.9	14.6	31.2	15.2	89.0	16.0	29.8
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	10.5	77.9	9.0	27.1	8.8	79.6	9.5	26.1
Max Q Clear Time (g_c+I1), s	10.0	62.8	8.9	23.5	9.0	2.0	9.7	16.8
Green Ext Time (p_c), s	0.0	10.5	0.0	0.5	0.0	26.2	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	39.0
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1492	188	247	1494	65	139	100	270	81	132	27
Future Volume (veh/h)	80	1492	188	247	1494	65	139	100	270	81	132	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	1538	194	255	1540	67	143	103	278	84	136	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1435	178	232	1869	872	131	87	234	77	259	53
Arrive On Green	0.02	0.15	0.15	0.13	0.53	0.53	0.07	0.20	0.20	0.04	0.17	0.17
Sat Flow, veh/h	1781	3165	393	1781	3554	1528	1781	434	1172	1781	1492	307
Grp Volume(v), veh/h	82	852	880	255	1540	67	143	0	381	84	0	164
Grp Sat Flow(s),veh/h/ln	1781	1777	1781	1781	1777	1528	1781	0	1606	1781	0	1799
Q Serve(g_s), s	6.9	68.0	68.0	19.5	54.4	3.0	11.0	0.0	30.0	6.5	0.0	12.4
Cycle Q Clear(g_c), s	6.9	68.0	68.0	19.5	54.4	3.0	11.0	0.0	30.0	6.5	0.0	12.4
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.73	1.00		0.17
Lane Grp Cap(c), veh/h	102	806	807	232	1869	872	131	0	321	77	0	312
V/C Ratio(X)	0.80	1.06	1.09	1.10	0.82	0.08	1.09	0.00	1.19	1.09	0.00	0.53
Avail Cap(c_a), veh/h	119	806	807	232	1869	872	131	0	321	77	0	318
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	72.7	63.8	63.8	65.3	29.7	14.5	69.5	0.0	60.0	71.8	0.0	56.4
Incr Delay (d2), s/veh	28.0	48.2	58.9	88.9	4.3	0.2	106.4	0.0	110.9	128.5	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	43.4	45.9	14.6	24.0	1.1	8.9	0.0	22.1	5.7	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.8	112.0	122.7	154.1	34.0	14.7	175.9	0.0	170.9	200.3	0.0	57.9
LnGrp LOS	F	F	F	F	C	B	F	A	F	F	A	E
Approach Vol, veh/h		1814			1862			524			248	
Approach Delay, s/veh		116.7			49.8			172.3			106.1	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	74.0	17.0	33.0	15.1	84.9	13.0	37.0
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	9.5	68.0	11.0	* 27	10.0	77.5	6.5	30.0
Max Q Clear Time (g_c+I1), s	21.5	70.0	13.0	14.4	8.9	56.4	8.5	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	12.7	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	94.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

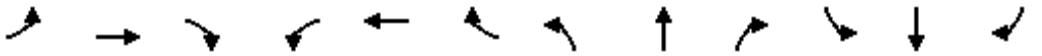
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1492	0	0	1674	0	0
Future Vol, veh/h	1492	0	0	1674	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1622	0	0	1820	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	811
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	277
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	277
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	1469	99	868	1674	350	85	85	223	220	155	30
Future Volume (veh/h)	36	1469	99	868	1674	350	85	85	223	220	155	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	1580	106	933	1800	376	91	91	240	237	167	32
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	50	1786	593	887	2935	1019	117	239	609	286	336	273
Arrive On Green	0.03	0.35	0.35	0.26	0.57	0.57	0.03	0.13	0.13	0.08	0.18	0.18
Sat Flow, veh/h	1781	5106	1543	3456	5106	1544	3456	1870	1585	3456	1870	1521
Grp Volume(v), veh/h	39	1580	106	933	1800	376	91	91	240	237	167	32
Grp Sat Flow(s),veh/h/ln	1781	1702	1543	1728	1702	1544	1728	1870	1585	1728	1870	1521
Q Serve(g_s), s	3.3	43.7	6.8	38.5	34.7	16.5	3.9	6.7	16.5	10.1	12.1	2.6
Cycle Q Clear(g_c), s	3.3	43.7	6.8	38.5	34.7	16.5	3.9	6.7	16.5	10.1	12.1	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	50	1786	593	887	2935	1019	117	239	609	286	336	273
V/C Ratio(X)	0.78	0.88	0.18	1.05	0.61	0.37	0.77	0.38	0.39	0.83	0.50	0.12
Avail Cap(c_a), veh/h	95	1786	593	887	2935	1019	117	301	661	369	436	355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.4	45.9	30.6	55.8	20.9	11.6	71.9	60.0	33.5	67.7	55.4	51.6
Incr Delay (d2), s/veh	21.9	6.8	0.7	42.5	0.8	0.9	26.9	1.0	0.4	11.7	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	19.6	2.7	22.0	14.0	5.9	2.2	3.3	6.5	5.0	5.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.3	52.8	31.2	98.3	21.8	12.5	98.8	61.0	33.9	79.4	56.6	51.8
LnGrp LOS	F	D	C	F	C	B	F	E	C	E	E	D
Approach Vol, veh/h		1725			3109			422			436	
Approach Delay, s/veh		52.4			43.6			53.8			68.6	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	45.0	59.5	11.6	33.9	11.2	93.2	19.4	26.1
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	38.5	44.4	5.1	35.0	8.0	* 75	16.0	* 24
Max Q Clear Time (g_c+I1), s	40.5	45.7	5.9	14.1	5.3	36.7	12.1	18.5
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	22.8	0.3	0.6

Intersection Summary	
HCM 6th Ctrl Delay	48.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	669	868	160	1810	0	0	0	0	150	0	108
Future Volume (veh/h)	0	669	868	160	1810	0	0	0	0	150	0	108
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	690	895	165	1866	0				155	0	111
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2177	1189	314	3230	0				365	0	168
Arrive On Green	0.00	0.43	0.43	0.09	0.63	0.00				0.11	0.00	0.11
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	690	895	165	1866	0				155	0	111
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	4.4	13.4	2.2	10.4	0.0				2.1	0.0	3.3
Cycle Q Clear(g_c), s	0.0	4.4	13.4	2.2	10.4	0.0				2.1	0.0	3.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2177	1189	314	3230	0				365	0	168
V/C Ratio(X)	0.00	0.32	0.75	0.53	0.58	0.00				0.42	0.00	0.66
Avail Cap(c_a), veh/h	0	2177	1189	406	3230	0				413	0	190
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.4	12.0	21.4	5.2	0.0				20.6	0.0	21.2
Incr Delay (d2), s/veh	0.0	0.4	4.4	0.5	0.8	0.0				0.3	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	4.0	0.9	2.3	0.0				0.8	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.8	16.4	21.9	6.0	0.0				20.9	0.0	26.0
LnGrp LOS	A	A	B	C	A	A				C	A	C
Approach Vol, veh/h		1585			2031						266	
Approach Delay, s/veh		13.5			7.3						23.1	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.2	27.8		11.3		38.0
Change Period (Y+Rc), s*	5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	5.8	19.7		5.9		31.2
Max Q Clear Time (g_c+I1), s	4.2	15.4		5.3		12.4
Green Ext Time (p_c), s	0.0	1.6		0.0		6.5

Intersection Summary	
HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	511	98	0	1002	120	848	300	40	110	0	470
Future Volume (veh/h)	250	511	98	0	1002	120	848	300	40	110	0	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	260	532	0	0	1044	125	883	312	42	115	0	490
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	442	1867		0	1718	514	989	502	67	199	0	0
Arrive On Green	0.13	0.53	0.00	0.00	0.34	0.34	0.29	0.16	0.16	0.11	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1528	3456	3133	417	1781	115	
Grp Volume(v), veh/h	260	532	0	0	1044	125	883	175	179	115	40.8	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1528	1728	1777	1773	1781	D	
Q Serve(g_s), s	6.6	7.8	0.0	0.0	16.0	5.5	22.9	8.6	8.8	5.7		
Cycle Q Clear(g_c), s	6.6	7.8	0.0	0.0	16.0	5.5	22.9	8.6	8.8	5.7		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.24	1.00		
Lane Grp Cap(c), veh/h	442	1867		0	1718	514	989	284	284	199		
V/C Ratio(X)	0.59	0.28		0.00	0.61	0.24	0.89	0.62	0.63	0.58		
Avail Cap(c_a), veh/h	506	1867		0	1718	514	1952	664	663	224		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	38.5	12.4	0.0	0.0	25.9	22.4	32.0	36.6	36.7	39.5		
Incr Delay (d2), s/veh	0.6	0.4	0.0	0.0	1.6	1.1	1.2	0.8	0.9	1.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.8	3.1	0.0	0.0	6.5	2.1	9.5	3.8	3.8	2.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	12.8	0.0	0.0	27.5	23.6	33.2	37.5	37.6	40.8		
LnGrp LOS	D	B		A	C	C	C	D	D	D		
Approach Vol, veh/h		792	A		1169			1237				
Approach Delay, s/veh		21.4			27.1			34.4				
Approach LOS		C			C			C				

Timer - Assigned Phs	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	56.0	32.9		17.7	38.3	16.5	21.1
Change Period (Y+Rc), s	6.8	6.1		* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	49.2	52.9		* 14	29.8	11.8	35.0
Max Q Clear Time (g_c+I1), s	9.8	24.9		8.6	18.0	7.7	10.8
Green Ext Time (p_c), s	2.6	1.9		0.2	4.4	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	29.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1166	304	30	719	294	79
Future Volume (veh/h)	1166	304	30	719	294	79
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1240	323	32	765	313	84
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1432	366	61	2263	327	291
Arrive On Green	0.52	0.52	0.03	0.64	0.18	0.18
Sat Flow, veh/h	2872	709	1781	3647	1781	1585
Grp Volume(v), veh/h	784	779	32	765	313	84
Grp Sat Flow(s),veh/h/ln	1777	1711	1781	1777	1781	1585
Q Serve(g_s), s	22.9	24.3	1.1	6.0	10.4	2.7
Cycle Q Clear(g_c), s	22.9	24.3	1.1	6.0	10.4	2.7
Prop In Lane		0.41	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	916	882	61	2263	327	291
V/C Ratio(X)	0.86	0.88	0.52	0.34	0.96	0.29
Avail Cap(c_a), veh/h	916	882	148	2263	327	291
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	12.9	28.5	5.0	24.3	21.1
Incr Delay (d2), s/veh	10.1	12.5	6.7	0.4	38.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.8	10.5	0.5	1.7	7.6	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.7	25.4	35.2	5.5	63.0	21.7
LnGrp LOS	C	C	D	A	E	C
Approach Vol, veh/h	1563			797	397	
Approach Delay, s/veh	24.0			6.6	54.2	
Approach LOS	C			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.3	36.7				44.0	16.0
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 5	28.0				38.2	11.0
Max Q Clear Time (g_c+I1), s	3.1	26.3				8.0	12.4
Green Ext Time (p_c), s	0.0	1.4				6.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	1539	60	168	1341	227	140	364	58	242	486	92
Future Volume (veh/h)	126	1539	60	168	1341	227	140	364	58	242	486	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	1570	61	171	1368	232	143	371	59	247	496	94
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	1404	54	148	1284	215	119	777	122	297	420	80
Arrive On Green	0.06	0.40	0.40	0.11	0.56	0.56	0.07	0.25	0.25	0.09	0.28	0.28
Sat Flow, veh/h	1781	3481	135	1781	3034	507	1781	3060	482	3456	1520	288
Grp Volume(v), veh/h	129	798	833	171	793	807	143	214	216	247	0	590
Grp Sat Flow(s),veh/h/ln	1781	1777	1839	1781	1777	1764	1781	1777	1765	1728	0	1808
Q Serve(g_s), s	9.5	60.5	60.5	12.5	63.5	63.5	10.0	15.3	15.6	10.6	0.0	41.5
Cycle Q Clear(g_c), s	9.5	60.5	60.5	12.5	63.5	63.5	10.0	15.3	15.6	10.6	0.0	41.5
Prop In Lane	1.00		0.07	1.00		0.29	1.00		0.27	1.00		0.16
Lane Grp Cap(c), veh/h	113	717	742	148	752	747	119	451	448	297	0	500
V/C Ratio(X)	1.14	1.11	1.12	1.15	1.05	1.08	1.20	0.47	0.48	0.83	0.00	1.18
Avail Cap(c_a), veh/h	113	717	742	148	752	747	119	451	448	396	0	500
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.3	44.7	44.8	66.7	32.8	32.8	70.0	47.4	47.6	67.5	0.0	54.3
Incr Delay (d2), s/veh	128.5	69.4	72.1	120.5	48.2	56.7	147.5	0.8	0.8	10.7	0.0	99.9
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	8.4	40.2	42.2	10.5	34.8	36.3	9.4	6.9	7.0	5.1	0.0	32.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	198.7	114.2	116.9	187.2	80.9	89.5	217.5	48.2	48.4	78.2	0.0	154.2
LnGrp LOS	F	F	F	F	F	F	F	D	D	E	A	F
Approach Vol, veh/h		1760			1771			573			837	
Approach Delay, s/veh		121.6			95.1			90.5			131.8	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	67.0	16.0	48.0	16.0	70.0	19.4	44.6
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	12.5	60.5	10.0	41.5	9.5	63.5	17.2	33.8
Max Q Clear Time (g_c+I1), s	14.5	62.5	12.0	43.5	11.5	65.5	12.6	17.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.3

Intersection Summary	
HCM 6th Ctrl Delay	110.2
HCM 6th LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1635	113	282	1497	80	370	334	402	200	306	50
Future Volume (veh/h)	110	1635	113	282	1497	80	370	334	402	200	306	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	1668	115	288	1528	82	378	341	410	204	312	51
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1537	105	184	1812	900	344	231	277	137	296	48
Arrive On Green	0.05	0.46	0.46	0.10	0.51	0.51	0.19	0.30	0.30	0.08	0.19	0.19
Sat Flow, veh/h	1781	3365	230	1781	3554	1527	1781	760	914	1781	1558	255
Grp Volume(v), veh/h	112	873	910	288	1528	82	378	0	751	204	0	363
Grp Sat Flow(s),veh/h/ln	1781	1777	1818	1781	1777	1527	1781	0	1674	1781	0	1812
Q Serve(g_s), s	7.5	68.5	68.5	15.5	55.4	3.5	29.0	0.0	45.5	11.5	0.0	28.5
Cycle Q Clear(g_c), s	7.5	68.5	68.5	15.5	55.4	3.5	29.0	0.0	45.5	11.5	0.0	28.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.55	1.00		0.14
Lane Grp Cap(c), veh/h	89	811	830	184	1812	900	344	0	508	137	0	344
V/C Ratio(X)	1.26	1.08	1.10	1.56	0.84	0.09	1.10	0.00	1.48	1.49	0.00	1.05
Avail Cap(c_a), veh/h	89	811	830	184	1812	900	344	0	508	137	0	344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	71.3	40.8	40.8	67.3	31.6	13.5	60.5	0.0	52.3	69.2	0.0	60.8
Incr Delay (d2), s/veh	179.6	53.8	61.0	278.8	5.0	0.2	77.3	0.0	226.1	256.1	0.0	63.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	41.6	44.2	21.3	24.7	1.3	20.5	0.0	50.9	15.0	0.0	19.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	250.8	94.6	101.7	346.0	36.6	13.7	137.8	0.0	278.3	325.4	0.0	123.7
LnGrp LOS	F	F	F	F	D	B	F	A	F	F	A	F
Approach Vol, veh/h		1895			1898			1129			567	
Approach Delay, s/veh		107.3			82.5			231.3			196.3	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	75.0	35.0	35.5	14.0	83.0	18.0	52.5
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	15.5	52.0	29.0	* 29	7.5	60.0	11.5	45.0
Max Q Clear Time (g_c+I1), s	17.5	70.5	31.0	30.5	9.5	57.4	13.5	47.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	133.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

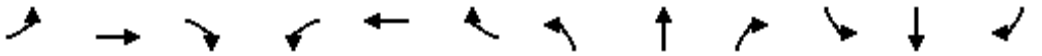
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1635	0	0	1863	0	0
Future Vol, veh/h	1635	0	0	1863	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1777	0	0	2025	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	889
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	246
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	246
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	2288	230	1045	1863	340	209	275	1032	1193	387	40
Future Volume (veh/h)	80	2288	230	1045	1863	340	209	275	1032	1193	387	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	2335	235	1066	1901	347	213	281	1053	1217	395	41
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	2196	776	611	2790	1160	242	231	476	691	480	394
Arrive On Green	0.08	0.57	0.57	0.18	0.55	0.55	0.07	0.12	0.12	0.20	0.26	0.26
Sat Flow, veh/h	1781	5106	1547	3456	5106	1543	3456	1870	1585	3456	1870	1534
Grp Volume(v), veh/h	82	2335	235	1066	1901	347	213	281	1053	1217	395	41
Grp Sat Flow(s),veh/h/ln	1781	1702	1547	1728	1702	1543	1728	1870	1585	1728	1870	1534
Q Serve(g_s), s	6.8	64.5	10.7	26.5	40.4	11.0	9.2	18.5	18.5	30.0	29.9	3.1
Cycle Q Clear(g_c), s	6.8	64.5	10.7	26.5	40.4	11.0	9.2	18.5	18.5	30.0	29.9	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	102	2196	776	611	2790	1160	242	231	476	691	480	394
V/C Ratio(X)	0.81	1.06	0.30	1.75	0.68	0.30	0.88	1.22	2.21	1.76	0.82	0.10
Avail Cap(c_a), veh/h	143	2196	776	611	2790	1160	242	231	476	691	480	394
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	32.1	16.1	61.8	24.6	6.2	69.1	65.7	52.5	60.0	52.5	42.6
Incr Delay (d2), s/veh	20.2	38.7	1.0	341.6	1.2	0.6	29.0	130.9	553.3	348.3	11.0	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	3.6	31.8	3.8	40.6	16.5	3.6	5.0	17.2	90.9	46.6	15.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.7	70.8	17.1	403.4	25.8	6.8	98.1	196.6	605.8	408.3	63.6	42.7
LnGrp LOS	F	F	B	F	C	A	F	F	F	F	E	D
Approach Vol, veh/h		2652			3314			1547			1653	
Approach Delay, s/veh		66.6			145.3			461.6			316.9	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	72.0	17.0	45.5	15.5	89.5	37.0	25.5
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	26.5	48.0	10.5	38.0	12.0	* 63	30.0	* 19
Max Q Clear Time (g_c+I1), s	28.5	66.5	11.2	31.9	8.8	42.4	32.0	20.5
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	15.3	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	206.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1559	1078	180	1740	0	0	0	0	100	0	58
Future Volume (veh/h)	0	1559	1078	180	1740	0	0	0	0	100	0	58
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	1591	1100	184	1776	0				102	0	59
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2400	1311	307	3409	0				298	0	137
Arrive On Green	0.00	0.47	0.47	0.09	0.67	0.00				0.09	0.00	0.09
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	1591	1100	184	1776	0				102	0	59
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	12.6	18.1	2.7	9.3	0.0				1.5	0.0	1.9
Cycle Q Clear(g_c), s	0.0	12.6	18.1	2.7	9.3	0.0				1.5	0.0	1.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2400	1311	307	3409	0				298	0	137
V/C Ratio(X)	0.00	0.66	0.84	0.60	0.52	0.00				0.34	0.00	0.43
Avail Cap(c_a), veh/h	0	2400	1311	330	3409	0				468	0	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.7	12.2	23.0	4.4	0.0				22.6	0.0	22.7
Incr Delay (d2), s/veh	0.0	1.5	6.5	1.6	0.6	0.0				0.3	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
%ile BackOfQ(50%),veh/ln	0.0	4.0	5.6	1.1	2.0	0.0				0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.2	18.7	24.6	5.0	0.0				22.8	0.0	23.5
LnGrp LOS	A	B	B	C	A	A				C	A	C
Approach Vol, veh/h		2691			1960						161	
Approach Delay, s/veh		14.8			6.9						23.1	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.4	31.4		10.6		41.8
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 5	24.3		7.1		35.0
Max Q Clear Time (g_c+I1), s	4.7	20.1		3.9		11.3
Green Ext Time (p_c), s	0.0	2.8		0.1		6.5

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	1131	168	0	962	120	798	230	70	160	0	510
Future Volume (veh/h)	360	1131	168	0	962	120	798	230	70	160	0	510
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	367	1154	0	0	982	122	814	235	71	163	0	520
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	442	2016		0	1938	582	917	322	95	203	0	0
Arrive On Green	0.13	0.57	0.00	0.00	0.38	0.38	0.27	0.12	0.12	0.11	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1532	3456	2706	798	1781	163	
Grp Volume(v), veh/h	367	1154	0	0	982	122	814	152	154	163	44.7	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1532	1728	1777	1727	1781	D	
Q Serve(g_s), s	9.9	19.8	0.0	0.0	14.1	5.1	21.5	7.9	8.2	8.5		
Cycle Q Clear(g_c), s	9.9	19.8	0.0	0.0	14.1	5.1	21.5	7.9	8.2	8.5		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.46	1.00		
Lane Grp Cap(c), veh/h	442	2016		0	1938	582	917	212	206	203		
V/C Ratio(X)	0.83	0.57		0.00	0.51	0.21	0.89	0.72	0.75	0.80		
Avail Cap(c_a), veh/h	574	2016		0	1938	582	2109	653	635	318		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	40.5	13.2	0.0	0.0	22.7	19.9	33.6	40.4	40.5	41.1		
Incr Delay (d2), s/veh	6.2	1.2	0.0	0.0	1.0	0.8	1.2	1.7	2.0	3.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.5	7.6	0.0	0.0	5.6	1.9	9.0	3.5	3.6	3.9		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	14.4	0.0	0.0	23.6	20.7	34.8	42.1	42.6	44.7		
LnGrp LOS	D	B		A	C	C	C	D	D	D		
Approach Vol, veh/h		1521	A		1104			1120				
Approach Delay, s/veh		22.2			23.3			36.9				
Approach LOS		C			C			D				

Timer - Assigned Phs	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	60.8	31.4		17.9	42.9	17.0	17.4
Change Period (Y+Rc), s	6.8	6.1		* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	54.0	58.1		* 16	32.5	17.0	35.0
Max Q Clear Time (g_c+I1), s	21.8	23.5		11.9	16.1	10.5	10.2
Green Ext Time (p_c), s	6.8	1.7		0.3	4.8	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX F

NEAR-TERM + PROJECT ANALYSIS WORKSHEETS

HCM 6th Signalized Intersection Summary
1: Bent Ave & Grand Ave

01/21/2021

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	375	181	20	406	128	24
Future Volume (veh/h)	375	181	20	406	128	24
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	441	213	24	478	151	28
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1175	561	51	2316	205	183
Arrive On Green	0.51	0.51	0.03	0.65	0.12	0.12
Sat Flow, veh/h	2394	1099	1781	3647	1781	1585
Grp Volume(v), veh/h	339	315	24	478	151	28
Grp Sat Flow(s),veh/h/ln	1777	1623	1781	1777	1781	1585
Q Serve(g_s), s	5.4	5.5	0.6	2.5	3.8	0.7
Cycle Q Clear(g_c), s	5.4	5.5	0.6	2.5	3.8	0.7
Prop In Lane		0.68	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	908	829	51	2316	205	183
V/C Ratio(X)	0.37	0.38	0.47	0.21	0.73	0.15
Avail Cap(c_a), veh/h	908	829	192	2316	346	308
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	6.9	6.9	22.2	3.2	19.8	18.5
Incr Delay (d2), s/veh	1.2	1.3	6.6	0.2	5.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.6	0.3	0.5	1.7	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	8.0	8.2	28.7	3.5	24.9	18.8
LnGrp LOS	A	A	C	A	C	B
Approach Vol, veh/h	654			502	179	
Approach Delay, s/veh	8.1			4.7	23.9	
Approach LOS	A			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	6.5	29.5				36.0	10.3
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 5	20.0				30.2	9.0
Max Q Clear Time (g_c+I1), s	2.6	7.5				4.5	5.8
Green Ext Time (p_c), s	0.0	3.4				3.3	0.1

Intersection Summary	
HCM 6th Ctrl Delay	8.9
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

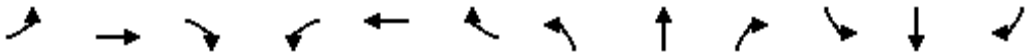
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	81	1585	50	93	1548	147	80	264	83	177	183	64
Future Volume (veh/h)	81	1585	50	93	1548	147	80	264	83	177	183	64
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	84	1651	52	97	1612	153	83	275	86	184	191	67
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	1906	60	116	1802	169	102	412	125	219	215	75
Arrive On Green	0.06	0.54	0.54	0.13	1.00	1.00	0.06	0.16	0.16	0.06	0.16	0.16
Sat Flow, veh/h	1781	3512	110	1781	3277	307	1781	2651	807	3456	1306	458
Grp Volume(v), veh/h	84	832	871	97	865	900	83	182	179	184	0	258
Grp Sat Flow(s),veh/h/ln	1781	1777	1846	1781	1777	1807	1781	1777	1681	1728	0	1764
Q Serve(g_s), s	7.0	60.4	61.3	8.0	0.0	0.0	6.9	14.4	15.1	7.9	0.0	21.5
Cycle Q Clear(g_c), s	7.0	60.4	61.3	8.0	0.0	0.0	6.9	14.4	15.1	7.9	0.0	21.5
Prop In Lane	1.00		0.06	1.00		0.17	1.00		0.48	1.00		0.26
Lane Grp Cap(c), veh/h	104	964	1002	116	977	994	102	276	261	219	0	290
V/C Ratio(X)	0.81	0.86	0.87	0.83	0.89	0.91	0.81	0.66	0.69	0.84	0.00	0.89
Avail Cap(c_a), veh/h	105	964	1002	125	977	994	107	309	292	219	0	319
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	69.8	29.5	29.7	64.4	0.0	0.0	69.9	59.6	59.9	69.5	0.0	61.3
Incr Delay (d2), s/veh	36.2	10.1	10.2	34.5	11.6	13.2	34.6	4.3	5.7	24.3	0.0	23.8
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	4.2	28.0	29.5	4.5	3.2	3.7	4.2	6.9	6.9	4.3	0.0	11.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.1	39.6	39.9	98.9	11.6	13.2	104.5	64.0	65.6	93.8	0.0	85.1
LnGrp LOS	F	D	D	F	B	B	F	E	E	F	A	F
Approach Vol, veh/h		1787			1862			444			442	
Approach Delay, s/veh		42.9			16.9			72.2			88.7	
Approach LOS		D			B			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	87.9	14.6	31.2	15.2	89.0	16.0	29.8
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	10.5	77.9	9.0	27.1	8.8	79.6	9.5	26.1
Max Q Clear Time (g_c+I1), s	10.0	63.3	8.9	23.5	9.0	2.0	9.9	17.1
Green Ext Time (p_c), s	0.0	10.3	0.0	0.5	0.0	26.6	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	39.6
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
3: San Marcos Blvd & Bent Ave

01/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1509	188	264	1501	67	144	100	280	86	132	27
Future Volume (veh/h)	80	1509	188	264	1501	67	144	100	280	86	132	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	1556	194	272	1547	69	148	103	289	89	136	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1437	176	232	1869	872	131	84	236	77	259	53
Arrive On Green	0.02	0.15	0.15	0.13	0.53	0.53	0.07	0.20	0.20	0.04	0.17	0.17
Sat Flow, veh/h	1781	3170	389	1781	3554	1528	1781	421	1182	1781	1492	307
Grp Volume(v), veh/h	82	860	890	272	1547	69	148	0	392	89	0	164
Grp Sat Flow(s),veh/h/ln	1781	1777	1782	1781	1777	1528	1781	0	1603	1781	0	1799
Q Serve(g_s), s	6.9	68.0	68.0	19.5	54.8	3.1	11.0	0.0	30.0	6.5	0.0	12.4
Cycle Q Clear(g_c), s	6.9	68.0	68.0	19.5	54.8	3.1	11.0	0.0	30.0	6.5	0.0	12.4
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.74	1.00		0.17
Lane Grp Cap(c), veh/h	102	806	808	232	1869	872	131	0	321	77	0	312
V/C Ratio(X)	0.80	1.07	1.10	1.17	0.83	0.08	1.13	0.00	1.22	1.15	0.00	0.53
Avail Cap(c_a), veh/h	119	806	808	232	1869	872	131	0	321	77	0	318
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	72.7	63.8	63.8	65.3	29.8	14.6	69.5	0.0	60.0	71.8	0.0	56.4
Incr Delay (d2), s/veh	28.0	51.5	63.1	114.5	4.4	0.2	118.9	0.0	124.9	149.7	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	44.2	46.9	16.2	24.3	1.1	9.3	0.0	23.3	6.2	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.8	115.3	126.9	179.7	34.2	14.7	188.4	0.0	184.9	221.4	0.0	57.9
LnGrp LOS	F	F	F	F	C	B	F	A	F	F	A	E
Approach Vol, veh/h		1832			1888			540			253	
Approach Delay, s/veh		120.3			54.5			185.8			115.4	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.0	74.0	17.0	33.0	15.1	84.9	13.0	37.0
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	19.5	68.0	11.0	* 27	10.0	77.5	6.5	30.0
Max Q Clear Time (g_c+I1), s	21.5	70.0	13.0	14.4	8.9	56.8	8.5	32.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	12.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	100.3
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

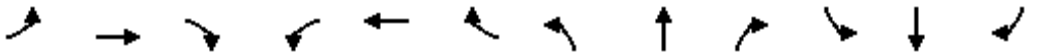
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1492	96	0	1726	0	93
Future Vol, veh/h	1492	96	0	1726	0	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1622	104	0	1876	0	101

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	863
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	256
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	256
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	27.9
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	256	-	-	-
HCM Lane V/C Ratio	0.395	-	-	-
HCM Control Delay (s)	27.9	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	1.8	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	1486	117	868	1691	350	85	85	223	220	155	30
Future Volume (veh/h)	48	1486	117	868	1691	350	85	85	223	220	155	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	1598	126	933	1818	376	91	91	240	237	167	32
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	67	1786	593	887	2888	1004	117	239	609	286	336	273
Arrive On Green	0.04	0.35	0.35	0.26	0.57	0.57	0.03	0.13	0.13	0.08	0.18	0.18
Sat Flow, veh/h	1781	5106	1543	3456	5106	1543	3456	1870	1585	3456	1870	1521
Grp Volume(v), veh/h	52	1598	126	933	1818	376	91	91	240	237	167	32
Grp Sat Flow(s),veh/h/ln	1781	1702	1543	1728	1702	1543	1728	1870	1585	1728	1870	1521
Q Serve(g_s), s	4.3	44.4	8.2	38.5	36.0	17.0	3.9	6.7	16.5	10.1	12.1	2.6
Cycle Q Clear(g_c), s	4.3	44.4	8.2	38.5	36.0	17.0	3.9	6.7	16.5	10.1	12.1	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	67	1786	593	887	2888	1004	117	239	609	286	336	273
V/C Ratio(X)	0.78	0.89	0.21	1.05	0.63	0.37	0.77	0.38	0.39	0.83	0.50	0.12
Avail Cap(c_a), veh/h	95	1786	593	887	2888	1004	117	301	661	369	436	355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.6	46.2	31.0	55.8	22.0	12.3	71.9	60.0	33.5	67.7	55.4	51.6
Incr Delay (d2), s/veh	22.4	7.4	0.8	42.5	0.9	0.9	26.9	1.0	0.4	11.7	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	20.0	3.3	22.0	14.5	6.1	2.2	3.3	6.5	5.0	5.8	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.0	53.6	31.8	98.3	22.9	13.2	98.8	61.0	33.9	79.4	56.6	51.8
LnGrp LOS	F	D	C	F	C	B	F	E	C	E	E	D
Approach Vol, veh/h		1776			3127			422			436	
Approach Delay, s/veh		53.2			44.2			53.8			68.6	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	45.0	59.5	11.6	33.9	12.6	91.8	19.4	26.1
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	38.5	44.4	5.1	35.0	8.0	* 75	16.0	* 24
Max Q Clear Time (g_c+I1), s	40.5	46.4	5.9	14.1	6.3	38.0	12.1	18.5
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	22.6	0.3	0.6

Intersection Summary	
HCM 6th Ctrl Delay	49.5
HCM 6th LOS	D

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	681	873	160	1822	0	0	0	0	150	0	113
Future Volume (veh/h)	0	681	873	160	1822	0	0	0	0	150	0	113
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	702	900	165	1878	0				155	0	116
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2169	1185	313	3220	0				375	0	172
Arrive On Green	0.00	0.42	0.42	0.09	0.63	0.00				0.11	0.00	0.11
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	702	900	165	1878	0				155	0	116
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	4.5	13.6	2.3	10.6	0.0				2.1	0.0	3.5
Cycle Q Clear(g_c), s	0.0	4.5	13.6	2.3	10.6	0.0				2.1	0.0	3.5
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2169	1185	313	3220	0				375	0	172
V/C Ratio(X)	0.00	0.32	0.76	0.53	0.58	0.00				0.41	0.00	0.67
Avail Cap(c_a), veh/h	0	2169	1185	405	3220	0				412	0	189
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.5	12.1	21.5	5.3	0.0				20.6	0.0	21.2
Incr Delay (d2), s/veh	0.0	0.4	4.6	0.5	0.8	0.0				0.3	0.0	6.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	4.1	0.9	2.4	0.0				0.8	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	9.9	16.7	22.0	6.1	0.0				20.8	0.0	27.2
LnGrp LOS	A	A	B	C	A	A				C	A	C
Approach Vol, veh/h		1602			2043						271	
Approach Delay, s/veh		13.7			7.4						23.6	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.2	27.8		11.5		38.0
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 5.8	19.7		5.9		31.2
Max Q Clear Time (g_c+I1), s	4.3	15.6		5.5		12.6
Green Ext Time (p_c), s	0.0	1.6		0.0		6.5

Intersection Summary	
HCM 6th Ctrl Delay	11.1
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	518	103	0	1009	120	853	300	40	110	0	470
Future Volume (veh/h)	250	518	103	0	1009	120	853	300	40	110	0	470
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	260	540	0	0	1051	125	889	312	42	115	0	490
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	442	1867		0	1718	514	996	502	67	199	0	0
Arrive On Green	0.13	0.53	0.00	0.00	0.34	0.34	0.29	0.16	0.16	0.11	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1528	3456	3133	417	1781	115	
Grp Volume(v), veh/h	260	540	0	0	1051	125	889	175	179	115	40.8	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1528	1728	1777	1773	1781	D	
Q Serve(g_s), s	6.6	8.0	0.0	0.0	16.1	5.5	23.1	8.6	8.8	5.7		
Cycle Q Clear(g_c), s	6.6	8.0	0.0	0.0	16.1	5.5	23.1	8.6	8.8	5.7		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.24	1.00		
Lane Grp Cap(c), veh/h	442	1867		0	1718	514	996	284	284	199		
V/C Ratio(X)	0.59	0.29		0.00	0.61	0.24	0.89	0.62	0.63	0.58		
Avail Cap(c_a), veh/h	506	1867		0	1718	514	1952	664	663	224		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	38.5	12.4	0.0	0.0	25.9	22.4	31.9	36.6	36.7	39.5		
Incr Delay (d2), s/veh	0.6	0.4	0.0	0.0	1.6	1.1	1.2	0.8	0.9	1.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.8	3.1	0.0	0.0	6.6	2.1	9.5	3.8	3.8	2.6		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.1	12.8	0.0	0.0	27.6	23.6	33.1	37.5	37.6	40.8		
LnGrp LOS	D	B		A	C	C	C	D	D	D		
Approach Vol, veh/h		800	A		1176			1243				
Approach Delay, s/veh		21.4			27.2			34.4				
Approach LOS		C			C			C				

Timer - Assigned Phs	2	3	5	6	7	8
Phs Duration (G+Y+Rc), s	56.0	33.1	17.7	38.3	16.5	21.1
Change Period (Y+Rc), s	6.8	6.1	* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	49.2	52.9	* 14	29.8	11.8	35.0
Max Q Clear Time (g_c+I1), s	10.0	25.1	8.6	18.1	7.7	10.8
Green Ext Time (p_c), s	2.6	1.9	0.2	4.4	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
1: Bent Ave & Grand Ave

01/21/2021

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1166	306	30	720	295	79
Future Volume (veh/h)	1166	306	30	720	295	79
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1240	326	32	766	314	84
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1429	368	61	2263	327	291
Arrive On Green	0.52	0.52	0.03	0.64	0.18	0.18
Sat Flow, veh/h	2866	714	1781	3647	1781	1585
Grp Volume(v), veh/h	785	781	32	766	314	84
Grp Sat Flow(s),veh/h/ln	1777	1710	1781	1777	1781	1585
Q Serve(g_s), s	23.0	24.4	1.1	6.0	10.5	2.7
Cycle Q Clear(g_c), s	23.0	24.4	1.1	6.0	10.5	2.7
Prop In Lane		0.42	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	916	881	61	2263	327	291
V/C Ratio(X)	0.86	0.89	0.52	0.34	0.96	0.29
Avail Cap(c_a), veh/h	916	881	148	2263	327	291
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	13.0	28.5	5.0	24.3	21.1
Incr Delay (d2), s/veh	10.2	12.7	6.7	0.4	39.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	10.6	0.5	1.7	7.7	1.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.8	25.6	35.2	5.5	63.8	21.7
LnGrp LOS	C	C	D	A	E	C
Approach Vol, veh/h	1566			798	398	
Approach Delay, s/veh	24.2			6.6	54.9	
Approach LOS	C			A	D	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.3	36.7				44.0	16.0
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 5	28.0				38.2	11.0
Max Q Clear Time (g_c+I1), s	3.1	26.4				8.0	12.5
Green Ext Time (p_c), s	0.0	1.3				6.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

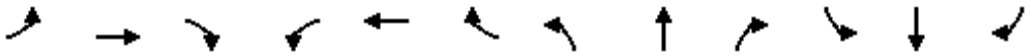
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	126	1543	60	168	1344	229	140	364	60	244	486	92
Future Volume (veh/h)	126	1543	60	168	1344	229	140	364	60	244	486	92
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	129	1574	61	171	1371	234	143	371	61	249	496	94
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	1404	54	148	1283	216	119	771	125	299	420	80
Arrive On Green	0.06	0.40	0.40	0.11	0.56	0.56	0.07	0.25	0.25	0.09	0.28	0.28
Sat Flow, veh/h	1781	3482	134	1781	3031	510	1781	3043	495	3456	1520	288
Grp Volume(v), veh/h	129	800	835	171	796	809	143	215	217	249	0	590
Grp Sat Flow(s),veh/h/ln	1781	1777	1839	1781	1777	1764	1781	1777	1762	1728	0	1808
Q Serve(g_s), s	9.5	60.5	60.5	12.5	63.5	63.5	10.0	15.4	15.7	10.6	0.0	41.5
Cycle Q Clear(g_c), s	9.5	60.5	60.5	12.5	63.5	63.5	10.0	15.4	15.7	10.6	0.0	41.5
Prop In Lane	1.00		0.07	1.00		0.29	1.00		0.28	1.00		0.16
Lane Grp Cap(c), veh/h	113	717	742	148	752	747	119	450	447	299	0	500
V/C Ratio(X)	1.14	1.12	1.13	1.15	1.06	1.08	1.20	0.48	0.49	0.83	0.00	1.18
Avail Cap(c_a), veh/h	113	717	742	148	752	747	119	450	447	396	0	500
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.3	44.7	44.8	66.7	32.8	32.8	70.0	47.6	47.7	67.4	0.0	54.3
Incr Delay (d2), s/veh	128.5	70.4	73.2	120.5	49.2	58.0	147.5	0.8	0.8	10.9	0.0	99.9
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	8.4	40.4	42.4	10.5	35.0	36.6	9.4	7.0	7.1	5.2	0.0	32.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	198.7	115.1	117.9	187.2	82.0	90.8	217.5	48.3	48.5	78.3	0.0	154.2
LnGrp LOS	F	F	F	F	F	F	F	D	D	E	A	F
Approach Vol, veh/h		1764			1776			575			839	
Approach Delay, s/veh		122.6			96.1			90.5			131.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	67.0	16.0	48.0	16.0	70.0	19.5	44.5
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	12.5	60.5	10.0	41.5	9.5	63.5	17.2	33.8
Max Q Clear Time (g_c+I1), s	14.5	62.5	12.0	43.5	11.5	65.5	12.6	17.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.3	2.3

Intersection Summary	
HCM 6th Ctrl Delay	110.9
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary
3: San Marcos Blvd & Bent Ave

01/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1643	113	290	1500	81	372	334	407	202	306	50
Future Volume (veh/h)	110	1643	113	290	1500	81	372	334	407	202	306	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	1677	115	296	1531	83	380	341	415	206	312	51
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1537	104	184	1812	900	344	229	279	137	296	48
Arrive On Green	0.05	0.46	0.46	0.10	0.51	0.51	0.19	0.30	0.30	0.08	0.19	0.19
Sat Flow, veh/h	1781	3367	228	1781	3554	1527	1781	755	918	1781	1558	255
Grp Volume(v), veh/h	112	877	915	296	1531	83	380	0	756	206	0	363
Grp Sat Flow(s),veh/h/ln	1781	1777	1818	1781	1777	1527	1781	0	1673	1781	0	1812
Q Serve(g_s), s	7.5	68.5	68.5	15.5	55.6	3.6	29.0	0.0	45.5	11.5	0.0	28.5
Cycle Q Clear(g_c), s	7.5	68.5	68.5	15.5	55.6	3.6	29.0	0.0	45.5	11.5	0.0	28.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.55	1.00		0.14
Lane Grp Cap(c), veh/h	89	811	830	184	1812	900	344	0	507	137	0	344
V/C Ratio(X)	1.26	1.08	1.10	1.61	0.84	0.09	1.10	0.00	1.49	1.51	0.00	1.05
Avail Cap(c_a), veh/h	89	811	830	184	1812	900	344	0	507	137	0	344
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.98	0.00	0.98
Uniform Delay (d), s/veh	71.3	40.8	40.8	67.3	31.6	13.5	60.5	0.0	52.3	69.2	0.0	60.8
Incr Delay (d2), s/veh	179.6	55.6	63.0	297.4	5.0	0.2	79.3	0.0	230.8	262.2	0.0	63.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	42.0	44.7	22.3	24.8	1.3	20.7	0.0	51.6	15.2	0.0	19.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	250.8	96.4	103.8	364.7	36.7	13.8	139.8	0.0	283.0	331.5	0.0	123.7
LnGrp LOS	F	F	F	F	D	B	F	A	F	F	A	F
Approach Vol, veh/h		1904			1910			1136			569	
Approach Delay, s/veh		109.0			86.5			235.1			198.9	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	75.0	35.0	35.5	14.0	83.0	18.0	52.5
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	15.5	52.0	29.0	* 29	7.5	60.0	11.5	45.0
Max Q Clear Time (g_c+I1), s	17.5	70.5	31.0	30.5	9.5	57.6	13.5	47.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	136.5
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

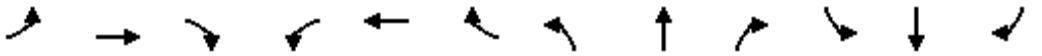
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1635	46	0	1888	0	46
Future Vol, veh/h	1635	46	0	1888	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1777	50	0	2052	0	50

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	914
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	237
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	237
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	24.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	237	-	-	-
HCM Lane V/C Ratio	0.211	-	-	-
HCM Control Delay (s)	24.2	-	-	-
HCM Lane LOS	C	-	-	-
HCM 95th %tile Q(veh)	0.8	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	2296	239	1045	1871	340	209	275	1032	1193	387	40
Future Volume (veh/h)	86	2296	239	1045	1871	340	209	275	1032	1193	387	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	2343	244	1066	1909	347	213	281	1053	1217	395	41
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	2196	776	611	2771	1154	242	231	476	691	480	394
Arrive On Green	0.08	0.57	0.57	0.18	0.54	0.54	0.07	0.12	0.12	0.20	0.26	0.26
Sat Flow, veh/h	1781	5106	1547	3456	5106	1542	3456	1870	1585	3456	1870	1534
Grp Volume(v), veh/h	88	2343	244	1066	1909	347	213	281	1053	1217	395	41
Grp Sat Flow(s),veh/h/ln	1781	1702	1547	1728	1702	1542	1728	1870	1585	1728	1870	1534
Q Serve(g_s), s	7.3	64.5	11.2	26.5	41.0	11.2	9.2	18.5	18.5	30.0	29.9	3.1
Cycle Q Clear(g_c), s	7.3	64.5	11.2	26.5	41.0	11.2	9.2	18.5	18.5	30.0	29.9	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	108	2196	776	611	2771	1154	242	231	476	691	480	394
V/C Ratio(X)	0.81	1.07	0.31	1.75	0.69	0.30	0.88	1.22	2.21	1.76	0.82	0.10
Avail Cap(c_a), veh/h	143	2196	776	611	2771	1154	242	231	476	691	480	394
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.1	32.1	16.2	61.8	25.0	6.4	69.1	65.7	52.5	60.0	52.5	42.6
Incr Delay (d2), s/veh	23.0	40.0	1.1	341.6	1.2	0.6	29.0	130.9	553.3	348.3	11.0	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	4.0	32.1	4.0	40.6	16.7	3.7	5.0	17.2	90.9	46.6	15.5	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.1	72.1	17.3	403.4	26.3	7.0	98.1	196.6	605.8	408.3	63.6	42.7
LnGrp LOS	F	F	B	F	C	A	F	F	F	F	E	D
Approach Vol, veh/h		2675			3322			1547			1653	
Approach Delay, s/veh		67.8			145.3			461.6			316.9	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	33.0	72.0	17.0	45.5	16.1	88.9	37.0	25.5
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	26.5	48.0	10.5	38.0	12.0	* 63	30.0	* 19
Max Q Clear Time (g_c+I1), s	28.5	66.5	11.2	31.9	9.3	43.0	32.0	20.5
Green Ext Time (p_c), s	0.0	0.0	0.0	1.3	0.0	14.9	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	206.8
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1565	1080	180	1746	0	0	0	0	100	0	60
Future Volume (veh/h)	0	1565	1080	180	1746	0	0	0	0	100	0	60
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	1597	1102	184	1782	0				102	0	61
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2400	1311	307	3408	0				299	0	137
Arrive On Green	0.00	0.47	0.47	0.09	0.67	0.00				0.09	0.00	0.09
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	1597	1102	184	1782	0				102	0	61
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	12.6	18.1	2.7	9.3	0.0				1.5	0.0	1.9
Cycle Q Clear(g_c), s	0.0	12.6	18.1	2.7	9.3	0.0				1.5	0.0	1.9
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2400	1311	307	3408	0				299	0	137
V/C Ratio(X)	0.00	0.67	0.84	0.60	0.52	0.00				0.34	0.00	0.45
Avail Cap(c_a), veh/h	0	2400	1311	330	3408	0				468	0	215
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.7	12.2	23.0	4.5	0.0				22.5	0.0	22.8
Incr Delay (d2), s/veh	0.0	1.5	6.6	1.6	0.6	0.0				0.3	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
%ile BackOfQ(50%),veh/ln	0.0	4.1	5.6	1.1	2.0	0.0				0.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	12.2	18.8	24.6	5.0	0.0				22.8	0.0	23.6
LnGrp LOS	A	B	B	C	A	A				C	A	C
Approach Vol, veh/h		2699			1966						163	
Approach Delay, s/veh		14.9			6.9						23.1	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.4	31.4		10.6		41.8
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 5	24.3		7.1		35.0
Max Q Clear Time (g_c+I1), s	4.7	20.1		3.9		11.3
Green Ext Time (p_c), s	0.0	2.8		0.1		6.5

Intersection Summary	
HCM 6th Ctrl Delay	11.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	360	1134	170	0	965	120	800	230	70	160	0	510
Future Volume (veh/h)	360	1134	170	0	965	120	800	230	70	160	0	510
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	367	1157	0	0	985	122	816	235	71	163	0	520
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	442	2016		0	1938	582	919	322	95	203	0	0
Arrive On Green	0.13	0.57	0.00	0.00	0.38	0.38	0.27	0.12	0.12	0.11	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1532	3456	2706	798	1781	163	
Grp Volume(v), veh/h	367	1157	0	0	985	122	816	152	154	163	44.7	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1532	1728	1777	1727	1781	D	
Q Serve(g_s), s	9.9	19.9	0.0	0.0	14.1	5.1	21.6	7.9	8.2	8.5		
Cycle Q Clear(g_c), s	9.9	19.9	0.0	0.0	14.1	5.1	21.6	7.9	8.2	8.5		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.46	1.00		
Lane Grp Cap(c), veh/h	442	2016		0	1938	582	919	212	206	203		
V/C Ratio(X)	0.83	0.57		0.00	0.51	0.21	0.89	0.72	0.75	0.80		
Avail Cap(c_a), veh/h	574	2016		0	1938	582	2109	653	635	318		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	40.5	13.2	0.0	0.0	22.7	19.9	33.6	40.4	40.5	41.1		
Incr Delay (d2), s/veh	6.2	1.2	0.0	0.0	1.0	0.8	1.2	1.7	2.0	3.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.5	7.7	0.0	0.0	5.7	1.9	9.0	3.5	3.6	3.9		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.7	14.4	0.0	0.0	23.7	20.7	34.8	42.1	42.6	44.7		
LnGrp LOS	D	B		A	C	C	C	D	D	D		
Approach Vol, veh/h		1524	A		1107			1122				
Approach Delay, s/veh		22.2			23.3			36.9				
Approach LOS		C			C			D				

Timer - Assigned Phs	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	60.8	31.4		17.9	42.9	17.0	17.4
Change Period (Y+Rc), s	6.8	6.1		* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	54.0	58.1		* 16	32.5	17.0	35.0
Max Q Clear Time (g_c+I1), s	21.9	23.6		11.9	16.1	10.5	10.2
Green Ext Time (p_c), s	6.8	1.7		0.3	4.8	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	27.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1509	188	264	1501	67	144	100	280	86	132	27
Future Volume (veh/h)	80	1509	188	264	1501	67	144	100	280	86	132	27
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	1556	194	272	1547	69	148	103	289	89	136	28
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1437	176	232	1869	872	131	374	305	77	259	53
Arrive On Green	0.02	0.15	0.15	0.13	0.53	0.53	0.07	0.20	0.20	0.04	0.17	0.17
Sat Flow, veh/h	1781	3170	389	1781	3554	1528	1781	1870	1526	1781	1492	307
Grp Volume(v), veh/h	82	860	890	272	1547	69	148	103	289	89	0	164
Grp Sat Flow(s),veh/h/ln	1781	1777	1782	1781	1777	1528	1781	1870	1526	1781	0	1799
Q Serve(g_s), s	6.9	68.0	68.0	19.5	54.8	3.1	11.0	7.0	28.0	6.5	0.0	12.4
Cycle Q Clear(g_c), s	6.9	68.0	68.0	19.5	54.8	3.1	11.0	7.0	28.0	6.5	0.0	12.4
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	102	806	808	232	1869	872	131	374	305	77	0	312
V/C Ratio(X)	0.80	1.07	1.10	1.17	0.83	0.08	1.13	0.28	0.95	1.15	0.00	0.53
Avail Cap(c_a), veh/h	119	806	808	232	1869	872	131	374	305	77	0	318
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	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	72.7	63.8	63.8	65.3	29.8	14.6	69.5	50.8	59.2	71.8	0.0	56.4
Incr Delay (d2), s/veh	28.0	51.5	63.1	114.5	4.4	0.2	118.9	0.4	37.6	149.7	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.1	44.2	46.9	16.2	24.3	1.1	9.3	3.4	14.0	6.2	0.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.8	115.3	126.9	179.7	34.2	14.7	188.4	51.2	96.8	221.4	0.0	57.9
LnGrp LOS	F	F	F	F	C	B	F	D	F	F	A	E
Approach Vol, veh/h		1832			1888			540			253	
Approach Delay, s/veh		120.3			54.5			113.2			115.4	
Approach LOS		F			D			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.0	74.0	17.0	33.0	15.1	84.9	13.0	37.0
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	9.5	68.0	11.0	* 27	10.0	77.5	6.5	30.0
Max Q Clear Time (g_c+I1), s	21.5	70.0	13.0	14.4	8.9	56.8	8.5	30.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.6	0.0	12.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	91.6
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	1643	113	290	1500	81	372	334	407	202	306	50
Future Volume (veh/h)	110	1643	113	290	1500	81	372	334	407	202	306	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	1677	115	296	1531	83	380	341	415	206	312	51
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	89	1537	104	184	1812	900	344	567	467	137	296	48
Arrive On Green	0.05	0.46	0.46	0.10	0.51	0.51	0.19	0.30	0.30	0.08	0.19	0.19
Sat Flow, veh/h	1781	3367	228	1781	3554	1527	1781	1870	1539	1781	1558	255
Grp Volume(v), veh/h	112	877	915	296	1531	83	380	341	415	206	0	363
Grp Sat Flow(s),veh/h/ln	1781	1777	1818	1781	1777	1527	1781	1870	1539	1781	0	1812
Q Serve(g_s), s	7.5	68.5	68.5	15.5	55.6	3.6	29.0	23.3	38.6	11.5	0.0	28.5
Cycle Q Clear(g_c), s	7.5	68.5	68.5	15.5	55.6	3.6	29.0	23.3	38.6	11.5	0.0	28.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.14
Lane Grp Cap(c), veh/h	89	811	830	184	1812	900	344	567	467	137	0	344
V/C Ratio(X)	1.26	1.08	1.10	1.61	0.84	0.09	1.10	0.60	0.89	1.51	0.00	1.05
Avail Cap(c_a), veh/h	89	811	830	184	1812	900	344	567	467	137	0	344
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	0.98	0.00	0.98
Uniform Delay (d), s/veh	71.3	40.8	40.8	67.3	31.6	13.5	60.5	44.5	49.8	69.2	0.0	60.8
Incr Delay (d2), s/veh	179.6	55.6	63.0	297.4	5.0	0.2	79.3	1.8	18.6	262.2	0.0	63.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	42.0	44.7	22.3	24.8	1.3	20.7	11.2	17.3	15.2	0.0	19.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	250.8	96.4	103.8	364.7	36.7	13.8	139.8	46.3	68.4	331.5	0.0	123.7
LnGrp LOS	F	F	F	F	D	B	F	D	E	F	A	F
Approach Vol, veh/h		1904			1910			1136			569	
Approach Delay, s/veh		109.0			86.5			85.6			198.9	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	75.0	35.0	35.5	14.0	83.0	18.0	52.5
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	15.5	52.0	29.0	* 29	7.5	60.0	11.5	45.0
Max Q Clear Time (g_c+I1), s	17.5	70.5	31.0	30.5	9.5	57.6	13.5	40.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	2.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	105.7
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

APPENDIX G

K&D FACTORS DEFINITIONS

PEAK HOUR VOLUME DATA

Peak hour volume data consists of hourly volume relationships and data location. The hourly volumes are expressed as a percentage of the Annual Average Daily Traffic (AADT). The percentages are shown for both the AM and the PM peak periods.

The principle data described here are the K factor, the D factor and their product (KD). The K factor is the percentage of AADT during the peak hour for both directions of travel. The D factor is the percentage of the peak hour travel in the peak direction. KD multiplied with the AADT gives the one way peak period directional flow rate or the design hourly volume (DHV). The design hourly volume is used for either Operational Analysis or Design Analysis. Refer to the 2000 Highway Capacity Manual for more details.

Following is a glossary of terms used in this listing of peak hour volume data:

Dir	Indicates direction of travel for peak volume
AADT	Annual Average Daily Traffic in vehicles per day (vpd).
AM Peak	Represents the morning peak period for traffic analysis
CS	Control Station Number, Caltrans identification number for monitoring site.
CO	County abbreviation used by Caltrans
D	D factor. The percentage of traffic in the peak direction during the peak hour. Values in this book are derived by dividing the measured PHV by the sum of both directions of travel during the peak hour.
DAY	Day of week for the peak volume.
DDHV	The directional design hour volume, in vehicles per hour (vph) DDHV=AADTxKxD. See equation (8-1) on page 8-11 of the 2000 Highway Capacity Manual.
DI	Caltrans has twelve transportation districts statewide. This abbreviation identifies the district in which the count station is located.
HR	The ending time for the peak hour volume listed. The volume observed fro 1 to 2 would be recorded as 2.

K	The percentage of the AADT in both directions during the peak hour. Values in this table are derived by dividing the measured 2-way PHV by the AADT.
KD	The product of K and D. The percentage of AADT in the peak direction during the peak hour. Values in this table are derived by dividing the measured 1-way PHV by the AADT.
LEG	For traffic counting purposes, a highway intersection or interchange is assigned two legs according to increasing postmiles (route direction) and with a postmile reference at the center of the intersection or interchange. The volume of traffic on each leg is denoted by an A, B or O. A = ahead leg, B = back leg, and O – traffic volume being same for both back and ahead legs.
MNTH	The month that the peak volume occurred.
PHV	Peak Hour Volume in the peak direction. A one way volume in vehicles per hour (vph) as used here. The PHV is analogous to the DDHV as used for design purposes.
PM	The Post Mile is the mileage measured from the county line, or from the beginning of a route. Each postmile along a route in a county is a unique location on the state highway system.
PM Peak	Represents the afternoon peak period for traffic analysis.
PRE	The postmile may have a prefix like R, T, L, M, etc. When a length of highway is changed due to construction or realigment, new postmile values are assigned. To distinguish the new values from the old, an alpha code is prefixed to the new postmile.
RTE	The state highway route number
YR	The year when the count was made. Traffic counting is on a 3-year cycle.

APPENDIX H

LONG-TERM ANALYSIS WORKSHEETS

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	409	226	30	449	165	54
Future Volume (veh/h)	409	226	30	449	165	54
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	481	266	35	528	194	64
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1052	578	69	2239	258	229
Arrive On Green	0.48	0.48	0.04	0.63	0.14	0.14
Sat Flow, veh/h	2272	1197	1781	3647	1781	1585
Grp Volume(v), veh/h	392	355	35	528	194	64
Grp Sat Flow(s),veh/h/ln	1777	1599	1781	1777	1781	1585
Q Serve(g_s), s	7.0	7.1	0.9	3.1	5.0	1.7
Cycle Q Clear(g_c), s	7.0	7.1	0.9	3.1	5.0	1.7
Prop In Lane		0.75	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	858	772	69	2239	258	229
V/C Ratio(X)	0.46	0.46	0.51	0.24	0.75	0.28
Avail Cap(c_a), veh/h	858	772	186	2239	334	298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.2	8.2	22.6	3.9	19.7	18.3
Incr Delay (d2), s/veh	1.8	2.0	5.6	0.2	6.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	2.3	0.5	0.7	2.3	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.0	10.2	28.2	4.1	26.5	18.9
LnGrp LOS	A	B	C	A	C	B
Approach Vol, veh/h	747			563	258	
Approach Delay, s/veh	10.1			5.6	24.6	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.1	28.9				36.0	11.9
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 5	20.0				30.2	9.0
Max Q Clear Time (g_c+I1), s	2.9	9.1				5.1	7.0
Green Ext Time (p_c), s	0.0	3.7				3.7	0.2

Intersection Summary	
HCM 6th Ctrl Delay	10.9
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1715	60	90	1654	160	90	314	80	200	223	75
Future Volume (veh/h)	91	1715	60	90	1654	160	90	314	80	200	223	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	1786	62	94	1723	167	94	327	83	208	232	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	1976	68	110	1843	176	103	464	116	244	240	81
Arrive On Green	0.06	0.56	0.56	0.12	1.00	1.00	0.06	0.17	0.17	0.07	0.18	0.18
Sat Flow, veh/h	1781	3500	121	1781	3271	312	1781	2790	695	3456	1323	445
Grp Volume(v), veh/h	95	902	946	94	923	967	94	206	204	208	0	310
Grp Sat Flow(s),veh/h/ln	1781	1777	1843	1781	1777	1806	1781	1777	1709	1728	0	1768
Q Serve(g_s), s	10.0	85.2	87.3	9.8	0.0	0.0	10.0	20.8	21.5	11.3	0.0	33.1
Cycle Q Clear(g_c), s	10.0	85.2	87.3	9.8	0.0	0.0	10.0	20.8	21.5	11.3	0.0	33.1
Prop In Lane	1.00		0.07	1.00		0.17	1.00		0.41	1.00		0.25
Lane Grp Cap(c), veh/h	112	1003	1041	110	1001	1018	103	295	284	244	0	321
V/C Ratio(X)	0.85	0.90	0.91	0.85	0.92	0.95	0.91	0.70	0.72	0.85	0.00	0.97
Avail Cap(c_a), veh/h	117	1003	1041	112	1001	1018	103	295	284	275	0	321
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	88.1	36.6	37.0	82.4	0.0	0.0	89.0	74.7	75.0	87.3	0.0	77.2
Incr Delay (d2), s/veh	39.7	12.5	13.1	43.4	14.9	18.6	61.1	7.0	8.5	20.1	0.0	40.8
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	5.9	40.3	42.9	5.6	4.1	5.2	6.4	10.2	10.2	5.8	0.0	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.8	49.1	50.2	125.8	14.9	18.6	150.1	81.8	83.5	107.4	0.0	118.0
LnGrp LOS	F	D	D	F	B	B	F	F	F	F	A	F
Approach Vol, veh/h		1943			1984			504			518	
Approach Delay, s/veh		53.5			21.9			95.2			113.8	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	113.8	17.0	41.0	18.5	113.5	19.9	38.1
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	11.3	107.1	11.0	34.5	12.5	106.5	15.1	29.9
Max Q Clear Time (g_c+I1), s	11.8	89.3	12.0	35.1	12.0	2.0	13.3	23.5
Green Ext Time (p_c), s	0.0	13.0	0.0	0.0	0.0	34.1	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	51.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1572	278	307	1542	90	210	114	330	65	163	31
Future Volume (veh/h)	77	1572	278	307	1542	90	210	114	330	65	163	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	1621	287	316	1590	93	216	118	340	67	168	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	1412	242	267	2007	918	188	87	251	61	215	41
Arrive On Green	0.07	0.62	0.62	0.15	0.56	0.56	0.11	0.21	0.21	0.03	0.14	0.14
Sat Flow, veh/h	1781	3015	516	1781	3554	1529	1781	413	1190	1781	1513	288
Grp Volume(v), veh/h	79	932	976	316	1590	93	216	0	458	67	0	200
Grp Sat Flow(s),veh/h/ln	1781	1777	1753	1781	1777	1529	1781	0	1603	1781	0	1801
Q Serve(g_s), s	8.3	89.0	89.0	28.5	66.9	4.9	20.0	0.0	40.0	6.5	0.0	20.4
Cycle Q Clear(g_c), s	8.3	89.0	89.0	28.5	66.9	4.9	20.0	0.0	40.0	6.5	0.0	20.4
Prop In Lane	1.00		0.29	1.00		1.00	1.00		0.74	1.00		0.16
Lane Grp Cap(c), veh/h	95	832	821	267	2007	918	188	0	338	61	0	256
V/C Ratio(X)	0.83	1.12	1.19	1.18	0.79	0.10	1.15	0.00	1.36	1.10	0.00	0.78
Avail Cap(c_a), veh/h	112	832	821	267	2007	918	188	0	338	61	0	261
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	87.4	35.8	35.8	80.8	32.6	16.3	85.0	0.0	75.0	91.8	0.0	78.7
Incr Delay (d2), s/veh	34.2	69.5	96.9	113.7	3.3	0.2	112.6	0.0	178.8	144.7	0.0	13.8
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	4.7	51.5	57.1	21.6	29.8	1.9	15.2	0.0	33.3	5.5	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	121.5	105.4	132.7	194.5	35.9	16.5	197.6	0.0	253.8	236.5	0.0	92.5
LnGrp LOS	F	F	F	F	D	B	F	A	F	F	A	F
Approach Vol, veh/h		1987			1999			674			267	
Approach Delay, s/veh		119.4			60.0			235.8			128.6	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	95.0	26.0	34.0	16.7	113.3	13.0	47.0
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	28.5	89.0	20.0	* 28	11.9	105.6	6.5	40.0
Max Q Clear Time (g_c+I1), s	30.5	91.0	22.0	22.4	10.3	68.9	8.5	42.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	18.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	111.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

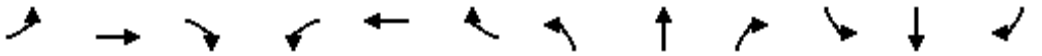
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1572	0	0	1787	0	0
Future Vol, veh/h	1572	0	0	1787	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1709	0	0	1942	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	855
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	259
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	259
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1557	125	980	1787	369	90	111	260	240	184	45
Future Volume (veh/h)	40	1557	125	980	1787	369	90	111	260	240	184	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	1674	134	1054	1922	397	97	119	280	258	198	48
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	1734	578	1077	3153	1090	118	221	682	296	323	262
Arrive On Green	0.03	0.34	0.34	0.31	0.62	0.62	0.03	0.12	0.12	0.09	0.17	0.17
Sat Flow, veh/h	1781	5106	1542	3456	5106	1545	3456	1870	1585	3456	1870	1519
Grp Volume(v), veh/h	43	1674	134	1054	1922	397	97	119	280	258	198	48
Grp Sat Flow(s),veh/h/ln	1781	1702	1542	1728	1702	1545	1728	1870	1585	1728	1870	1519
Q Serve(g_s), s	4.6	61.2	11.3	57.4	43.9	19.5	5.3	11.4	22.5	14.0	18.6	5.1
Cycle Q Clear(g_c), s	4.6	61.2	11.3	57.4	43.9	19.5	5.3	11.4	22.5	14.0	18.6	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	55	1734	578	1077	3153	1090	118	221	682	296	323	262
V/C Ratio(X)	0.78	0.97	0.23	0.98	0.61	0.36	0.82	0.54	0.41	0.87	0.61	0.18
Avail Cap(c_a), veh/h	94	1734	578	1077	3153	1090	118	221	682	346	345	280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	91.4	61.6	40.8	64.8	22.3	11.3	91.2	78.8	37.5	85.8	72.8	67.2
Incr Delay (d2), s/veh	20.5	14.8	0.9	19.6	0.7	0.8	34.9	2.6	0.4	18.8	2.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	28.9	4.6	28.3	18.0	7.1	3.0	5.7	9.3	7.1	9.3	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.9	76.5	41.7	84.4	23.0	12.0	126.1	81.4	37.9	104.6	75.7	67.5
LnGrp LOS	F	E	D	F	C	B	F	F	D	F	E	E
Approach Vol, veh/h		1851			3373			496			504	
Approach Delay, s/veh		74.8			40.9			65.6			89.7	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	65.7	71.5	13.0	39.8	12.9	124.3	23.3	29.5
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	59.2	62.3	6.5	35.0	10.0	* 1.1E2	19.0	* 23
Max Q Clear Time (g_c+I1), s	59.4	63.2	7.3	20.6	6.6	45.9	16.0	24.5
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	33.4	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	56.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	730	930	180	2000	0	0	0	0	190	0	130
Future Volume (veh/h)	0	730	930	180	2000	0	0	0	0	190	0	130
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	753	959	186	2062	0				196	0	134
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2132	1165	319	3186	0				408	0	187
Arrive On Green	0.00	0.42	0.42	0.09	0.62	0.00				0.12	0.00	0.12
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	753	959	186	2062	0				196	0	134
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	5.0	15.3	2.6	12.7	0.0				2.7	0.0	4.1
Cycle Q Clear(g_c), s	0.0	5.0	15.3	2.6	12.7	0.0				2.7	0.0	4.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2132	1165	319	3186	0				408	0	187
V/C Ratio(X)	0.00	0.35	0.82	0.58	0.65	0.00				0.48	0.00	0.72
Avail Cap(c_a), veh/h	0	2132	1165	401	3186	0				408	0	187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.9	12.9	21.8	5.9	0.0				20.6	0.0	21.2
Incr Delay (d2), s/veh	0.0	0.5	6.6	0.6	1.0	0.0				0.3	0.0	10.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.6	4.9	1.0	3.0	0.0				1.0	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.4	19.6	22.4	7.0	0.0				20.9	0.0	32.0
LnGrp LOS	A	B	B	C	A	A				C	A	C
Approach Vol, veh/h		1712			2248						330	
Approach Delay, s/veh		15.5			8.2						25.4	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.3	27.7		12.0		38.0
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 5.8	19.7		5.9		31.2
Max Q Clear Time (g_c+I1), s	4.6	17.3		6.1		14.7
Green Ext Time (p_c), s	0.0	1.1		0.0		7.1

Intersection Summary	
HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	580	100	0	1150	140	930	330	50	130	0	540
Future Volume (veh/h)	290	580	100	0	1150	140	930	330	50	130	0	540
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	302	604	0	0	1198	146	969	344	52	135	0	562
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	436	1838		0	1691	506	1076	526	79	200	0	0
Arrive On Green	0.13	0.52	0.00	0.00	0.33	0.33	0.31	0.17	0.17	0.11	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1528	3456	3080	460	1781	135	
Grp Volume(v), veh/h	302	604	0	0	1198	146	969	197	199	135	45.7	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1528	1728	1777	1764	1781	D	
Q Serve(g_s), s	8.0	9.4	0.0	0.0	19.5	6.7	25.5	9.8	10.0	6.9		
Cycle Q Clear(g_c), s	8.0	9.4	0.0	0.0	19.5	6.7	25.5	9.8	10.0	6.9		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.26	1.00		
Lane Grp Cap(c), veh/h	436	1838		0	1691	506	1076	304	301	200		
V/C Ratio(X)	0.69	0.33		0.00	0.71	0.29	0.90	0.65	0.66	0.67		
Avail Cap(c_a), veh/h	498	1838		0	1691	506	1921	654	649	221		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.8	13.4	0.0	0.0	27.8	23.5	31.4	36.8	36.9	40.6		
Incr Delay (d2), s/veh	2.5	0.5	0.0	0.0	2.5	1.4	1.3	0.9	0.9	5.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.5	3.7	0.0	0.0	8.1	2.6	10.5	4.3	4.4	3.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.4	13.8	0.0	0.0	30.4	25.0	32.6	37.6	37.8	45.7		
LnGrp LOS	D	B		A	C	C	C	D	D	D		
Approach Vol, veh/h		906	A		1344			1365				
Approach Delay, s/veh		23.3			29.8			34.1				
Approach LOS		C			C			C				

Timer - Assigned Phs	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	56.0	35.7		17.7	38.3	16.8	22.4
Change Period (Y+Rc), s	6.8	6.1		* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	49.2	52.9		* 14	29.8	11.8	35.0
Max Q Clear Time (g_c+I1), s	11.4	27.5		10.0	21.5	8.9	12.0
Green Ext Time (p_c), s	3.0	2.1		0.2	4.1	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1269	390	50	789	392	110
Future Volume (veh/h)	1269	390	50	789	392	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1350	415	53	839	417	117
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1439	424	73	2259	435	387
Arrive On Green	0.54	0.54	0.04	0.64	0.24	0.24
Sat Flow, veh/h	2774	790	1781	3647	1781	1585
Grp Volume(v), veh/h	875	890	53	839	417	117
Grp Sat Flow(s),veh/h/ln	1777	1693	1781	1777	1781	1585
Q Serve(g_s), s	40.4	46.1	2.6	10.1	20.8	5.4
Cycle Q Clear(g_c), s	40.4	46.1	2.6	10.1	20.8	5.4
Prop In Lane		0.47	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	954	909	73	2259	435	387
V/C Ratio(X)	0.92	0.98	0.73	0.37	0.96	0.30
Avail Cap(c_a), veh/h	954	909	101	2259	435	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	20.3	42.7	7.8	33.5	27.7
Incr Delay (d2), s/veh	14.9	25.1	15.2	0.5	32.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.9	22.6	1.5	3.6	12.6	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	33.9	45.4	57.8	8.3	65.9	28.2
LnGrp LOS	C	D	E	A	E	C
Approach Vol, veh/h	1765			892	534	
Approach Delay, s/veh	39.7			11.2	57.6	
Approach LOS	D			B	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.9	54.1				63.0	27.0
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 5.1	46.9				57.2	22.0
Max Q Clear Time (g_c+I1), s	4.6	48.1				12.1	22.8
Green Ext Time (p_c), s	0.0	0.0				7.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	34.8
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	1665	70	180	1441	249	160	416	60	273	584	102
Future Volume (veh/h)	146	1665	70	180	1441	249	160	416	60	273	584	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1699	71	184	1470	254	163	424	61	279	596	104
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	1753	73	147	1370	232	134	493	70	721	451	79
Arrive On Green	0.14	0.50	0.50	0.17	0.90	0.90	0.08	0.16	0.16	0.21	0.29	0.29
Sat Flow, veh/h	1781	3471	144	1781	3028	513	1781	3101	443	3456	1543	269
Grp Volume(v), veh/h	149	865	905	184	850	874	163	241	244	279	0	700
Grp Sat Flow(s),veh/h/ln	1781	1777	1838	1781	1777	1764	1781	1777	1767	1728	0	1812
Q Serve(g_s), s	15.8	93.9	96.1	16.5	90.5	90.5	15.0	26.5	26.9	13.9	0.0	58.5
Cycle Q Clear(g_c), s	15.8	93.9	96.1	16.5	90.5	90.5	15.0	26.5	26.9	13.9	0.0	58.5
Prop In Lane	1.00		0.08	1.00		0.29	1.00		0.25	1.00		0.15
Lane Grp Cap(c), veh/h	240	897	928	147	804	798	134	282	281	721	0	530
V/C Ratio(X)	0.62	0.96	0.98	1.25	1.06	1.09	1.22	0.86	0.87	0.39	0.00	1.32
Avail Cap(c_a), veh/h	240	897	928	147	804	798	134	439	436	721	0	530
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	81.7	47.7	48.3	83.5	9.5	9.5	92.5	81.9	82.1	68.1	0.0	70.8
Incr Delay (d2), s/veh	4.8	22.5	24.1	157.3	48.1	60.9	148.8	9.7	10.9	0.3	0.0	157.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	47.1	50.1	13.6	14.9	17.6	12.5	13.0	13.2	6.3	0.0	50.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.4	70.2	72.4	240.8	57.6	70.4	241.3	91.6	93.0	68.5	0.0	227.8
LnGrp LOS	F	E	E	F	F	F	F	F	F	E	A	F
Approach Vol, veh/h		1919			1908			648			979	
Approach Delay, s/veh		72.5			81.1			129.8			182.4	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	108.0	21.5	65.0	34.0	97.0	48.2	38.3
Change Period (Y+Rc), s	6.5	6.5	6.5	* 6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	16.5	84.5	15.0	* 59	10.5	90.5	23.6	49.4
Max Q Clear Time (g_c+I1), s	19.5	98.1	17.0	60.5	17.8	92.5	15.9	28.9
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.9

Intersection Summary	
HCM 6th Ctrl Delay	102.1
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	1725	170	347	1515	120	460	379	452	189	366	72
Future Volume (veh/h)	122	1725	170	347	1515	120	460	379	452	189	366	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	124	1760	173	354	1546	122	469	387	461	193	373	73
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1443	139	218	1803	882	267	247	294	120	366	72
Arrive On Green	0.02	0.15	0.15	0.16	0.67	0.67	0.15	0.32	0.32	0.07	0.24	0.24
Sat Flow, veh/h	1781	3261	314	1781	3554	1527	1781	765	911	1781	1510	295
Grp Volume(v), veh/h	124	942	991	354	1546	122	469	0	848	193	0	446
Grp Sat Flow(s),veh/h/ln	1781	1777	1799	1781	1777	1527	1781	0	1676	1781	0	1805
Q Serve(g_s), s	11.5	88.5	88.5	24.5	67.1	5.0	30.0	0.0	64.5	13.5	0.0	48.5
Cycle Q Clear(g_c), s	11.5	88.5	88.5	24.5	67.1	5.0	30.0	0.0	64.5	13.5	0.0	48.5
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.54	1.00		0.16
Lane Grp Cap(c), veh/h	102	786	796	218	1803	882	267	0	540	120	0	438
V/C Ratio(X)	1.21	1.20	1.24	1.62	0.86	0.14	1.76	0.00	1.57	1.61	0.00	1.02
Avail Cap(c_a), veh/h	102	786	796	218	1803	882	267	0	540	120	0	438
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.83	0.00	0.83
Uniform Delay (d), s/veh	98.1	85.4	85.4	83.7	26.9	12.6	85.0	0.0	67.8	93.3	0.0	75.8
Incr Delay (d2), s/veh	156.1	101.4	120.7	300.1	5.5	0.3	354.9	0.0	265.1	302.0	0.0	44.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	65.0	70.0	29.3	27.4	1.8	40.3	0.0	67.5	16.4	0.0	28.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	254.2	186.8	206.1	383.8	32.4	13.0	439.9	0.0	332.8	395.3	0.0	119.8
LnGrp LOS	F	F	F	F	C	B	F	A	F	F	A	F
Approach Vol, veh/h		2057			2022			1317			639	
Approach Delay, s/veh		200.2			92.8			370.9			203.0	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.0	95.0	36.0	55.5	18.0	108.0	20.0	71.5
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	24.5	72.0	30.0	* 49	11.5	85.0	13.5	64.0
Max Q Clear Time (g_c+I1), s	26.5	90.5	32.0	50.5	13.5	69.1	15.5	66.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	10.6	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	201.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

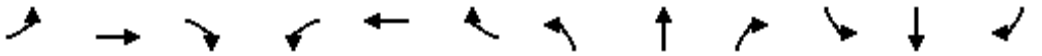
Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1725	0	0	1945	0	0
Future Vol, veh/h	1725	0	0	1945	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1875	0	0	2114	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	938
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	228
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	228
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	2387	250	1180	1945	370	235	325	1170	1258	441	42
Future Volume (veh/h)	90	2387	250	1180	1945	370	235	325	1170	1258	441	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	2436	255	1204	1985	378	240	332	1194	1284	450	43
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	2030	721	769	2842	1192	233	220	539	726	491	403
Arrive On Green	0.08	0.53	0.53	0.22	0.56	0.56	0.07	0.12	0.12	0.21	0.26	0.26
Sat Flow, veh/h	1781	5106	1546	3456	5106	1543	3456	1870	1585	3456	1870	1535
Grp Volume(v), veh/h	92	2436	255	1204	1985	378	240	332	1194	1284	450	43
Grp Sat Flow(s),veh/h/ln	1781	1702	1546	1728	1702	1543	1728	1870	1585	1728	1870	1535
Q Serve(g_s), s	10.2	79.5	17.7	44.5	56.4	15.1	13.5	23.5	23.5	42.0	46.7	4.3
Cycle Q Clear(g_c), s	10.2	79.5	17.7	44.5	56.4	15.1	13.5	23.5	23.5	42.0	46.7	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	109	2030	721	769	2842	1192	233	220	539	726	491	403
V/C Ratio(X)	0.85	1.20	0.35	1.57	0.70	0.32	1.03	1.51	2.22	1.77	0.92	0.11
Avail Cap(c_a), veh/h	151	2030	721	769	2842	1192	233	220	539	726	491	403
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	91.0	47.1	26.1	77.8	32.2	7.2	93.2	88.3	66.0	79.0	71.6	56.0
Incr Delay (d2), s/veh	25.8	95.1	1.4	260.0	1.2	0.6	66.6	251.9	553.0	351.8	22.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	49.9	6.6	47.7	23.8	5.2	8.3	26.9	110.4	54.3	25.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	116.7	142.3	27.5	337.7	33.4	7.8	159.9	340.2	619.0	430.8	93.7	56.1
LnGrp LOS	F	F	C	F	C	A	F	F	F	F	F	E
Approach Vol, veh/h		2783			3567			1766			1777	
Approach Delay, s/veh		130.9			133.4			504.2			336.4	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	51.0	87.0	20.0	59.5	19.2	118.8	49.0	30.5
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	44.5	63.0	13.5	52.0	17.0	* 91	42.0	* 24
Max Q Clear Time (g_c+I1), s	46.5	81.5	15.5	48.7	12.2	58.4	44.0	25.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.1	22.6	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		235.3
HCM 6th LOS		F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↱↱	↰↰	↑↑↑					↰↰		↱
Traffic Volume (veh/h)	0	1720	1160	200	1920	0	0	0	0	130	0	70
Future Volume (veh/h)	0	1720	1160	200	1920	0	0	0	0	130	0	70
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	1755	1184	204	1959	0				133	0	71
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2381	1301	312	3395	0				312	0	143
Arrive On Green	0.00	0.47	0.47	0.09	0.66	0.00				0.09	0.00	0.09
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	1755	1184	204	1959	0				133	0	71
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	14.7	20.7	3.0	11.0	0.0				1.9	0.0	2.2
Cycle Q Clear(g_c), s	0.0	14.7	20.7	3.0	11.0	0.0				1.9	0.0	2.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2381	1301	312	3395	0				312	0	143
V/C Ratio(X)	0.00	0.74	0.91	0.65	0.58	0.00				0.43	0.00	0.50
Avail Cap(c_a), veh/h	0	2381	1301	328	3395	0				466	0	214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.4	13.0	23.2	4.8	0.0				22.7	0.0	22.8
Incr Delay (d2), s/veh	0.0	2.1	11.0	3.2	0.7	0.0				0.3	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.8	7.0	1.3	2.4	0.0				0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.5	24.0	26.4	5.5	0.0				23.0	0.0	23.8
LnGrp LOS	A	B	C	C	A	A				C	A	C
Approach Vol, veh/h		2939			2163						204	
Approach Delay, s/veh		17.8			7.5						23.3	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	31.3		10.8		41.8
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 5	24.3		7.1		35.0
Max Q Clear Time (g_c+I1), s	15.0	22.7		4.2		13.0
Green Ext Time (p_c), s	0.0	1.3		0.1		7.3

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	1300	180	0	1100	140	880	250	80	190	0	590
Future Volume (veh/h)	420	1300	180	0	1100	140	880	250	80	190	0	590
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	429	1327	0	0	1122	143	898	255	82	194	0	602
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	497	1956		0	1780	533	1000	341	107	227	0	0
Arrive On Green	0.14	0.55	0.00	0.00	0.35	0.35	0.29	0.13	0.13	0.13	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1529	3456	2661	836	1781	194	
Grp Volume(v), veh/h	429	1327	0	0	1122	143	898	168	169	194	54.2	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1529	1728	1777	1720	1781	D	
Q Serve(g_s), s	11.9	26.3	0.0	0.0	18.0	6.6	24.5	8.9	9.3	10.5		
Cycle Q Clear(g_c), s	11.9	26.3	0.0	0.0	18.0	6.6	24.5	8.9	9.3	10.5		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.49	1.00		
Lane Grp Cap(c), veh/h	497	1956		0	1780	533	1000	228	221	227		
V/C Ratio(X)	0.86	0.68		0.00	0.63	0.27	0.90	0.74	0.76	0.85		
Avail Cap(c_a), veh/h	557	1956		0	1780	533	2047	634	614	309		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	41.0	15.8	0.0	0.0	26.7	23.0	33.5	41.2	41.3	41.9		
Incr Delay (d2), s/veh	11.1	1.9	0.0	0.0	1.7	1.2	1.2	1.8	2.1	12.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.8	10.4	0.0	0.0	7.4	2.5	10.2	4.0	4.0	5.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	17.7	0.0	0.0	28.4	24.2	34.7	42.9	43.4	54.2		
LnGrp LOS	D	B		A	C	C	C	D	D	D		
Approach Vol, veh/h		1756	A		1265			1235				
Approach Delay, s/veh		26.1			27.9			37.0				
Approach LOS		C			C			D				

Timer - Assigned Phs	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	60.8	34.5		19.8	41.0	18.6	18.7
Change Period (Y+Rc), s	6.8	6.1		* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	54.0	58.1		* 16	32.5	17.0	35.0
Max Q Clear Time (g_c+I1), s	28.3	26.5		13.9	20.0	12.5	11.3
Green Ext Time (p_c), s	7.9	1.9		0.2	4.9	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

APPENDIX I

LONG-TERM + PROJECT ANALYSIS WORKSHEETS

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	409	231	30	451	167	54
Future Volume (veh/h)	409	231	30	451	167	54
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	481	272	35	531	196	64
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1041	585	69	2236	260	231
Arrive On Green	0.48	0.48	0.04	0.63	0.15	0.15
Sat Flow, veh/h	2253	1213	1781	3647	1781	1585
Grp Volume(v), veh/h	395	358	35	531	196	64
Grp Sat Flow(s),veh/h/ln	1777	1596	1781	1777	1781	1585
Q Serve(g_s), s	7.1	7.2	0.9	3.1	5.1	1.7
Cycle Q Clear(g_c), s	7.1	7.2	0.9	3.1	5.1	1.7
Prop In Lane		0.76	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	856	769	69	2236	260	231
V/C Ratio(X)	0.46	0.47	0.51	0.24	0.75	0.28
Avail Cap(c_a), veh/h	856	769	186	2236	334	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	8.3	8.3	22.6	3.9	19.7	18.2
Incr Delay (d2), s/veh	1.8	2.0	5.6	0.3	7.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	2.3	0.5	0.7	2.4	0.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.1	10.3	28.2	4.1	26.7	18.9
LnGrp LOS	B	B	C	A	C	B
Approach Vol, veh/h	753			566	260	
Approach Delay, s/veh	10.2			5.6	24.8	
Approach LOS	B			A	C	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	7.1	28.9				36.0	12.0
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 5	20.0				30.2	9.0
Max Q Clear Time (g_c+I1), s	2.9	9.2				5.1	7.1
Green Ext Time (p_c), s	0.0	3.7				3.7	0.2

Intersection Summary	
HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

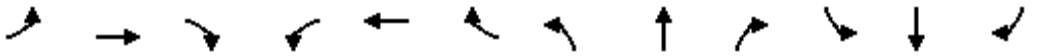
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1722	60	90	1661	165	90	314	85	205	223	75
Future Volume (veh/h)	91	1722	60	90	1661	165	90	314	85	205	223	75
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	95	1794	62	94	1730	172	94	327	89	214	232	78
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	1976	68	110	1838	180	103	451	121	250	240	81
Arrive On Green	0.06	0.56	0.56	0.12	1.00	1.00	0.06	0.16	0.16	0.07	0.18	0.18
Sat Flow, veh/h	1781	3500	120	1781	3263	319	1781	2744	732	3456	1323	445
Grp Volume(v), veh/h	95	905	951	94	928	974	94	209	207	214	0	310
Grp Sat Flow(s),veh/h/ln	1781	1777	1844	1781	1777	1805	1781	1777	1700	1728	0	1768
Q Serve(g_s), s	10.0	86.0	88.1	9.8	0.0	0.0	10.0	21.2	22.0	11.6	0.0	33.1
Cycle Q Clear(g_c), s	10.0	86.0	88.1	9.8	0.0	0.0	10.0	21.2	22.0	11.6	0.0	33.1
Prop In Lane	1.00		0.07	1.00		0.18	1.00		0.43	1.00		0.25
Lane Grp Cap(c), veh/h	112	1003	1041	110	1001	1017	103	292	280	250	0	321
V/C Ratio(X)	0.85	0.90	0.91	0.85	0.93	0.96	0.91	0.72	0.74	0.86	0.00	0.97
Avail Cap(c_a), veh/h	117	1003	1041	112	1001	1017	103	292	280	275	0	321
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	88.1	36.7	37.2	82.4	0.0	0.0	89.0	75.2	75.5	87.2	0.0	77.2
Incr Delay (d2), s/veh	39.7	12.9	13.5	43.4	15.5	19.7	61.1	8.1	9.9	21.2	0.0	40.8
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	5.9	40.7	43.4	5.6	4.3	5.6	6.4	10.4	10.5	6.0	0.0	18.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.8	49.6	50.7	125.8	15.5	19.7	150.1	83.3	85.4	108.3	0.0	118.0
LnGrp LOS	F	D	D	F	B	B	F	F	F	F	A	F
Approach Vol, veh/h		1951			1996			510			524	
Approach Delay, s/veh		54.0			22.8			96.5			114.0	
Approach LOS		D			C			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.2	113.8	17.0	41.0	18.5	113.5	20.2	37.8
Change Period (Y+Rc), s	6.5	6.5	6.0	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	11.9	107.1	11.0	34.5	12.5	106.5	15.1	29.9
Max Q Clear Time (g_c+I1), s	11.8	90.1	12.0	35.1	12.0	2.0	13.6	24.0
Green Ext Time (p_c), s	0.0	12.6	0.0	0.0	0.0	34.7	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	52.1
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary
3: San Marcos Blvd & Bent Ave

01/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1589	278	324	1549	92	215	114	340	70	163	31
Future Volume (veh/h)	77	1589	278	324	1549	92	215	114	340	70	163	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	1638	287	334	1597	95	222	118	351	72	168	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	1415	239	267	2007	918	188	85	252	61	215	41
Arrive On Green	0.07	0.62	0.62	0.15	0.56	0.56	0.11	0.21	0.21	0.03	0.14	0.14
Sat Flow, veh/h	1781	3021	511	1781	3554	1529	1781	403	1198	1781	1513	288
Grp Volume(v), veh/h	79	939	986	334	1597	95	222	0	469	72	0	200
Grp Sat Flow(s),veh/h/ln	1781	1777	1754	1781	1777	1529	1781	0	1601	1781	0	1801
Q Serve(g_s), s	8.3	89.0	89.0	28.5	67.5	5.0	20.0	0.0	40.0	6.5	0.0	20.4
Cycle Q Clear(g_c), s	8.3	89.0	89.0	28.5	67.5	5.0	20.0	0.0	40.0	6.5	0.0	20.4
Prop In Lane	1.00		0.29	1.00		1.00	1.00		0.75	1.00		0.16
Lane Grp Cap(c), veh/h	95	832	822	267	2007	918	188	0	337	61	0	256
V/C Ratio(X)	0.83	1.13	1.20	1.25	0.80	0.10	1.18	0.00	1.39	1.18	0.00	0.78
Avail Cap(c_a), veh/h	112	832	822	267	2007	918	188	0	337	61	0	261
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	87.4	35.8	35.8	80.8	32.7	16.3	85.0	0.0	75.0	91.8	0.0	78.7
Incr Delay (d2), s/veh	34.2	72.9	101.5	139.6	3.4	0.2	124.0	0.0	193.3	172.0	0.0	13.8
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	4.7	52.3	58.2	23.6	30.1	1.9	15.7	0.0	34.7	5.9	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	121.5	108.7	137.3	220.4	36.0	16.5	209.0	0.0	268.3	263.8	0.0	92.5
LnGrp LOS	F	F	F	F	D	B	F	A	F	F	A	F
Approach Vol, veh/h		2004			2026			691			272	
Approach Delay, s/veh		123.2			65.5			249.3			137.8	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	95.0	26.0	34.0	16.7	113.3	13.0	47.0
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	28.5	89.0	20.0	* 28	11.9	105.6	6.5	40.0
Max Q Clear Time (g_c+I1), s	30.5	91.0	22.0	22.4	10.3	69.5	8.5	42.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	18.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	118.1
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

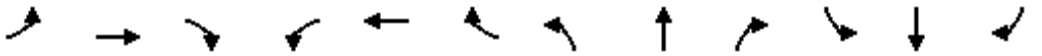
Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1572	96	0	1839	0	93
Future Vol, veh/h	1572	96	0	1839	0	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1709	104	0	1999	0	101

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	907
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	239
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	239
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	30.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	239	-	-	-
HCM Lane V/C Ratio	0.423	-	-	-
HCM Control Delay (s)	30.7	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	2	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1574	143	980	1804	369	90	111	260	240	184	45
Future Volume (veh/h)	52	1574	143	980	1804	369	90	111	260	240	184	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		1.00	1.00		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	56	1692	154	1054	1940	397	97	119	280	258	198	48
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	1734	578	1077	3109	1077	118	221	682	296	323	262
Arrive On Green	0.04	0.34	0.34	0.31	0.61	0.61	0.03	0.12	0.12	0.09	0.17	0.17
Sat Flow, veh/h	1781	5106	1542	3456	5106	1545	3456	1870	1585	3456	1870	1519
Grp Volume(v), veh/h	56	1692	154	1054	1940	397	97	119	280	258	198	48
Grp Sat Flow(s),veh/h/ln	1781	1702	1542	1728	1702	1545	1728	1870	1585	1728	1870	1519
Q Serve(g_s), s	5.9	62.2	13.2	57.4	45.5	20.1	5.3	11.4	22.5	14.0	18.6	5.1
Cycle Q Clear(g_c), s	5.9	62.2	13.2	57.4	45.5	20.1	5.3	11.4	22.5	14.0	18.6	5.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	1734	578	1077	3109	1077	118	221	682	296	323	262
V/C Ratio(X)	0.79	0.98	0.27	0.98	0.62	0.37	0.82	0.54	0.41	0.87	0.61	0.18
Avail Cap(c_a), veh/h	94	1734	578	1077	3109	1077	118	221	682	346	345	280
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	90.5	62.0	41.4	64.8	23.4	11.9	91.2	78.8	37.5	85.8	72.8	67.2
Incr Delay (d2), s/veh	27.9	16.6	1.1	19.6	0.8	0.8	34.9	2.6	0.4	18.8	2.9	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	29.6	5.3	28.3	18.7	7.3	3.0	5.7	9.3	7.1	9.3	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.3	78.5	42.5	84.4	24.2	12.7	126.1	81.4	37.9	104.6	75.7	67.5
LnGrp LOS	F	E	D	F	C	B	F	F	D	F	E	E
Approach Vol, veh/h		1902			3391			496			504	
Approach Delay, s/veh		76.8			41.6			65.6			89.7	
Approach LOS		E			D			E			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	65.7	71.5	13.0	39.8	14.5	122.7	23.3	29.5
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	59.2	62.3	6.5	35.0	10.0	* 1.1E2	19.0	* 23
Max Q Clear Time (g_c+I1), s	59.4	64.2	7.3	20.6	7.9	47.5	16.0	24.5
Green Ext Time (p_c), s	0.0	0.0	0.0	1.0	0.0	33.5	0.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	58.0
HCM 6th LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	742	935	180	2012	0	0	0	0	190	0	135
Future Volume (veh/h)	0	742	935	180	2012	0	0	0	0	190	0	135
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	765	964	186	2074	0				196	0	139
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2132	1165	319	3186	0				408	0	187
Arrive On Green	0.00	0.42	0.42	0.09	0.62	0.00				0.12	0.00	0.12
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	765	964	186	2074	0				196	0	139
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	5.1	15.4	2.6	12.9	0.0				2.7	0.0	4.2
Cycle Q Clear(g_c), s	0.0	5.1	15.4	2.6	12.9	0.0				2.7	0.0	4.2
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2132	1165	319	3186	0				408	0	187
V/C Ratio(X)	0.00	0.36	0.83	0.58	0.65	0.00				0.48	0.00	0.74
Avail Cap(c_a), veh/h	0	2132	1165	401	3186	0				408	0	187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.0	13.0	21.8	6.0	0.0				20.6	0.0	21.3
Incr Delay (d2), s/veh	0.0	0.5	6.8	0.6	1.0	0.0				0.3	0.0	13.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.7	4.9	1.0	3.0	0.0				1.0	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	10.4	19.8	22.4	7.0	0.0				20.9	0.0	34.5
LnGrp LOS	A	B	B	C	A	A				C	A	C
Approach Vol, veh/h		1729			2260						335	
Approach Delay, s/veh		15.6			8.3						26.6	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.3	27.7		12.0		38.0
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 5.8	19.7		5.9		31.2
Max Q Clear Time (g_c+I1), s	14.6	17.4		6.2		14.9
Green Ext Time (p_c), s	0.0	1.1		0.0		7.1

Intersection Summary	
HCM 6th Ctrl Delay	12.6
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	587	105	0	1157	140	935	330	50	130	0	540
Future Volume (veh/h)	290	587	105	0	1157	140	935	330	50	130	0	540
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		0.96	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	302	611	0	0	1205	146	974	344	52	135	0	562
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	436	1838		0	1691	506	1081	526	79	200	0	0
Arrive On Green	0.13	0.52	0.00	0.00	0.33	0.33	0.31	0.17	0.17	0.11	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1528	3456	3080	460	1781	135	
Grp Volume(v), veh/h	302	611	0	0	1205	146	974	197	199	135	45.7	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1528	1728	1777	1764	1781	D	
Q Serve(g_s), s	8.0	9.5	0.0	0.0	19.7	6.7	25.7	9.8	10.0	6.9		
Cycle Q Clear(g_c), s	8.0	9.5	0.0	0.0	19.7	6.7	25.7	9.8	10.0	6.9		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.26	1.00		
Lane Grp Cap(c), veh/h	436	1838		0	1691	506	1081	304	301	200		
V/C Ratio(X)	0.69	0.33		0.00	0.71	0.29	0.90	0.65	0.66	0.67		
Avail Cap(c_a), veh/h	498	1838		0	1691	506	1921	654	649	221		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	39.8	13.4	0.0	0.0	27.9	23.5	31.3	36.8	36.9	40.6		
Incr Delay (d2), s/veh	2.5	0.5	0.0	0.0	2.6	1.4	1.4	0.9	0.9	5.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	8.5	3.8	0.0	0.0	8.2	2.6	10.6	4.3	4.4	3.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.4	13.9	0.0	0.0	30.5	25.0	32.6	37.6	37.8	45.7		
LnGrp LOS	D	B		A	C	C	C	D	D	D		
Approach Vol, veh/h		913	A		1351			1370				
Approach Delay, s/veh		23.3			29.9			34.1				
Approach LOS		C			C			C				

Timer - Assigned Phs	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	56.0	35.9		17.7	38.3	16.8	22.4
Change Period (Y+Rc), s	6.8	6.1		* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	49.2	52.9		* 14	29.8	11.8	35.0
Max Q Clear Time (g_c+I1), s	11.5	27.7		10.0	21.7	8.9	12.0
Green Ext Time (p_c), s	3.0	2.1		0.2	4.0	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	30.4
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1269	392	50	790	393	110
Future Volume (veh/h)	1269	392	50	790	393	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		0.96	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	1350	417	53	840	418	117
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	1438	425	73	2259	435	387
Arrive On Green	0.54	0.54	0.04	0.64	0.24	0.24
Sat Flow, veh/h	2771	792	1781	3647	1781	1585
Grp Volume(v), veh/h	876	891	53	840	418	117
Grp Sat Flow(s),veh/h/ln	1777	1693	1781	1777	1781	1585
Q Serve(g_s), s	40.5	46.3	2.6	10.2	20.8	5.4
Cycle Q Clear(g_c), s	40.5	46.3	2.6	10.2	20.8	5.4
Prop In Lane		0.47	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	954	909	73	2259	435	387
V/C Ratio(X)	0.92	0.98	0.73	0.37	0.96	0.30
Avail Cap(c_a), veh/h	954	909	101	2259	435	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.0	20.4	42.7	7.8	33.6	27.7
Incr Delay (d2), s/veh	15.0	25.4	15.2	0.5	32.9	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.0	22.8	1.5	3.6	12.7	2.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.1	45.8	57.8	8.3	66.5	28.2
LnGrp LOS	C	D	E	A	E	C
Approach Vol, veh/h	1767			893	535	
Approach Delay, s/veh	40.0			11.2	58.1	
Approach LOS	D			B	E	

Timer - Assigned Phs	1	2				6	8
Phs Duration (G+Y+Rc), s	8.9	54.1				63.0	27.0
Change Period (Y+Rc), s	* 5.2	5.8				5.8	5.0
Max Green Setting (Gmax), s	* 5.1	46.9				57.2	22.0
Max Q Clear Time (g_c+I1), s	4.6	48.3				12.2	22.8
Green Ext Time (p_c), s	0.0	0.0				7.3	0.0

Intersection Summary	
HCM 6th Ctrl Delay	35.0
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	1669	70	180	1444	251	160	416	62	275	584	102
Future Volume (veh/h)	146	1669	70	180	1444	251	160	416	62	275	584	102
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.98	1.00		0.96	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	149	1703	71	184	1473	256	163	424	63	281	596	104
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	240	1753	73	147	1369	233	134	492	73	719	451	79
Arrive On Green	0.14	0.50	0.50	0.17	0.90	0.90	0.08	0.16	0.16	0.21	0.29	0.29
Sat Flow, veh/h	1781	3471	144	1781	3025	515	1781	3086	455	3456	1543	269
Grp Volume(v), veh/h	149	867	907	184	853	876	163	243	244	281	0	700
Grp Sat Flow(s),veh/h/ln	1781	1777	1838	1781	1777	1763	1781	1777	1764	1728	0	1812
Q Serve(g_s), s	15.8	94.3	96.5	16.5	90.5	90.5	15.0	26.6	27.0	14.0	0.0	58.5
Cycle Q Clear(g_c), s	15.8	94.3	96.5	16.5	90.5	90.5	15.0	26.6	27.0	14.0	0.0	58.5
Prop In Lane	1.00		0.08	1.00		0.29	1.00		0.26	1.00		0.15
Lane Grp Cap(c), veh/h	240	897	928	147	804	798	134	284	281	719	0	530
V/C Ratio(X)	0.62	0.97	0.98	1.25	1.06	1.10	1.22	0.86	0.87	0.39	0.00	1.32
Avail Cap(c_a), veh/h	240	897	928	147	804	798	134	439	436	719	0	530
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	81.7	47.8	48.4	83.5	9.5	9.5	92.5	81.8	82.0	68.3	0.0	70.8
Incr Delay (d2), s/veh	4.8	22.8	24.6	157.3	49.0	62.2	148.8	9.8	11.1	0.3	0.0	157.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	47.3	50.4	13.6	15.1	17.9	12.5	13.1	13.3	6.3	0.0	50.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.4	70.7	73.0	240.8	58.5	71.7	241.3	91.6	93.0	68.6	0.0	227.8
LnGrp LOS	F	E	E	F	F	F	F	F	F	E	A	F
Approach Vol, veh/h		1923			1913			650			981	
Approach Delay, s/veh		73.0			82.1			129.7			182.2	
Approach LOS		E			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.0	108.0	21.5	65.0	34.0	97.0	48.1	38.4
Change Period (Y+Rc), s	6.5	6.5	6.5	* 6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	16.5	84.5	15.0	* 59	10.5	90.5	23.6	49.4
Max Q Clear Time (g_c+I1), s	19.5	98.5	17.0	60.5	17.8	92.5	16.0	29.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.6	2.9

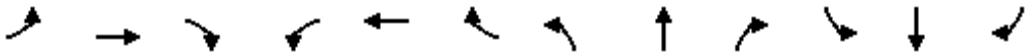
Intersection Summary	
HCM 6th Ctrl Delay	102.5
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
3: San Marcos Blvd & Bent Ave

01/29/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	1733	170	355	1518	121	462	379	457	191	366	72
Future Volume (veh/h)	122	1733	170	355	1518	121	462	379	457	191	366	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	124	1768	173	362	1549	123	471	387	466	195	373	73
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1444	138	218	1803	882	267	245	295	120	366	72
Arrive On Green	0.02	0.15	0.15	0.16	0.67	0.67	0.15	0.32	0.32	0.07	0.24	0.24
Sat Flow, veh/h	1781	3263	313	1781	3554	1527	1781	760	915	1781	1510	295
Grp Volume(v), veh/h	124	946	995	362	1549	123	471	0	853	195	0	446
Grp Sat Flow(s),veh/h/ln	1781	1777	1799	1781	1777	1527	1781	0	1675	1781	0	1805
Q Serve(g_s), s	11.5	88.5	88.5	24.5	67.4	5.1	30.0	0.0	64.5	13.5	0.0	48.5
Cycle Q Clear(g_c), s	11.5	88.5	88.5	24.5	67.4	5.1	30.0	0.0	64.5	13.5	0.0	48.5
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.55	1.00		0.16
Lane Grp Cap(c), veh/h	102	786	796	218	1803	882	267	0	540	120	0	438
V/C Ratio(X)	1.21	1.20	1.25	1.66	0.86	0.14	1.76	0.00	1.58	1.62	0.00	1.02
Avail Cap(c_a), veh/h	102	786	796	218	1803	882	267	0	540	120	0	438
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.83	0.00	0.83
Uniform Delay (d), s/veh	98.1	85.4	85.4	83.7	27.0	12.6	85.0	0.0	67.8	93.3	0.0	75.8
Incr Delay (d2), s/veh	156.1	103.3	122.9	316.0	5.6	0.3	358.2	0.0	269.5	309.1	0.0	44.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	65.4	70.5	30.3	27.6	1.9	40.5	0.0	68.1	16.6	0.0	28.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	254.2	188.7	208.3	399.7	32.5	13.0	443.2	0.0	337.3	402.4	0.0	119.8
LnGrp LOS	F	F	F	F	C	B	F	A	F	F	A	F
Approach Vol, veh/h		2065			2034			1324			641	
Approach Delay, s/veh		202.1			96.7			374.9			205.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.0	95.0	36.0	55.5	18.0	108.0	20.0	71.5
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	24.5	72.0	30.0	* 49	11.5	85.0	13.5	64.0
Max Q Clear Time (g_c+I1), s	26.5	90.5	32.0	50.5	13.5	69.4	15.5	66.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	204.9
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

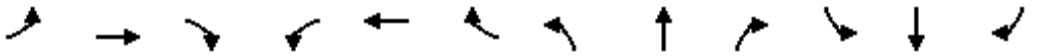
Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1725	46	0	1970	0	46
Future Vol, veh/h	1725	46	0	1970	0	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1875	50	0	2141	0	50

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	963
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	-	-	0	-	0	220
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	220
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	26.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	220	-	-	-
HCM Lane V/C Ratio	0.227	-	-	-
HCM Control Delay (s)	26.1	-	-	-
HCM Lane LOS	D	-	-	-
HCM 95th %tile Q(veh)	0.8	-	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	2395	259	1180	1953	370	235	325	1170	1258	441	42
Future Volume (veh/h)	96	2395	259	1180	1953	370	235	325	1170	1258	441	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	1.00		1.00	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	2444	264	1204	1993	378	240	332	1194	1284	450	43
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	2030	721	769	2824	1186	233	220	539	726	491	403
Arrive On Green	0.09	0.53	0.53	0.22	0.55	0.55	0.07	0.12	0.12	0.21	0.26	0.26
Sat Flow, veh/h	1781	5106	1546	3456	5106	1543	3456	1870	1585	3456	1870	1535
Grp Volume(v), veh/h	98	2444	264	1204	1993	378	240	332	1194	1284	450	43
Grp Sat Flow(s),veh/h/ln	1781	1702	1546	1728	1702	1543	1728	1870	1585	1728	1870	1535
Q Serve(g_s), s	10.9	79.5	18.5	44.5	57.2	15.4	13.5	23.5	23.5	42.0	46.7	4.3
Cycle Q Clear(g_c), s	10.9	79.5	18.5	44.5	57.2	15.4	13.5	23.5	23.5	42.0	46.7	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	115	2030	721	769	2824	1186	233	220	539	726	491	403
V/C Ratio(X)	0.85	1.20	0.37	1.57	0.71	0.32	1.03	1.51	2.22	1.77	0.92	0.11
Avail Cap(c_a), veh/h	151	2030	721	769	2824	1186	233	220	539	726	491	403
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	90.5	47.1	26.3	77.8	32.8	7.4	93.2	88.3	66.0	79.0	71.6	56.0
Incr Delay (d2), s/veh	28.7	96.8	1.4	259.9	1.3	0.6	66.6	251.9	553.0	351.8	22.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	50.3	6.9	47.7	24.2	5.3	8.3	26.9	110.4	54.3	25.6	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.2	144.0	27.7	337.7	34.0	8.0	159.9	340.2	619.0	430.8	93.7	56.1
LnGrp LOS	F	F	C	F	C	A	F	F	F	F	F	E
Approach Vol, veh/h		2806			3575			1766			1777	
Approach Delay, s/veh		132.2			133.5			504.2			336.4	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	51.0	87.0	20.0	59.5	19.9	118.1	49.0	30.5
Change Period (Y+Rc), s	6.5	7.0	6.5	7.0	7.0	* 7	7.0	* 7
Max Green Setting (Gmax), s	44.5	63.0	13.5	52.0	17.0	* 91	42.0	* 24
Max Q Clear Time (g_c+I1), s	46.5	81.5	15.5	48.7	12.9	59.2	44.0	25.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.9	0.1	22.3	0.0	0.0

Intersection Summary		
HCM 6th Ctrl Delay		235.4
HCM 6th LOS		F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1726	1162	200	1926	0	0	0	0	130	0	72
Future Volume (veh/h)	0	1726	1162	200	1926	0	0	0	0	130	0	72
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	0	1870
Adj Flow Rate, veh/h	0	1761	1186	204	1965	0				133	0	73
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	2	2	2	2	0				2	0	2
Cap, veh/h	0	2381	1301	312	3394	0				312	0	143
Arrive On Green	0.00	0.47	0.47	0.09	0.66	0.00				0.09	0.00	0.09
Sat Flow, veh/h	0	5274	2790	3456	5274	0				3456	0	1585
Grp Volume(v), veh/h	0	1761	1186	204	1965	0				133	0	73
Grp Sat Flow(s),veh/h/ln	0	1702	1395	1728	1702	0				1728	0	1585
Q Serve(g_s), s	0.0	14.8	20.8	3.0	11.0	0.0				1.9	0.0	2.3
Cycle Q Clear(g_c), s	0.0	14.8	20.8	3.0	11.0	0.0				1.9	0.0	2.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2381	1301	312	3394	0				312	0	143
V/C Ratio(X)	0.00	0.74	0.91	0.65	0.58	0.00				0.43	0.00	0.51
Avail Cap(c_a), veh/h	0	2381	1301	328	3394	0				466	0	214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	11.5	13.0	23.2	4.8	0.0				22.7	0.0	22.8
Incr Delay (d2), s/veh	0.0	2.1	11.2	3.3	0.7	0.0				0.3	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.9	7.1	1.3	2.4	0.0				0.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	13.6	24.2	26.4	5.5	0.0				23.0	0.0	23.9
LnGrp LOS	A	B	C	C	A	A				C	A	C
Approach Vol, veh/h		2947			2169						206	
Approach Delay, s/veh		17.9			7.5						23.3	
Approach LOS		B			A						C	

Timer - Assigned Phs	1	2		4		6
Phs Duration (G+Y+Rc), s	10.5	31.3		10.9		41.8
Change Period (Y+Rc), s	* 5.7	6.8		6.1		6.8
Max Green Setting (Gmax), s	* 5	24.3		7.1		35.0
Max Q Clear Time (g_c+I1), s	15.0	22.8		4.3		13.0
Green Ext Time (p_c), s	0.0	1.2		0.1		7.4

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	420	1303	182	0	1103	140	882	250	80	190	0	590
Future Volume (veh/h)	420	1303	182	0	1103	140	882	250	80	190	0	590
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	0	1870	1870	1870	1870	1870	1870	0	1870
Adj Flow Rate, veh/h	429	1330	0	0	1126	143	900	255	82	194	0	602
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	0	2	2	2	2	2	2	0	2
Cap, veh/h	497	1956		0	1780	533	1002	341	107	227	0	0
Arrive On Green	0.14	0.55	0.00	0.00	0.35	0.35	0.29	0.13	0.13	0.13	0.00	0.00
Sat Flow, veh/h	3456	3554	1585	0	5274	1529	3456	2661	836	1781	194	
Grp Volume(v), veh/h	429	1330	0	0	1126	143	900	168	169	194	54.2	
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	0	1702	1529	1728	1777	1720	1781	D	
Q Serve(g_s), s	11.9	26.4	0.0	0.0	18.1	6.6	24.5	8.9	9.3	10.5		
Cycle Q Clear(g_c), s	11.9	26.4	0.0	0.0	18.1	6.6	24.5	8.9	9.3	10.5		
Prop In Lane	1.00		1.00	0.00		1.00	1.00		0.49	1.00		
Lane Grp Cap(c), veh/h	497	1956		0	1780	533	1002	228	221	227		
V/C Ratio(X)	0.86	0.68		0.00	0.63	0.27	0.90	0.74	0.76	0.85		
Avail Cap(c_a), veh/h	557	1956		0	1780	533	2047	634	614	309		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	41.0	15.8	0.0	0.0	26.7	23.0	33.4	41.2	41.3	41.9		
Incr Delay (d2), s/veh	11.1	1.9	0.0	0.0	1.7	1.2	1.2	1.8	2.1	12.3		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	5.8	10.5	0.0	0.0	7.4	2.5	10.2	4.0	4.0	5.3		
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.2	17.8	0.0	0.0	28.4	24.2	34.7	42.9	43.4	54.2		
LnGrp LOS	D	B		A	C	C	C	D	D	D		
Approach Vol, veh/h		1759	A		1269			1237				
Approach Delay, s/veh		26.2			28.0			37.0				
Approach LOS		C			C			D				

Timer - Assigned Phs	2	3		5	6	7	8
Phs Duration (G+Y+Rc), s	60.8	34.5		19.8	41.0	18.6	18.7
Change Period (Y+Rc), s	6.8	6.1		* 5.7	6.8	6.1	6.1
Max Green Setting (Gmax), s	54.0	58.1		* 16	32.5	17.0	35.0
Max Q Clear Time (g_c+I1), s	28.4	26.5		13.9	20.1	12.5	11.3
Green Ext Time (p_c), s	7.9	1.9		0.2	4.9	0.1	1.3

Intersection Summary	
HCM 6th Ctrl Delay	30.9
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1589	278	324	1549	92	215	114	340	70	163	31
Future Volume (veh/h)	77	1589	278	324	1549	92	215	114	340	70	163	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	79	1638	287	334	1597	95	222	118	351	72	168	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	95	1415	239	267	2007	918	188	394	322	61	215	41
Arrive On Green	0.07	0.62	0.62	0.15	0.56	0.56	0.11	0.21	0.21	0.03	0.14	0.14
Sat Flow, veh/h	1781	3021	511	1781	3554	1529	1781	1870	1528	1781	1513	288
Grp Volume(v), veh/h	79	939	986	334	1597	95	222	118	351	72	0	200
Grp Sat Flow(s),veh/h/ln	1781	1777	1754	1781	1777	1529	1781	1870	1528	1781	0	1801
Q Serve(g_s), s	8.3	89.0	89.0	28.5	67.5	5.0	20.0	10.1	40.0	6.5	0.0	20.4
Cycle Q Clear(g_c), s	8.3	89.0	89.0	28.5	67.5	5.0	20.0	10.1	40.0	6.5	0.0	20.4
Prop In Lane	1.00		0.29	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	95	832	822	267	2007	918	188	394	322	61	0	256
V/C Ratio(X)	0.83	1.13	1.20	1.25	0.80	0.10	1.18	0.30	1.09	1.18	0.00	0.78
Avail Cap(c_a), veh/h	112	832	822	267	2007	918	188	394	322	61	0	261
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.00	0.99
Uniform Delay (d), s/veh	87.4	35.8	35.8	80.8	32.7	16.3	85.0	63.2	75.0	91.8	0.0	78.7
Incr Delay (d2), s/veh	34.2	72.9	101.5	139.6	3.4	0.2	124.0	0.4	76.9	172.0	0.0	13.8
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	4.7	52.3	58.2	23.6	30.1	1.9	15.7	4.9	22.7	5.9	0.0	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	121.5	108.7	137.3	220.4	36.0	16.5	209.0	63.6	151.9	263.8	0.0	92.5
LnGrp LOS	F	F	F	F	D	B	F	E	F	F	A	F
Approach Vol, veh/h		2004			2026			691			272	
Approach Delay, s/veh		123.2			65.5			155.2			137.8	
Approach LOS		F			E			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.0	95.0	26.0	34.0	16.7	113.3	13.0	47.0
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	28.5	89.0	20.0	* 28	11.9	105.6	6.5	40.0
Max Q Clear Time (g_c+I1), s	30.5	91.0	22.0	22.4	10.3	69.5	8.5	42.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	18.2	0.0	0.0

Intersection Summary	
HCM 6th Ctrl Delay	105.0
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	1733	170	355	1518	121	462	379	457	191	366	72
Future Volume (veh/h)	122	1733	170	355	1518	121	462	379	457	191	366	72
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.96	1.00		0.96	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	124	1768	173	362	1549	123	471	387	466	195	373	73
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	102	1444	138	218	1803	882	267	603	497	120	366	72
Arrive On Green	0.02	0.15	0.15	0.16	0.67	0.67	0.15	0.32	0.32	0.07	0.24	0.24
Sat Flow, veh/h	1781	3263	313	1781	3554	1527	1781	1870	1541	1781	1510	295
Grp Volume(v), veh/h	124	946	995	362	1549	123	471	387	466	195	0	446
Grp Sat Flow(s),veh/h/ln	1781	1777	1799	1781	1777	1527	1781	1870	1541	1781	0	1805
Q Serve(g_s), s	11.5	88.5	88.5	24.5	67.4	5.1	30.0	35.4	58.7	13.5	0.0	48.5
Cycle Q Clear(g_c), s	11.5	88.5	88.5	24.5	67.4	5.1	30.0	35.4	58.7	13.5	0.0	48.5
Prop In Lane	1.00		0.17	1.00		1.00	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	102	786	796	218	1803	882	267	603	497	120	0	438
V/C Ratio(X)	1.21	1.20	1.25	1.66	0.86	0.14	1.76	0.64	0.94	1.62	0.00	1.02
Avail Cap(c_a), veh/h	102	786	796	218	1803	882	267	603	497	120	0	438
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.00	0.83
Uniform Delay (d), s/veh	98.1	85.4	85.4	83.7	27.0	12.6	85.0	57.9	65.8	93.3	0.0	75.8
Incr Delay (d2), s/veh	156.1	103.3	122.9	316.0	5.6	0.3	358.2	2.3	25.7	309.1	0.0	44.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.0	65.4	70.5	30.3	27.6	1.9	40.5	17.3	26.8	16.6	0.0	28.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	254.2	188.7	208.3	399.7	32.5	13.0	443.2	60.2	91.5	402.4	0.0	119.8
LnGrp LOS	F	F	F	F	C	B	F	E	F	F	A	F
Approach Vol, veh/h		2065			2034			1324			641	
Approach Delay, s/veh		202.1			96.7			207.4			205.7	
Approach LOS		F			F			F			F	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.0	95.0	36.0	55.5	18.0	108.0	20.0	71.5
Change Period (Y+Rc), s	6.5	6.0	6.0	* 7	6.5	6.0	6.5	7.0
Max Green Setting (Gmax), s	24.5	72.0	30.0	* 49	11.5	85.0	13.5	64.0
Max Q Clear Time (g_c+I1), s	26.5	90.5	32.0	50.5	13.5	69.4	15.5	60.7
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	10.5	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	168.3
HCM 6th LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.