Appendix K
Local Transportation Analysis

LINSCOTT LAW & GREENSPAN
engineers

LOCAL TRANSPORTATION ANALYSIS

PACIFIC PROJECT

San Marcos, California
February 16, 2023

LLG Ref. 3-20-3279

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EXECUTIVE SUMMARY

Linscott, Law & Greenspan, Engineers (LLG) has prepared the following Local Transportation Analysis (LTA) to determine and evaluate the potential effects to the local roadway system due to the proposed Pacific project (proposed Project). The Project site is located at the northwest corner of the Linda Vista Drive / Las Posas Road intersection in the City of San Marcos. The Project site is currently undeveloped.

The Project consists of 449 residential units, including a mix of apartments within a five-story podium building, three-story rowhomes, three-story villas, and affordable flats within a four-story building on approximately 15.09 acres within the 33.2-acre Project site. The Project proposes a General Plan Amendment, Rezone, Specific Plan, Tentative Map, and Multi-Family Site Development Plan. The General Plan Amendment and Rezone would change the General Plan designation and Zoning from Industrial (I) to Specific Plan Area (SPA).

The Project is calculated to generate a total of 2,694 ADT with 216 AM peak hour trips (43 inbound / 173 outbound) and 242 PM peak hour trips (169 inbound and 73 outbound).

While Level of Service (LOS) analysis is not used to determine CEQA significance, the intersection and segment analysis provided in this study shows that the Project will have a substantial effect on study area facilities, including two (2) study area intersections and one (1) study area street segment, according to the City of San Marcos LOS Standards. Roadway improvements are identified for each location that will increase performance to acceptable and/or pre-project conditions.

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LOCAL TRANSPORTATION ANALYSIS

PACIFIC PROJECT

San Marcos, California
February 16, 2023

1.0 INTRODUCTION

Linscott, Law & Greenspan, Engineers (LLG) has prepared the following Local Transportation Analysis (LTA) for the proposed Pacific project (proposed Project) located at the northwest corner of the Linda Vista Drive / Las Posas Road intersection in the City of San Marcos.

Transportation impact analyses within the City of San Marcos includes two sets of requirements:

- **CEQA Analysis** primarily consisting of vehicle miles traveled (VMT) analysis.
- **Non-CEQA Local Transportation Analysis** to evaluate the effects of a development project on the circulation network.

CEQA VMT analysis is provided under separate cover.

The following items are included in this transportation study:

- Project Description
- Existing Conditions Discussion
- Local Transportation Analysis Approach and Methodology
- Analysis of Existing Conditions
- Near-Term Conditions Discussion
- Trip Generation, Distribution, and Assignment
- Analysis of Near-Term Scenarios
- Long-Term Conditions Discussion
- Analysis of Long-Term Scenarios
- Site Access, Circulation, and Parking Review
- Active Transportation Review
- Conclusions

2.0 PROJECT DESCRIPTION

2.1 Project Location

The 33.2-acre project site is an infill site located in the western portion of the City of San Marcos (City), at the northwest corner of Las Posas Road and Linda Vista Drive, and comprises Assessor's Parcel Numbers (APNs) 219-222-01, 219-222-02, 219-222-03, and 219-222-04. La Mirada Road abuts the site's northern boundary, while South Pacific Street abuts the property's western boundary. The Grand Plaza shopping center is located directly across Las Posas Road to the east. Light industrial uses are adjacent to the sites northern, southern, and western boundary, and Bradley Park is located across from the site's southwestern corner. Single- and multi-family residential uses are located to the west and south of Bradley Park.

Figure 2–1 shows the vicinity map. ***Figure 2–2*** shows a more detailed project area map.

2.2 Project Description

The project consists of 449 residential units, including a mix of apartments, rowhomes, villas, and affordable flats on approximately 15.09 acres of the 33.2-acre project site. Proposed residential units would include a mix of apartments within a five-story podium building, three-story rowhomes, three-story villas, and affordable flats within a four-story building. The project includes a total of 927 parking spaces and 134,985 square feet of common open space area. 68 of the 449 total units (15 percent of the total) would be designated as deed-restricted affordable units (alternatively, the project reserves the option to contribute to the affordable housing fund by paying the in-lieu fee).

The proposed project also includes landscaping, bio-retention areas, and circulation improvements. The remaining approximately 17.94 acres of the 33.2-acre project site would be preserved and restored as open space and habitat area. The proposed project would have a density of approximately 13.5 dwelling units per acre, including the open space and habitat area.

The project proposes a General Plan Amendment, Rezone, Specific Plan, Tentative Map, and Multi-Family Site Development Plan. The General Plan Amendment and Rezone would change the General Plan designation and Zoning from Industrial (I) to Specific Plan Area (SPA). The Specific Plan has been prepared with the intent to provide a comprehensive plan to ensure the efficient development of a new residential community. The Specific Plan serves as both a policy document and a regulatory document for the systematic implementation of the policies and goals of the General Plan. The Tentative Map presents specific lot configurations for the site. The Multi-Family Site Development Plan will configure the site for multi-family dwelling units, street configuration, infrastructure, recreational open space, and private open space.

As part of the project, additional pedestrian connectivity would be provided along three of the adjacent street frontages. The project would provide a 6-foot sidewalk and Class II buffered bike lane along the project's frontage on Pacific Street; the project would provide a 12-foot urban trail (shared use path) along the project's frontage on Linda Vista Drive; and the project would also provide a 12-foot urban trail (shared use path) along the project's frontage on La Mirada Drive. In addition to the proposed sidewalk and trail connections, the project would add a bus stop and shelter with a bus turnout along South Las Posas Road adjacent to the development area and would install a

4-way traffic signal at the intersection of Linda Vista Drive and Pacific Street. Furthermore, the project would upsize approximately 1,458-feet of existing water pipe from 8-inches to 12-inches and would convert approximately 1,400-feet of existing overhead power lines to underground along La Mirada.

The proposed project would be accessible from three points on La Mirada Drive, one emergency access-only point on South Las Posas Road, and two access points on Linda Vista Drive. The three access points on La Mirada Drive would serve the residences of the rowhomes, villas, and apartments, and the two access points on Linda Vista drive would serve the residences of the affordable flats.

Figure 2–3 shows the conceptual site plan for the Project.

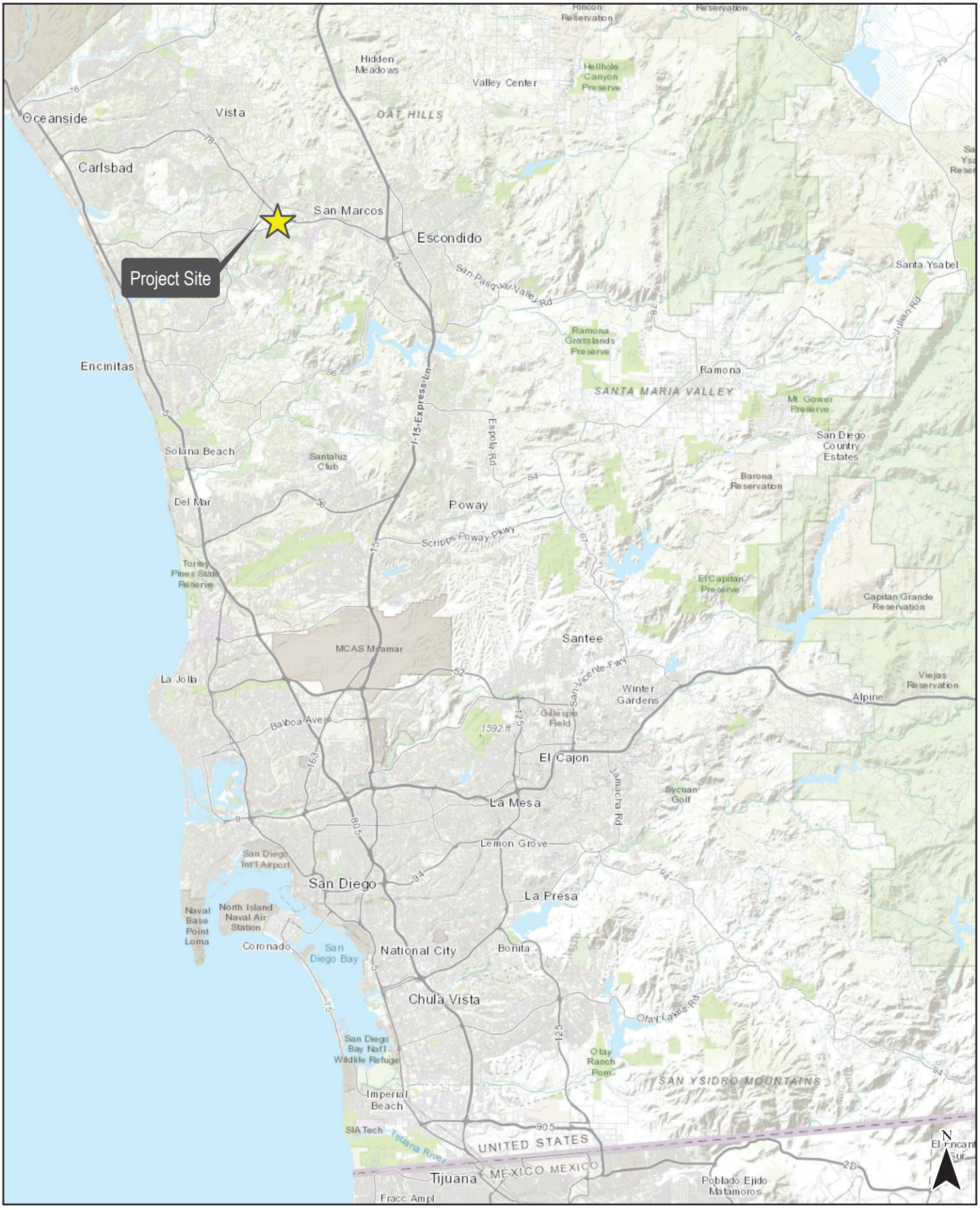

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Figure 2-1
Vicinity Map

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Figure 2-2
Project Area Map

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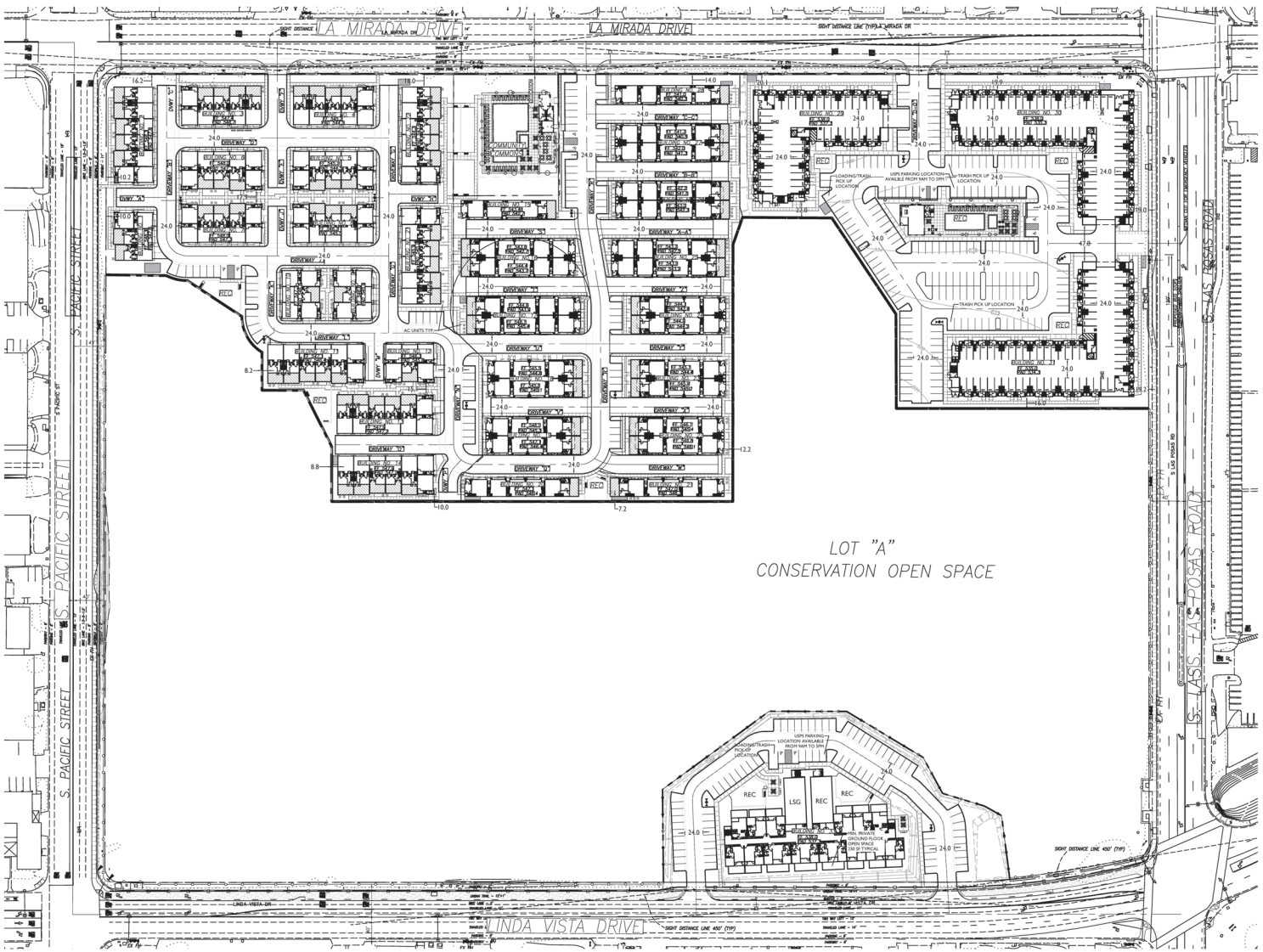

RESIDENCES	449 HOMES
GROSS SITE AREA	33.229 ACRES (15.091 ACRES NET)
GROSS DENSITY	13.51 DU/AC (29.75 DU/AC NET)

ROWHOMES - LOT 1

23	2BD/2BA	1,200 SF	
23	3BD/3BA	1,310 SF	
28	3BD/3.5BA	1,736 SF	
27	4BD/3.5BA	1,890 SF	
101	4.419 AC =	22.86 DU/AC	

PARKING SUMMARY PER CA 65915

2&3 BD	74 X 1.5 =	111 SPACES
4 BD	27 X 2.5 =	68 SPACES
TOTAL REQUIRED		179 SPACES
TOTAL PROVIDED		234 SPACES* (32 OPEN/202 PRIVATE GARAGES)

*NOTE: RECIPROCAL ACCESS & PARKING AGREEMENT BETWEEN LOT 1 & 2
(LOT 1 EV = 234 SP X 5% = 12 EV LEVEL 2 CHARGERS INSTALLED)

PRIVATE OPEN SPACE	REQUIRED	PROVIDED
101 X 50 SF	5,050 SF	6,959 SF
COMMON OPEN SPACE	REQUIRED	PROVIDED
GROUND FLOOR SF X 30% 12,945 SF		
TOT LOT (1:25 DU) 4X400 SF	1,600 SF	
PLAYGROUND	800 SF	
TOTAL	15,345 SF	40,876 SF

VILLAS - LOT 2

60	2BD/2BA	1,272 SF	
24	3BD/2.5BA	1,486 SF	
24	3BD/3BA	1,832 SF	
108	4.583 AC =	23.57 DU/AC	

PARKING SUMMARY PER CA 65915

2&3 BD	108 X 1.5 =	162 SPACES
TOTAL REQUIRED		162 SPACES
TOTAL PROVIDED		254 SPACES* (38 OPEN/216 PRIVATE GARAGES)

*NOTE: RECIPROCAL ACCESS & PARKING AGREEMENT BETWEEN LOT 1 & 2
(LOT 2 EV = 254 SP X 5% = 13 EV LEVEL 2 CHARGERS INSTALLED)

PRIVATE OPEN SPACE	REQUIRED	PROVIDED
108 X 50 SF	5,400 SF	6,180 SF
COMMON OPEN SPACE	REQUIRED	PROVIDED
GROUND FLOOR SF X 30%	16,204 SF	
TOT LOT (1:25 DU) 5X400 SF	2,000 SF	
PLAYGROUND	800 SF	
TOTAL	19,004 SF	29,899 SF

APARTMENTS - LOT 3

86	1B/1BA	740 SF	
62	2BD/2.5BA	1,256 SF	
24	3BD/2.5BA	1,579 SF	
172	4.308 AC =	39.93 DU/AC	

PARKING SUMMARY PER CA 65915

1BD	86 X 1.0 =	86 SPACES
2&3BD	86 X 1.5 =	129 SPACES
TOTAL REQUIRED		215 SPACES
PROVIDED COVERED (1:1)		172 GARAGE SPACES
PROVIDED OPEN		187 SPACES
TOTAL PROVIDED		359 SPACES

(LOT 3 EV = 359 SP X 5% = 18 EV LEVEL 2 CHARGERS INSTALLED)

PRIVATE OPEN SPACE	REQUIRED	PROVIDED
172 X 50 SF	8,600 SF	11,180 SF
COMMON OPEN SPACE	REQUIRED	PROVIDED
GROUND FLOOR SF X 30%	15,606 SF	
TOT LOT (1:25 DU) 6X400 SF	2,400 SF	
PLAYGROUND	800 SF	
TOTAL	18,806 SF	47,870 SF

AFFORDABLE - LOT 4

UNIT MIX

8	STUDIO/1BA	512 SF	
42	1BD/1BA	625 SF	
18	2BD/2BA	924 SF	
68	1.781 AC =	38.18 DU/AC	

PARKING PROVIDED PER CA 65915

50 X 1.0 SP/DU =	50 SPACES
18 X 1.5 SP/DU =	27 SPACES
TOTAL REQUIRED	77 SPACES
TOTAL PROVIDED	80 SPACES

(LOT 4 EV = 80 SP X 5% = 4 EV LEVEL 2 CHARGERS INSTALLED)

PRIVATE OPEN SPACE	REQUIRED	PROVIDED
68 X 50 SF	3,400 SF	3,111 SF
COMMON OPEN SPACE	REQUIRED	PROVIDED
GROUND FLOOR SF X 30%	2,828 SF	
TOT LOT (1:25 DU) 3X400 SF	1,200 SF	
TOTAL	4,028 SF	16,340 SF

TOTAL EV = 927 SP X 5% = 47 EV LEVEL 2 CHARGERS INSTALLED

(PROJECT SHALL MEET THE MINIMUM CGBSC STANDARDS FOR EV CHARGING FOR NEW CONSTRUCTION AT TIME OF PERMIT APPLICATION)

SAN MARCOS, CA

UPHAM PROPERTY

CONCEPTUAL SITE PLAN

INTEGRAL COMMUNITIES
703 Palomar Airport Road, Suite 170
Carlsbad, CA 92011
(760) 944-7511

JANUARY 25, 2023

SCALE: 0 60 120 180

SUMMA ARCHITECTURE
5256 S. Mission Road, Ste 404
Bonsall, CA 92003
760.724.1198 summarch.com

A-SP

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Figure 2-3
Project Site Plan

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. Las Posas Road / SR-78 WB Ramps
2. Las Posas Road / Grand Avenue
3. Via Vera Cruz / Grand Avenue / SR-78 EB Ramps
4. Pacific Street / La Mirada Drive
5. Las Posas Road / La Mirada Drive
6. Rancho Santa Fe Road / Linda Vista Drive
7. Pacific Street / Linda Vista Drive
8. Las Posas Road / Linda Vista Drive
9. Pacific Street / San Marcos Blvd
10. Las Posas Road / San Marcos Blvd

Segments

Las Posas Road

1. Descanso Avenue to SR-78 WB Ramps
2. SR-78 WB Ramps to Grand Avenue
3. Grand Avenue to La Mirada Drive
4. La Mirada Drive to Linda Vista Drive
5. Linda Vista Drive to San Marcos Blvd

Pacific Street

6. La Mirada Drive to Linda Vista Drive
7. Linda Vista Drive to San Marcos Blvd

La Mirada Drive

8. Pacific Street to Las Posas Road

Linda Vista Drive

9. Rancho Santa Fe Road to Pacific Street
10. Pacific Street to Las Posas Road
11. Las Posas Road to Via Vera Cruz

San Marcos Boulevard

12. Pacific Street to Las Posas Road
13. Las Posas Road to Via Vera Cruz

The following Project driveways are also included in the evaluation:

Project Driveways

A. La Mirada Drive / Project Driveway (west)
B. La Mirada Drive / Project Driveway (central)
C. La Mirada Drive / Project Driveway (east)
D. Linda Vista Drive / Project Driveway (west)
E. Linda Vista Drive / Project Driveway (east)

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.

Las Posas Road is currently constructed as a 6-lane divided roadway between the SR-78 westbound ramps and Grand Avenue, a 5-lane divided roadway between Grand Avenue and La Mirada Drive, a 4-lane divided roadway between La Mirada Drive and Linda Vista Drive, and a 4-lane undivided roadway with a two-way left-turn (TWLT) lane between Linda Vista Drive and San Marcos Boulevard. The posted speed limit is 45 mph. On-street parking is prohibited. Class II bike lanes are provided. Las Posas Road is classified as a 4-Lane+ Arterial between SR-78 westbound ramps and San Marcos Boulevard.

Grand Avenue is constructed as a 4-lane undivided roadway with a TWLT lane between Via Vera Cruz and Rancho Santa Fe Road. The posted speed limit is 40 mph. On-street parking is prohibited. Only 350' of Class II bike lanes are provided on both sides of the roadway. Grand Avenue is classified as a 4-lane Arterial between Via Vera Cruz and Rancho Santa Fe 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. The posted speed limit is 40 mph between Grand Avenue & San Marcos Boulevard. On-street parking is prohibited. Class II bike lanes are provided. Via Vera Cruz is classified as a 4-lane Arterial between Grand Avenue and San Marcos Boulevard.

Pacific Street is constructed as a 2-lane undivided roadway for its entire length from San Marcos Boulevard to north of Grand Avenue. The posted speed limit is 35 mph. On-street parking is generally allowed on both sides of the street. Sidewalks are generally not provided on Pacific Street within the study area and there are no bicycle facilities. Pacific Street is classified as a Major Road between Grand Avenue and San Marcos Boulevard.

La Mirada Drive is constructed as a 2-lane undivided roadway between Rancho Santa Fe Road and Las Posas Road. On-street parking is generally allowed on both sides of the street. The posted speed limit is 35 mph. Sidewalks are generally not provided on La Mirada Drive within the study and there

are no bicycle facilities. La Mirada Drive is classified as a Major Road between Rancho Santa Fe Road and Las Posas Road.

Rancho Santa Fe Road is currently constructed as a 4 to 6-lane divided roadway with left turn pockets lanes between Grand Avenue and San Marcos Boulevard. The posted speed limit is 40 mph. On-street parking is prohibited. Class II bike lanes are provided. Rancho Santa Fe Road is classified as a 6-lane Arterial between Grand Avenue and W. San Marcos Boulevard.

Linda Vista Drive is currently constructed as a 3-lane undivided roadway with a TWLT lane between Rancho Santa Fe Road and Las Posas Road and a 4-lane undivided roadway between Las Posas Road and Via Vera Cruz. The posted speed limit is 40 mph. On-street parking is generally provided between Rancho Santa Fe Road and Las Posas Road. Class II Bike lanes are only provided between Rancho Santa Fe Road and Pacific Street on the north side of Linda Vista Drive. Linda Vista Drive is classified as a 4-lane Arterial between Rancho Santa Fe and Las Posas Road.

San Marcos Boulevard is constructed as a 4-lane divided roadway between Pacific Street and Via Vera Cruz. The posted speed limit is 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 Via Vera Cruz.

3.2 Existing Traffic Volumes

3.2.1 *Data Collection*

Traffic volumes at Intersections 1-3 were available from the City of San Marcos General Plan Existing Conditions Report. These data were collected during the week of March 2 through March 6, 2020, when schools were in session and represent the latest available data prior to significant coronavirus (COVID-19) pandemic-related activity restrictions. These volumes were used directly as the existing baseline.

For the remainder of the study area, additional traffic counts were conducted in March 2021. Average daily traffic volumes (ADTs) counts were conducted on March 24-25, 2021. Counts at the remaining study intersections, including bicycle and pedestrian counts, were conducted on March 23, 2021 between 7:00-9:00 AM and 4:00-6:00 PM.

Although traffic volumes had recovered somewhat from the lowest levels in 2020, counts in March 2021 remained artificially depressed due to restrictions and limitations on business, school, and other activities associated with COVID-19.

3.2.2 *COVID-19 Restrictions/Limitations*

The following conditions are noted with respect to activity in and around the study area at the time of count collection.

San Marcos Unified School District secondary students returned to campuses beginning March 23, 2021. San Marcos High School is located approximately ½ mile from the southeastern edge of the project study area and contributes to traffic volumes to portions of the study area. This partial reopening is captured in the March 23 and March 25, 2021 traffic counts.

Palomar College is located just beyond the northern edge of the project study area and contributes to traffic volumes to portions of the study area. Most courses during the Spring 2021 semester beginning February 1, 2021 remained online although a limited number of programs provided face-to-face courses and limited on-campus student service were available. This limited activity is captured in the March 2021 traffic counts.

As of March 2021, retail and restaurants at Grand Plaza, located opposite South Las Posas Road from the Project site, (as well as elsewhere) were allowed to operate with restrictions on normal capacity.

3.2.3 *Traffic Volume Adjustment*

Therefore, March 2021 counts were compared to traffic data collected prior to 2020. Overall, March 2021 traffic volumes were consistently lower when compared to the most recently available pre-pandemic traffic counts by a range of 5% to 40%, depending on the location. The weighted average through the project study area was calculated to be 28% below pre-pandemic conditions.

March 2021 traffic counts were adjusted upward to take account of the reduced traffic levels on a location-specific basis similar to future traffic volume forecasting using ADT volumes and the existing (pre-COVID) relationship between ADT and peak hour volumes. Where pre-COVID ADT volumes were not available, the observed percent change for the adjacent segment along the same corridor was used. For a limited number of streets where neither condition was met, the average for the overall study area (28% above March 2021 counts) was used in the forecast.

Pre-COVID traffic data were available for the major roadways in the study area including Las Posas Road, Linda Vista Drive, and San Marcos Boulevard. The study area average was applied only to a limited number of lower-volume roadways such as Pacific Street and La Mirada Drive where comparable pre-COVID data were not available.

The adjusted existing baseline traffic volumes were checked for consistency between intersections where no driveways or roadways exist between intersections. Particular attention was paid to adjusting traffic volumes to balance with the counts collected in March 2020, where available.

Table 3–1 summarizes the Existing ADTs, after adjustment.

Figure 3–2 shows the Existing daily traffic volumes, after adjustment. ***Appendix A*** contains both the current count sheets and pre-COVID counts used for adjustment.

TABLE 3–1
EXISTING TRAFFIC VOLUMES

Street Segment	ADT[a]	Date [b]
Las Posas Road		
1. Descanso Avenue to SR-78 WB Ramps	38,300	March 25, 2021
2. SR-78 WB Ramps to Grand Avenue	43,600	March 25, 2021
3. Grand Avenue to La Mirada Drive	15,400	March 25, 2021
4. La Mirada Drive to Linda Vista Drive	14,500	March 25, 2021
5. Linda Vista Drive to San Marcos Boulevard	11,400	March 25, 2021
Pacific Street		
6. La Mirada Drive to Linda Vista Drive	4,800	March 24, 2021
7. Linda Vista Drive to San Marcos Boulevard	4,500	March 24, 2021
La Mirada Drive		
8. Pacific Street to Las Posas Road	3,600	March 24, 2021
Linda Vista Drive		
9. Rancho Santa Fe Road to Pacific Street	12,600	March 24, 2021
10. Pacific Street to Las Posas Road	9,200	March 24, 2021
11. Las Posas Road to Via Vera Cruz	6,500	March 25, 2021
San Marcos Boulevard		
12. Pacific Street to Las Posas Road	39,600	March 25, 2021
13. Las Posas Road to Via Vera Cruz	35,400	March 25, 2021

Footnotes:

a. Average Daily Traffic Volumes (rounded up to the nearest 100).
b. Counts collected in March 2021 were adjusted based on comparison with pre-COVID traffic data as described in *Section 3.2*. The adjusted volumes are shown in this table.

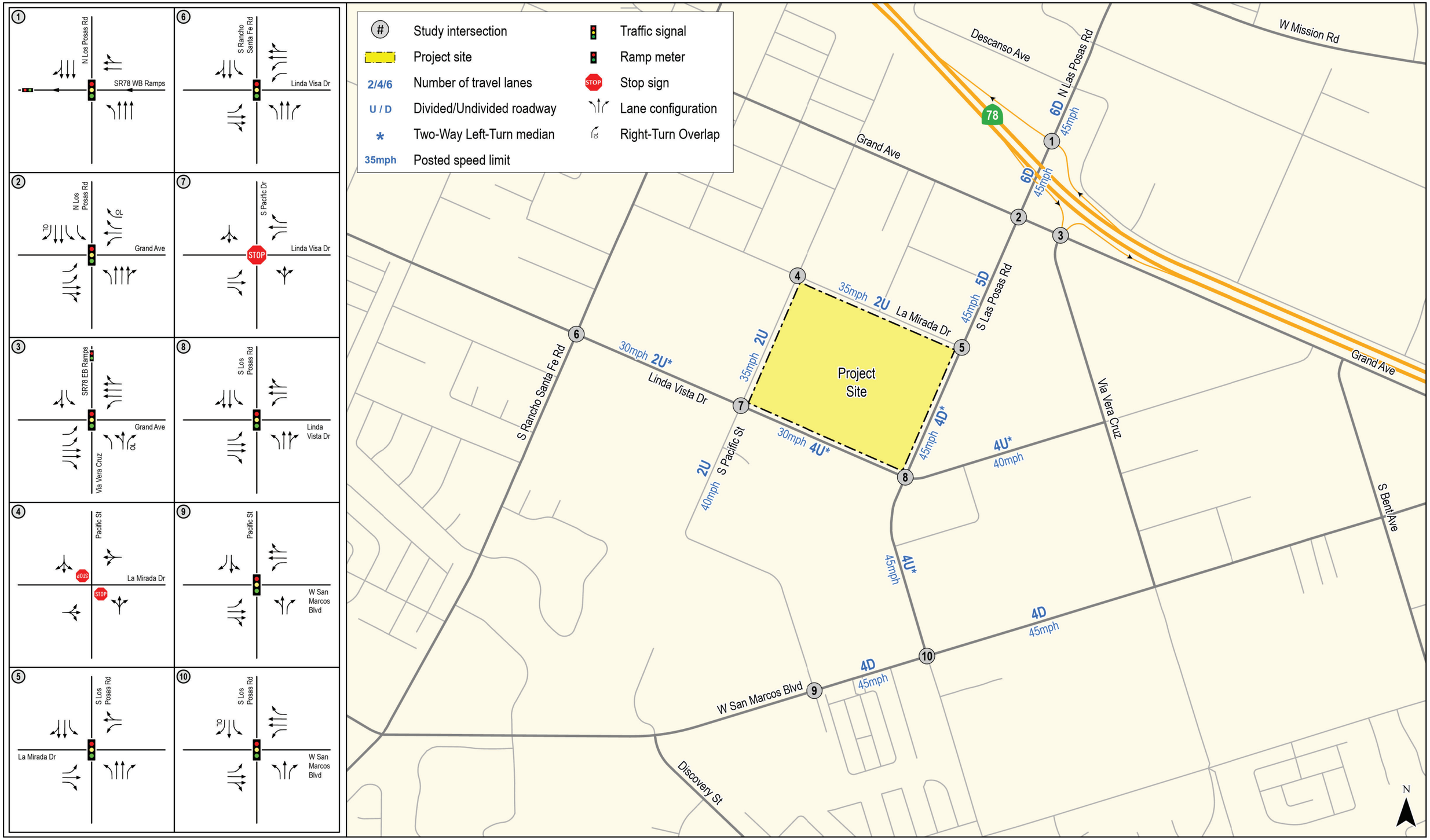

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Figure 3-1
Existing Conditions

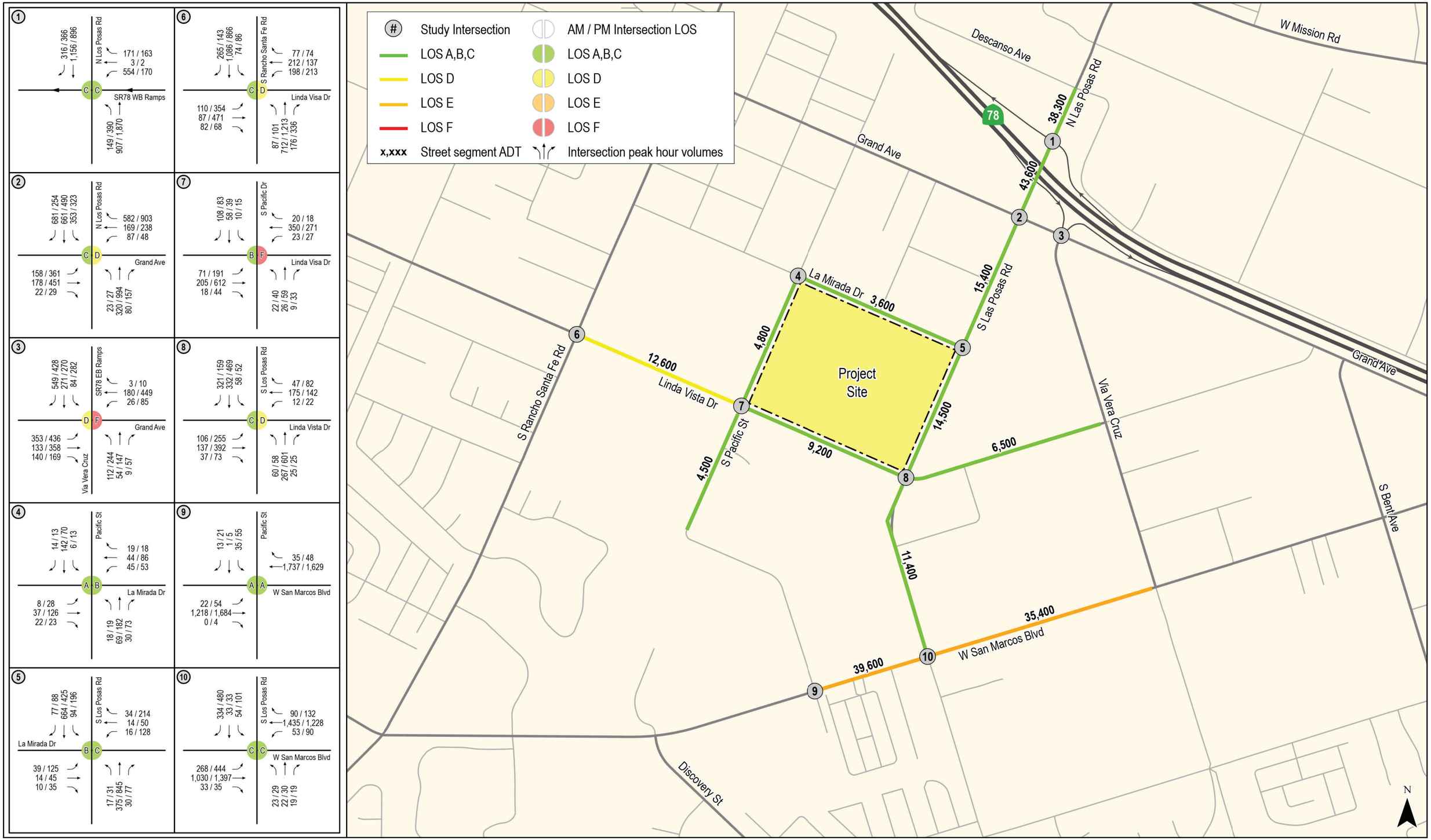

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Figure 3-2
Existing Volumes

Pacific

4.0 LOCAL TRANSPORTATION ANALYSIS APPROACH AND METHODOLOGY

A local transportation analysis is required for projects generating more than 1,000 daily vehicle trips or more than 100 peak hour vehicle trips (if consistent with the latest version of the City's General Plan) or generating at least 500 daily vehicle trips or at least 50 peak hour vehicle trips if inconsistent with the City's latest General Plan.

The Project is estimated to generate 2,694 ADT (see *Section 8.1*) and is part of a proposed amendment to the City's General Plan. Therefore, a local transportation analysis is required.

A scoping memo was prepared and reviewed by City staff. The draft scoping memo and City review comments are included in ***Appendix B***.

4.1 Study Scenarios

- ***Existing Conditions*** are adjusted to account the effects of the COVID-19 pandemic as described in *Section 3.2*.
- ***Near-Term (Interim Year) Conditions*** are based on the SANDAG pre-established interim year scenario closest to the project's anticipated opening year.
- ***Near-Term (Interim Year) Plus Project Conditions*** include project-generated traffic added to interim year volumes.
- ***Horizon Year Conditions*** based on the Regional Transportation Plan (RTP) year, currently 2050.
- ***Horizon Year Plus Project Conditions*** include project-generated traffic added to horizon year traffic volumes.

4.2 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.

4.2.1 *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.

4.2.2 *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 C***.

4.3 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.

5.0 ANALYSIS OF EXISTING CONDITIONS

5.1 Peak Hour Intersection Levels of Service

5.1.1 *Intersection LOS*

Table 5–1a summarizes the peak hour intersection operations under Existing conditions. As seen in *Table 5–1a*, the following study intersections are calculated to currently operate at LOS F:

- Intersection #3. Via Vera Cruz / Grand Avenue / SR-78 EB Ramps (LOS F/E during the AM/PM peak hours)
- Intersection #7. Pacific Street / Linda Vista Drive (LOS F during the PM peak hour)

Appendix D contains the Existing intersection analysis worksheets.

5.1.2 *Intersection Queuing*

Table 5–1b presents the existing 95th percentile peak hour queue lengths for intersection turn pockets where the Project adds traffic within the study area. As shown in *Table 5–1b*, all existing peak hour queues are contained within existing turn pockets except for:

- Intersection #1. La Posas Road / SR-78 Westbound Ramps –
  - Westbound left-turn (AM peak hour)
  - Northbound left-turn (PM peak hour)
- Intersection #3. Via Vera Cruz / SR-78 Eastbound Ramps –
  - Southbound right-turn (AM/PM peak hour)
  - Eastbound left-turn (AM/PM peak hour)
- Intersection #5. Las Posas Road / La Mirada Drive –
  - Eastbound left-turn (PM peak hour)
- Intersection #8. Las Posas Road / Linda Vista Drive –
  - Eastbound left-turn (PM peak hour)
- Intersection #10. Las Posas Road / San Marcos Boulevard –
  - Southbound right-turn (AM/PM peak hour)
  - Eastbound left-turn (AM/PM peak hour)

Appendix E contains the Existing queueing analysis worksheets.

5.2 Daily Street Segment Levels of Service

Table 5–2 summarizes the segment operations under Existing conditions. As seen in *Table 5–2*, the following study segments are calculated to currently operate at LOS E:

- Segment #12. San Marcos Boulevard: Pacific Street to Las Posas Road (LOS E)
- Segment #13. San Marcos Boulevard: Las Posas Road to Via Vera Cruz (LOS E)

TABLE 5–1A
EXISTING INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing	
			Delay[a]	LOS[b]
1. Las Posas Rd / SR-78 WB Ramps	Signal	AM PM	34.4 15.6	C B
2. Las Posas Rd / Grand Ave	Signal	AM PM	32.2 42.8	C D
3. Via Vera Cruz / Grand Ave / SR-78 EB Ramps	Signal	AM PM	>80.0 66.8	F E
4. Pacific St / La Mirada Dr	AWSC[c]	AM PM	9.0 10.7	A B
5. Las Posas Rd / La Mirada Dr	Signal	AM PM	17.9 39.7	B D
6. Rancho Santa Fe Rd / Linda Vista Dr	Signal	AM PM	36.1 49.1	D D
7. Pacific St / Linda Vista Dr	AWSC	AM PM	14.8 66.9	B F
8. Las Posas Rd / Linda Vista Dr	Signal	AM PM	29.9 42.9	C D
9. Pacific St / San Marcos Blvd	Signal	AM PM	7.9 9.3	A A
10. Las Posas Rd / San Marcos Blvd	Signal	AM PM	34.7 33.5	C C

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. AWSC = All-Way Stop Controlled intersection.

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 5–1B
EXISTING INTERSECTION QUEUING

Intersection	Movement	Storage (ft)	Peak Hour	Existing Queue (ft) [a]
1. Las Posas Rd / SR-78 WB Ramps	WBL	340	AM	**464**
			PM	176
	NBL	300	AM	190
			PM	**303**
2. Las Posas Rd / Grand Ave	WBL	200	AM	57
			PM	37
3. Via Vera Cruz / SR-78 EB Ramps	SBR	220	AM	**964**
			PM	**752**
	EBL	140	AM	**150**
			PM	**234**
5. Las Posas Rd / La Mirada Dr	NBL	250	AM	34
			PM	57
	EBL	110	AM	59
			PM	**199**
	EBR	110	AM	0
			PM	0
8. Las Posas Rd / Linda Vista Dr	SBL	130	AM	97
			PM	95
	NBL	240	AM	104
			PM	109
	EBL	170	AM	168
			PM	**392**
9. Pacific St / San Marcos Blvd	EBL	240	AM	49
			PM	91

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TABLE 5–1B
EXISTING INTERSECTION QUEUING

Intersection	Movement	Storage (ft)	Peak Hour	Existing Queue (ft) [a]
Continued from Previous Page				
10. Las Posas Rd / San Marcos Blvd	SBR	240	AM	**299**
			PM	**413**
	SBL	240	AM	85
			PM	145
	NBL	670	AM	17
			PM	47
	EBR	240	AM	**411**
			PM	**679**

Footnotes:

a. 95th percentile queue length.

General Notes:

- **BOLD** indicates queue is calculated to exceed available storage.
- Ft = Feet
- SBR = Direction/Turn Lane; e.g. southbound right-turn lane.

TABLE 5–2
EXISTING STREET SEGMENT OPERATIONS

Street Segment	Classification	Capacity (LOS E) [a]	ADT [b]	LOS [c]	V/C [d]
Las Posas Road					
1. Descanso Ave to SR-78 WB Ramps	6-Lane Prime Arterial	60,000	38,300	C	0.638
2. SR-78 WB Ramps to Grand Ave	6-Lane Prime Arterial	60,000	43,600	C	0.727
3. Grand Ave to La Mirada Dr	4-Lane Major Arterial	40,000	15,400	B	0.385
4. La Mirada Dr to Linda Vista Dr	4-Lane Major Arterial	40,000	14,500	A	0.363
5. Linda Vista Dr to San Marcos Blvd	4-Lane Secondary Arterial	30,000	11,400	B	0.380
Pacific Street					
6. La Mirada Dr to Linda Vista Dr	2-Lane Collector (Commercial/Industrial)	8,000	4,800	C	0.600
7. Linda Vista Dr to San Marcos Blvd	2-Lane Collector (Commercial/Industrial)	8,000	4,500	C	0.563
La Mirada Drive					
8. Pacific St to Las Posas Rd	2-Lane Collector (Commercial/Industrial)	8,000	3,600	B	0.450
Linda Vista Drive					
9. Rancho Santa Fe Rd to Pacific St	2-Lane Collector (Continuous TWLTL)	15,000	12,600	D	0.840
10. Pacific St to Las Posas Rd	4-Lane Secondary Arterial	30,000	9,200	A	0.307
11. Las Posas Rd to Via Vera Cruz	4-Lane Collector (No TWLTL)	15,000	6,500	B	0.433
San Marcos Boulevard					
12. Pacific St to Las Posas Rd	4-Lane Major Arterial	40,000	39,600	E	0.990
13. Las Posas Rd to Via Vera Cruz	4-Lane Major Arterial	40,000	35,400	E	0.885

Footnotes:

a. Capacities based on based on the City of San Marcos' *Roadway Classifications, Capacity, and LOS* (see *Appendix C*).

b. Average Daily Traffic Volumes.

c. Level of Service.

d. Volume to Capacity.

e. Two-Way Left-Turn Lane

6.0 NEAR-TERM (INTERIM YEAR 2025) CONDITIONS

This section describes Near-Term (Interim Year 2025) roadway network and traffic volume conditions. Year 2025 was selected based on SANDAG's pre-established interim year scenarios, as the closest the opening year of the proposed Project.

6.1 Network Conditions

Within the study area, the existing street system as illustrated in *Figure 3–1* is assumed for Near-Term (Interim Year 2025) conditions with no notable improvements. Adjacent to the study area, the following network change is assumed to be complete by Year 2025:

- Extension of Discovery Street, from Bent Avenue/Craven Road to Twin Oaks Valley Road (four-lane arterial)

This network change is included in the SANDAG Year 2025 interim year scenario model. Per the City of San Marcos Capital Improvement Program, this capital improvement project is funded with target completion in Fall 2023.

However, it should be noted that based on a comparison of base year and Year 2025 forecast volumes, this roadway extension affects traffic volumes on existing portions of Discovery Street and Craven Road but does not substantially affect traffic patterns within the study area.

6.2 Near-Term (Interim Year 2025) Traffic Volumes

To forecast future traffic volumes for Near-Term (Interim Year 2025) conditions, the SANDAG Series 14 Model was utilized. 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 F*** 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 6–1 illustrates the peak hour and ADT segment volumes under the Near-Term scenario.

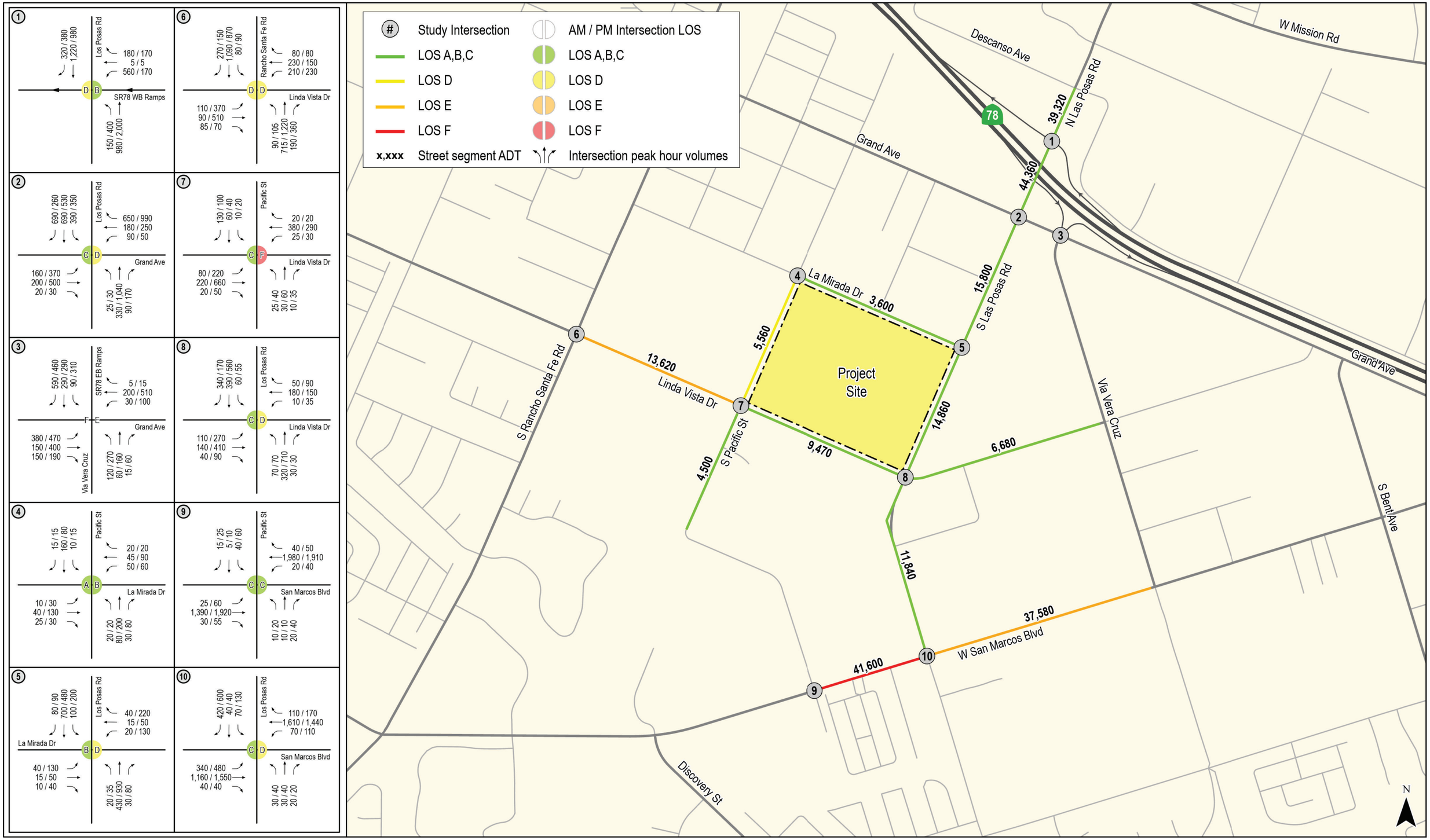

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Figure 6-1
Near-Term without Project Traffic Volumes

7.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

As described in *Section 2.2*, the proposed Project would provide a maximum of 449 residential dwelling units.

The following is a discussion of the traffic expected to be generated by the Project.

7.1 Trip Generation

7.1.1 *Trip Rates*

Trip generation for Project multi-family housing was estimated using trip rates from SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002*. The trip generation rate for "Apartment (or any multi-family units more than 20 DU/acre)" was used based on the proposed density.

SANDAG provides for a 5% daily trip reduction for land uses with transit access or near transit stations accessible within ¼ mile. The site is located adjacent to transit service with stops located near both the north and south ends of the site along Las Posas Road. The Project will also upgrade the existing stop along its frontage with enhanced amenities and include clear and direct access to bus stops in the site design. To provide a conservative analysis, however, no transit trip reduction was applied to the trip generation for this analysis.

7.1.2 *Project Trips*

Table 7–1 tabulates the total Project traffic generation. The Project is calculated to generate a total of 2,694 ADT with 216 AM peak hour trips (43 inbound / 173 outbound) and 242 PM peak hour trips (169 inbound and 73 outbound).

TABLE 7–1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate [a]	ADT	Rate	In:Out Split	Volume			Rate	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Apartments (multi-family > 20 du/acre)	449 DU	6/DU	2,694	8%	20:80	43	173	216	9%	70:30	169	73	242

Footnotes:

a. Trip generation rate from SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002* ("SANDAG Brief Guide").

General Note:

- DU = Dwelling Unit

7.2 Trip Distribution and Assignment

The traffic generated by the Project was distributed and assigned based on anticipated traffic patterns to and from the site and the Project site's proximity to state highways and arterials. ***Figure 7–1a*** shows the Project traffic distribution.

The Project will be served by three driveways located on La Mirada Drive, and one driveway on Linda Vista Drive. All driveways are assumed to provide full turning movements. An emergency-only access is proposed on Las Posas Road; no day-to-day Project traffic was distributed to this driveway.

The split of Project traffic among each driveway was determined based on the number of dwelling units served by each access point. ***Figure 8–1b*** shows the Project driveway traffic distribution to provide additional clarity on the local distribution of trips on the streets immediately adjacent to the Project site. Project traffic was assigned using this distribution and the trip generation in *Table 7–1*. ***Figures 7–2a & 7–2b*** show the overall and driveway Project traffic volumes. ***Figure 7–3*** shows the Near-Term + Project traffic volumes.

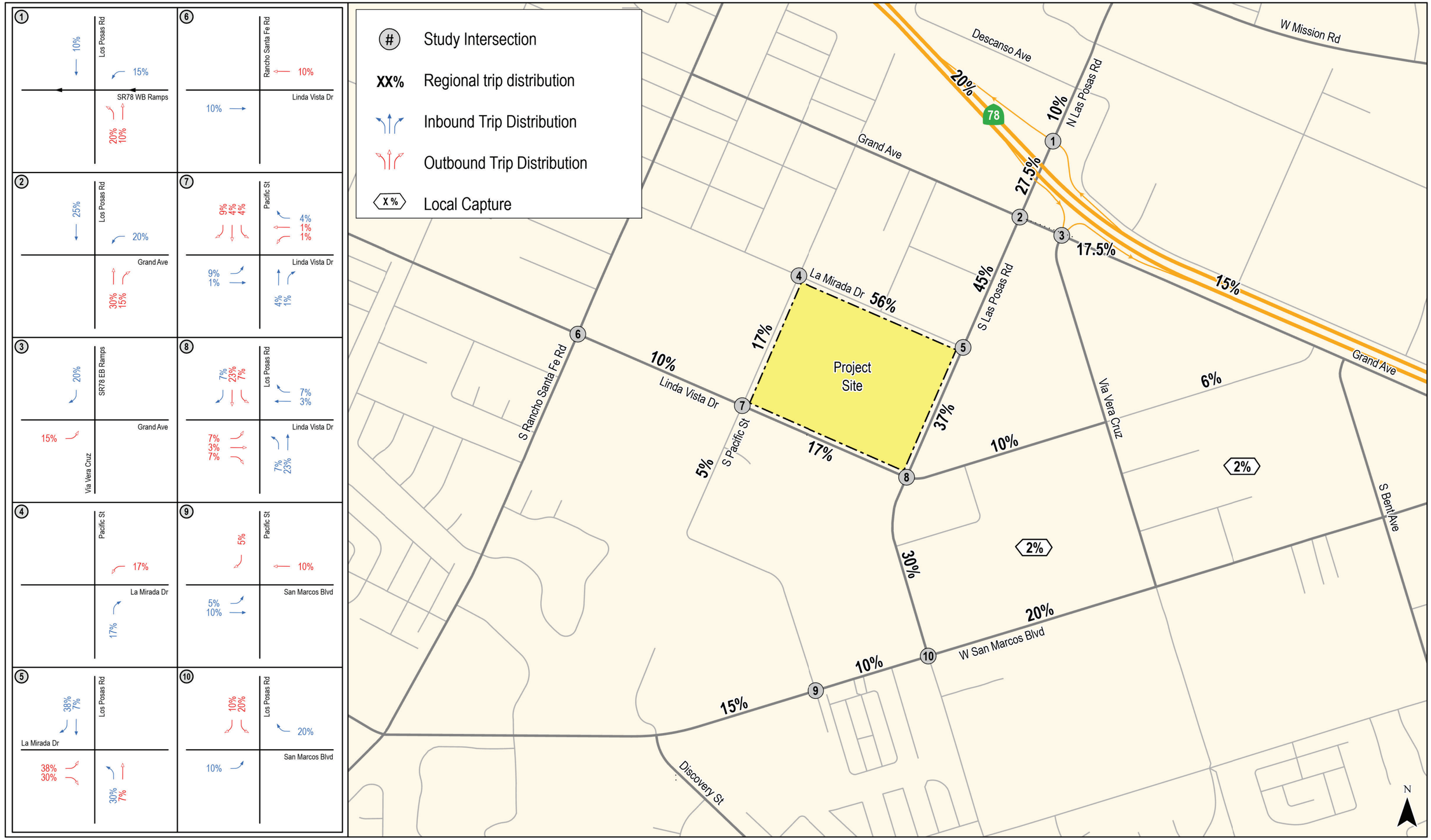

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Figure 7-1a
Project Traffic Distribution

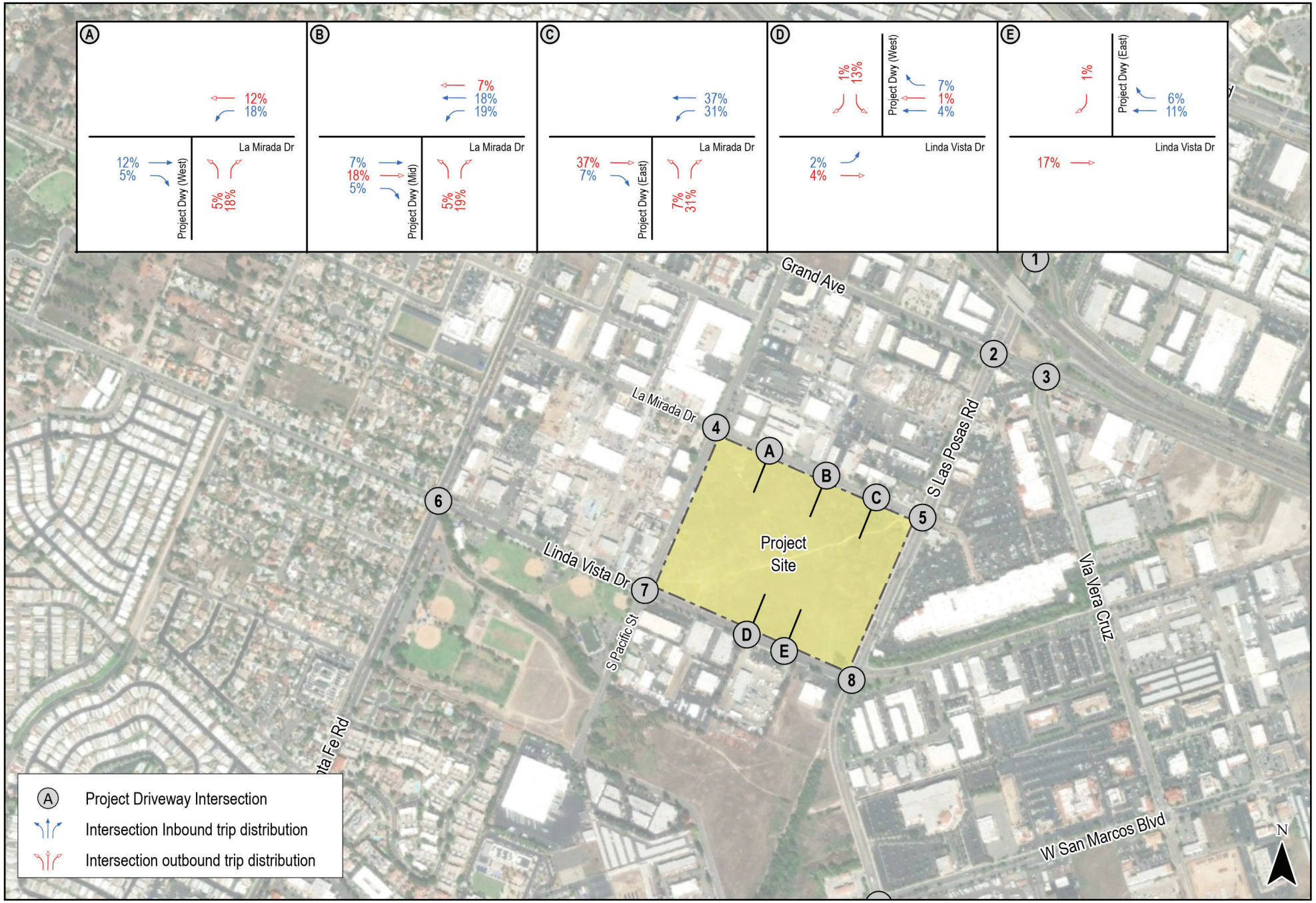

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Figure 7-1b
Project Driveway Traffic Distribution

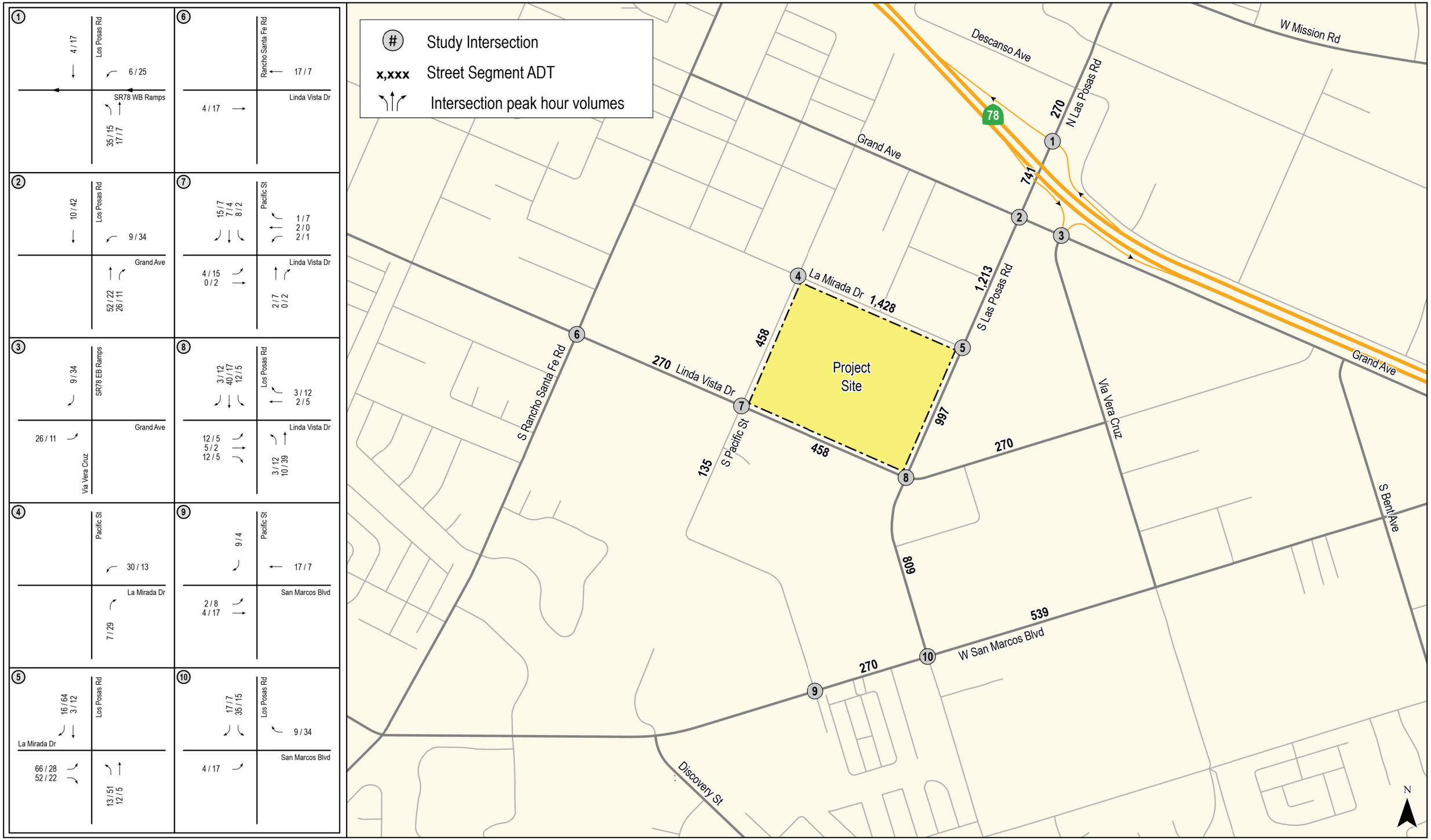

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Figure 7-2a
Project Traffic Volumes

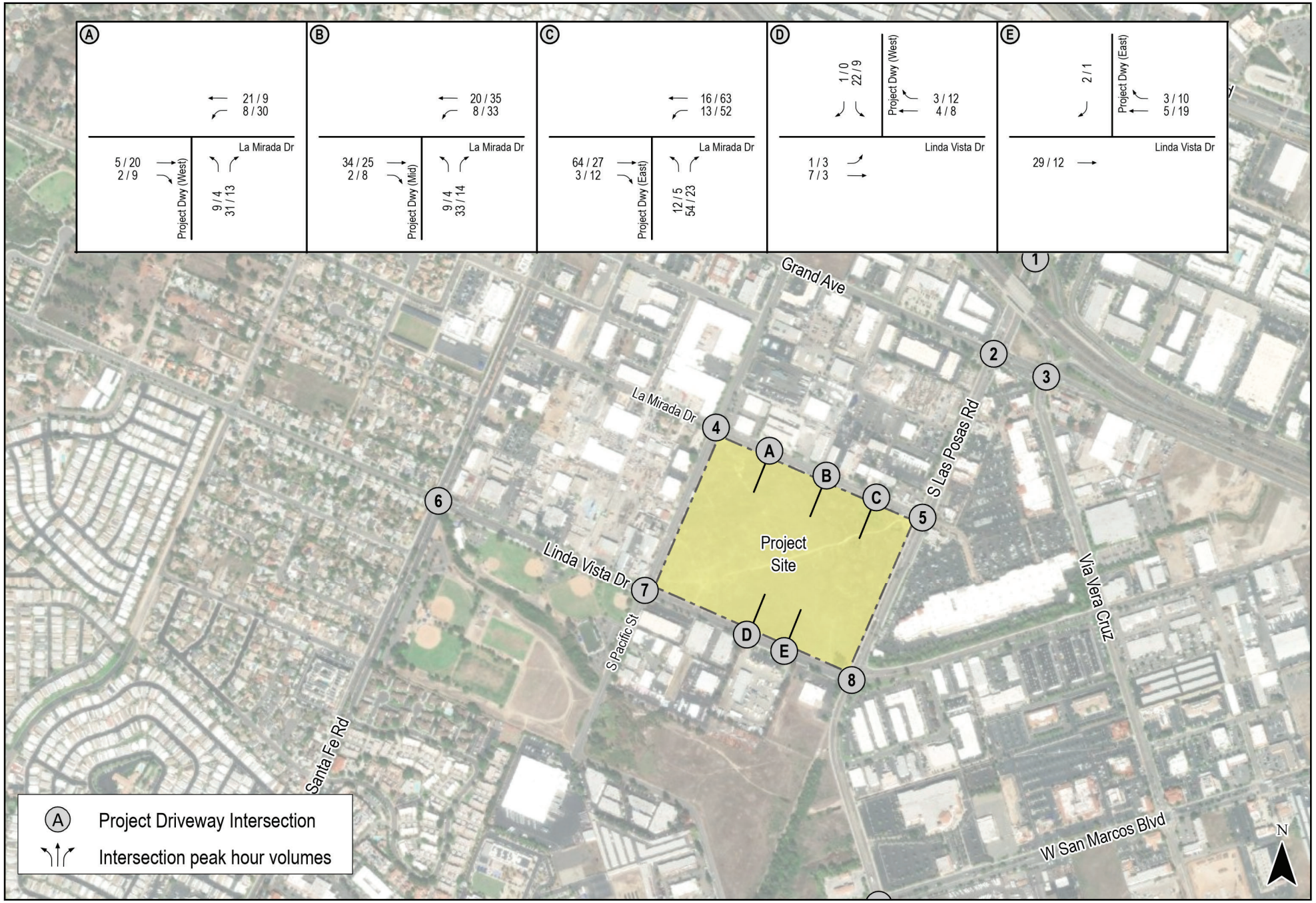

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Figure 7-2b
Project Driveway Traffic Volumes

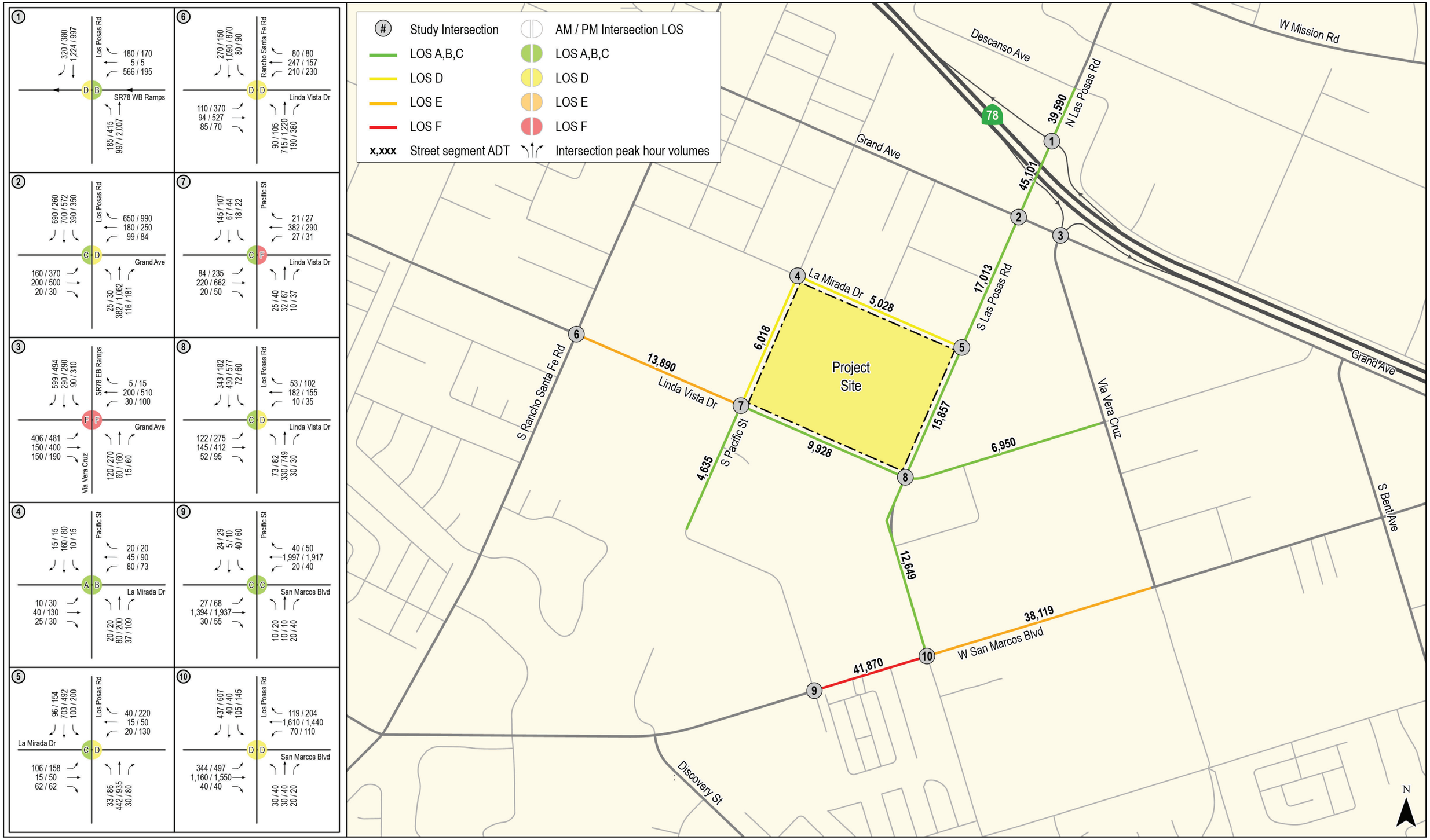

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Figure 7-3
Near-Term + Project Traffic Volumes

8.0 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 Project.

8.1 Near-Term Without Project

8.1.1 *Intersection Analysis*

Table 8–1a summarizes the intersection operations under the Near-Term without Project condition. As seen in *Table 8–1a*, the following study intersections are calculated to operate at LOS F:

- Intersection #3. Via Vera Cruz / Grand Avenue / SR-78 EB Ramps (LOS F/E during the AM/PM peak hours)
- Intersection #7. Pacific Street / Linda Vista Drive (LOS F during the PM peak hour)

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

8.1.2 *Intersection Queuing*

Table 8–1b presents the 95th percentile peak hour queue lengths for intersection turn pockets where the Project adds traffic within the study area for the Near-Term with Project condition. As shown in *Table 8–1b*, all Near-Term without Project peak hour queues are contained within existing turn pockets except for:

- Intersection #1. La Posas Road / SR-78 Westbound Ramps –
    - Westbound left-turn (AM peak hour)
- Intersection #3. Via Vera Cruz / SR-78 Eastbound Ramps –
    - Southbound right-turn (AM/PM peak hour)
    - Eastbound left-turn (AM/PM peak hour)
- Intersection #5. Las Posas Road / La Mirada Drive –
    - Eastbound left-turn (PM peak hour)
- Intersection #8. Las Posas Road / Linda Vista Drive –
    - Eastbound left-turn (AM/PM peak hour)
- Intersection #10. Las Posas Road / San Marcos Boulevard –
    - Southbound right-turn (AM/PM peak hour)
    - Eastbound left-turn (AM/PM peak hour)

Appendix H contains the Near-Term without Project queueing analysis worksheets.

8.1.3 *Segment Operations*

Table 8–2 summarizes the segment operations under the Near-Term without Project condition. As seen in *Table 8–2*, the following study segments are calculated to operate at LOS E or F:

- Segment #9. Linda Vista Drive: Rancho Santa Fe to Pacific Street (LOS E)
- Segment #12. San Marcos Boulevard: Pacific Street to Las Posas Road (LOS F)
- Segment #13. San Marcos Boulevard: Las Posas Road to Via Vera Cruz (LOS E)

8.2 Near-Term + Project

8.2.1 *Intersection Analysis*

Table 8–1a summarizes the intersection operations under the Near-Term + Project condition. As seen in *Table 8–1a*, with the addition of Project traffic, the following study intersections are calculated to continue to operate at LOS F:

- **Intersection #3. Via Vera Cruz / Grand Avenue / SR-78 EB Ramps (LOS F during the AM/PM peak hours)**
- **Intersection #7. Pacific Street / Linda Vista Drive (LOS F during the PM peak hour)**

Based on the established Level of Service Standards outlined in *Section 4.3*, the Project is calculated to result in a substantial effect to both the above-listed intersections.

Roadway improvements to address these Level of Service deficiencies are proposed and analyzed in *Section 15.0*.

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

8.2.2 *Intersection Queuing*

Table 8–1b presents the 95th percentile peak hour queue lengths for intersection turn pockets where the Project adds traffic within the study area for the Near-Term + Project condition. As shown in *Table 8–1b*, all Project driveways operate with minimal queuing. For off-site intersections, all near-term peak hour queues, with the addition of Project traffic, are contained within existing turn pockets except for:

- Intersection #1. La Posas Road / SR-78 Westbound Ramps –
  - Westbound left-turn (AM peak hour)
- Intersection #3. Via Vera Cruz / SR-78 Eastbound Ramps –
  - Southbound right-turn (AM/PM peak hour)
  - Eastbound left-turn (AM/PM peak hour)
- Intersection #5. Las Posas Road / La Mirada Drive –
  - Eastbound left-turn (AM/PM peak hour)
- Intersection #8. Las Posas Road / Linda Vista Drive –

- Eastbound left-turn (AM/PM peak hour)

- Intersection #10. Las Posas Road / San Marcos Boulevard –
  - Southbound right-turn (AM/PM peak hour)
  - Eastbound left-turn (AM/PM peak hour)

The maximum queue increase due to the Project is 98 feet at the eastbound left turn from La Mirada Drive to Las Posas Road during the AM peak hour. This is the only location/peak hour where the Project causes a queueing deficiency. ***Appendix J*** contains the Near-Term + Project queueing analysis worksheets.

8.2.3 *Segment Operations*

Table 8–2 summarizes the segment operations under the Near-Term + Project condition. As seen in *Table 8–2*, with the addition of Project traffic, the following study segments are calculated to continue to operate at LOS E or F:

- Segment #9. Linda Vista Drive: Rancho Santa Fe to Pacific Street (LOS E)
- Segment #12. San Marcos Boulevard: Pacific Street to Las Posas Road (LOS F)
- Segment #13. San Marcos Boulevard: Las Posas Road to Via Vera Cruz (LOS E)

The Project-related increase in V/C ratio for each of the above-listed street segments already operating at unacceptable LOS is less than the threshold of 0.02. The Project is not calculated to result in substantial effects to the study segments and no improvements are required.

TABLE 8–1A
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Near-Term Without Project		Near-Term + Project		Δ [c]	Substantial Effect?
			Delay [a]	LOS [b]	Delay	LOS		
1. Las Posas Rd / SR-78 WB Ramps	Signal	AM	35.5	D	37.7	D	2.2	No
		PM	15.7	B	16.8	B	1.1	No
2. Las Posas Rd / Grand Ave	Signal	AM	33.0	C	33.1	C	0.1	No
		PM	45.2	D	46.0	D	0.8	No
3. Via Vera Cruz / Grand Ave / SR-78 EB Ramps	Signal	AM	**>80.0**	**F**	**>80.0**	**F**	**>2.0**	**Yes**
		PM	**79.4**	**E**	**>80.0**	**F**	**>2.0**	**Yes**
4. Pacific St / La Mirada Dr	AWSC	AM	9.4	A	9.7	A	0.3	No
		PM	11.3	B	11.5	B	0.2	No
5. Las Posas Rd / La Mirada Dr	Signal	AM	18.4	B	21.2	C	2.8	No
		PM	46.0	D	51.2	D	5.2	No
6. Rancho Santa Fe Rd / Linda Vista Dr	Signal	AM	37.8	D	38.2	D	0.4	No
		PM	52.6	D	52.9	D	0.3	No
7. Pacific St / Linda Vista Dr	AWSC [d]	AM	17.5	C	18.8	C	1.3	No
		PM	**>50.0**	**F**	**>50.0**	**F**	**>2.0**	**Yes**
8. Las Posas Rd / Linda Vista Dr	Signal	AM	30.5	C	32.8	C	2.3	No
		PM	45.8	D	48.0	D	2.2	No
9. Pacific St / San Marcos Blvd	Signal	AM	25.7	C	26.2	C	0.5	No
		PM	31.9	C	32.6	C	0.7	No
10. Las Posas Rd / San Marcos Blvd	Signal	AM	35.0	C	35.6	D	0.6	No
		PM	39.5	D	41.0	D	1.5	No
A. Project Driveway (W) / La Mirada Dr	MSSC [e]	AM	—	—	9.2	A	—	No
		PM	—	—	10.4	B	—	No
B. Project Driveway (M) / La Mirada Dr	MSSC	AM	—	—	9.3	A	—	No
		PM	—	—	10.5	B	—	No
C. Project Driveway (E) / La Mirada Dr	MSSC	AM	—	—	9.7	A	—	No
		PM	—	—	10.7	B	—	No

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TABLE 8–1A
NEAR-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Near-Term Without Project		Near-Term + Project		Δ [c]	Substantial Effect?
			Delay [a]	LOS [b]	Delay	LOS		
Continued from Previous Page								
D. Project Driveway (W) / Linda Vista Dr	MSSC	AM	—	—	14.5	B	—	No
		PM	—	—	17.0	C	—	No
E. Project Driveway (E) / Linda Vista Dr	MSSC	AM	—	—	12.7	B	—	No
		PM	—	—	10.9	B	—	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. AWSC = All-Way Stop Controlled intersection. Average delay reported.
e. MSSC = Minor Street Stop Controlled intersection. Worst left turn delay reported.

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 8–1B
NEAR-TERM INTERSECTION QUEUING

Intersection	Movement	Storage (ft)	Peak Hour	Near-Term without Project	Near-Term + Project
				Queue (ft) [a]	Queue (ft) [a]
1. Las Posas Rd / SR-78 WB Ramps	WBL	340	AM	**470**	**480**
			PM	176	201
	NBL	300	AM	178	237
			PM	284	294
2. Las Posas Rd / Grand Ave	WBL	200	AM	57	61
			PM	37	60
3. Via Vera Cruz / SR-78 EB Ramps	SBR	220	AM	**1,052**	**1,066**
			PM	**842**	**892**
	EBL	140	AM	**152**	**163**
			PM	**262**	**270**
5. Las Posas Rd / La Mirada Dr	NBL	250	AM	37	54
			PM	61	173
	EBL	110	AM	59	**157**
			PM	**211**	**267**
	EBR	110	AM	0	0
			PM	0	0
8. Las Posas Rd / Linda Vista Dr	SBL	130	AM	104	127
			PM	103	116
	NBL	240	AM	121	128
			PM	135	162
	EBL	170	AM	**176**	**199**
			PM	**419**	**429**
9. Pacific St / San Marcos Blvd	EBL	240	AM	53	56
			PM	100	121

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TABLE 8–1B
NEAR-TERM INTERSECTION QUEUING

Intersection	Movement	Storage (ft)	Peak Hour	Near-Term without Project	Near-Term + Project
				Queue (ft) [a]	Queue (ft) [a]
Continued from Previous Page					
10. Las Posas Rd / San Marcos Blvd	SBR	240	AM	**422**	**422**
			PM	**584**	**597**
	SBL	240	AM	104	147
			PM	183	203
	NBL	670	AM	31	38
			PM	51	55
	EBR	240	AM	**578**	**588**
			PM	**760**	**799**
A. La Mirada Dr / Project Driveway (W)	WBL	345 [b]	AM	—	7
			PM	—	29
B. La Mirada Dr / Project Driveway (M)	WBL	370 [b]	AM	—	13
			PM	—	31
C. La Mirada Dr / Project Driveway (E)	WBL	130 [b]	AM	—	11
			PM	—	33
D. Linda Vista Dr / Project Driveway (W)	EBL	640 [b]	AM	—	8
			PM	—	8

Footnotes:

a. 95th percentile queue length.
b. Storage shown at this location is distance to upstream project driveway or public street.

General Notes:

- **BOLD** indicates queue is calculated to exceed available storage.
- Ft = Feet
- SBR = Direction/Turn Lane; e.g. southbound right-turn lane.

TABLE 8–2
NEAR-TERM STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS E) [a]	Near-Term Without Project			Near-Term + Project			Δ[e]	Substantial Effect?
		ADT [b]	LOS [c]	V/C [d]	ADT	LOS	V/C		
Las Posas Road									
1. Descanso Ave to SR-78 WB Ramps	60,000	39,320	C	0.655	39,590	C	0.660	0.005	No
2. SR-78 WB Ramps to Grand Ave	60,000	44,360	C	0.739	45,101	C	0.752	0.0013	No
3. Grand Ave to La Mirada Dr	40,000	15,800	B	0.395	17,013	B	0.425	0.030	No
4. La Mirada Dr to Linda Vista Dr	40,000	14,860	A	0.372	15,857	B	0.396	0.024	No
5. Linda Vista Dr to San Marcos Blvd	30,000	11,840	B	0.395	12,649	B	0.422	0.027	No
Pacific Street									
6. La Mirada Dr to Linda Vista Dr	8,000	5,560	D	0.695	6,018	D	0.752	0.057	No
7. Linda Vista Dr to San Marcos Blvd	8,000	4,500	C	0.563	4,635	C	0.579	0.016	No
La Mirada Drive									
8. Pacific St to Las Posas Rd	8,000	3,600	C	0.450	5,028	D	0.629	0.179	No
Linda Vista Drive									
9. Rancho Santa Fe Rd to Pacific St	15,000	13,620	E	0.908	13,890	E	0.926	0.018	No
10. Pacific St to Las Posas Rd	30,000	9,470	A	0.316	9,928	A	0.331	0.015	No
11. Las Posas Rd to Via Vera Cruz	15,000	6,680	B	0.445	6,950	B	0.463	0.018	No
San Marcos Boulevard									
12. Pacific St to Las Posas Rd	40,000	41,600	F	1.040	41,870	F	1.047	0.007	No
13. Las Posas Rd to Via Vera Cruz	40,000	37,580	E	0.940	38,119	E	0.953	0.013	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.

9.0 HORIZON YEAR (YEAR 2050) CONDITIONS

9.1 Horizon Year (Year 2050) Network Conditions

The Year 2050 street network in the SANDAG Series 14 forecast model includes changes to the roadway system in the vicinity of the study area including the planned extension of McMahr Road between San Marcos Boulevard and Discovery Street.

For the purposes of this traffic study, this network addition is assumed in the long-term traffic volumes forecast but no changes to the study area roadway geometry or intersection control as shown in *Figure 3–1*, were assumed.

9.2 Horizon Year (Year 2050) Traffic Volumes

To forecast future traffic volumes for Horizon Year (Year 2050) conditions, the SANDAG Series 14 Model was utilized. 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 E* 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.

As noted in the previous section, completion of the extension of McMahr Road between San Marcos Boulevard and Discovery Street was assumed in the traffic volume forecast. Traffic volumes associated with the Project as described in Section 7.0 were added to Year 2050 baseline traffic volumes to arrive at Year 2050 + Project traffic.

Figure 9–1 shows the Horizon Year (Year 2050) without Project traffic volumes. ***Figure 9–2*** shows the Horizon Year (Year 2050) + Project traffic volumes.

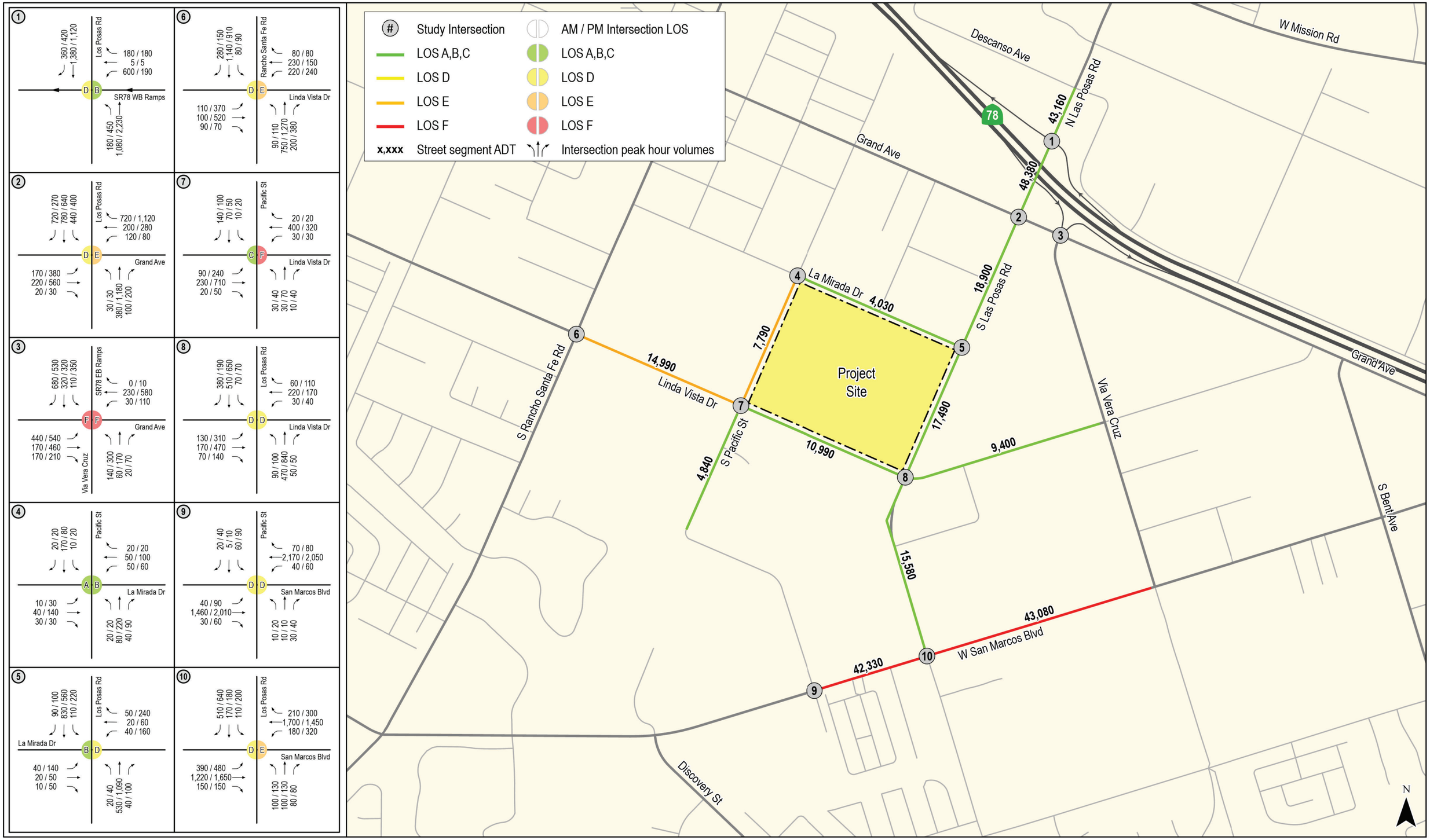

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Figure 9-1
Long-Term without Project Traffic Volumes

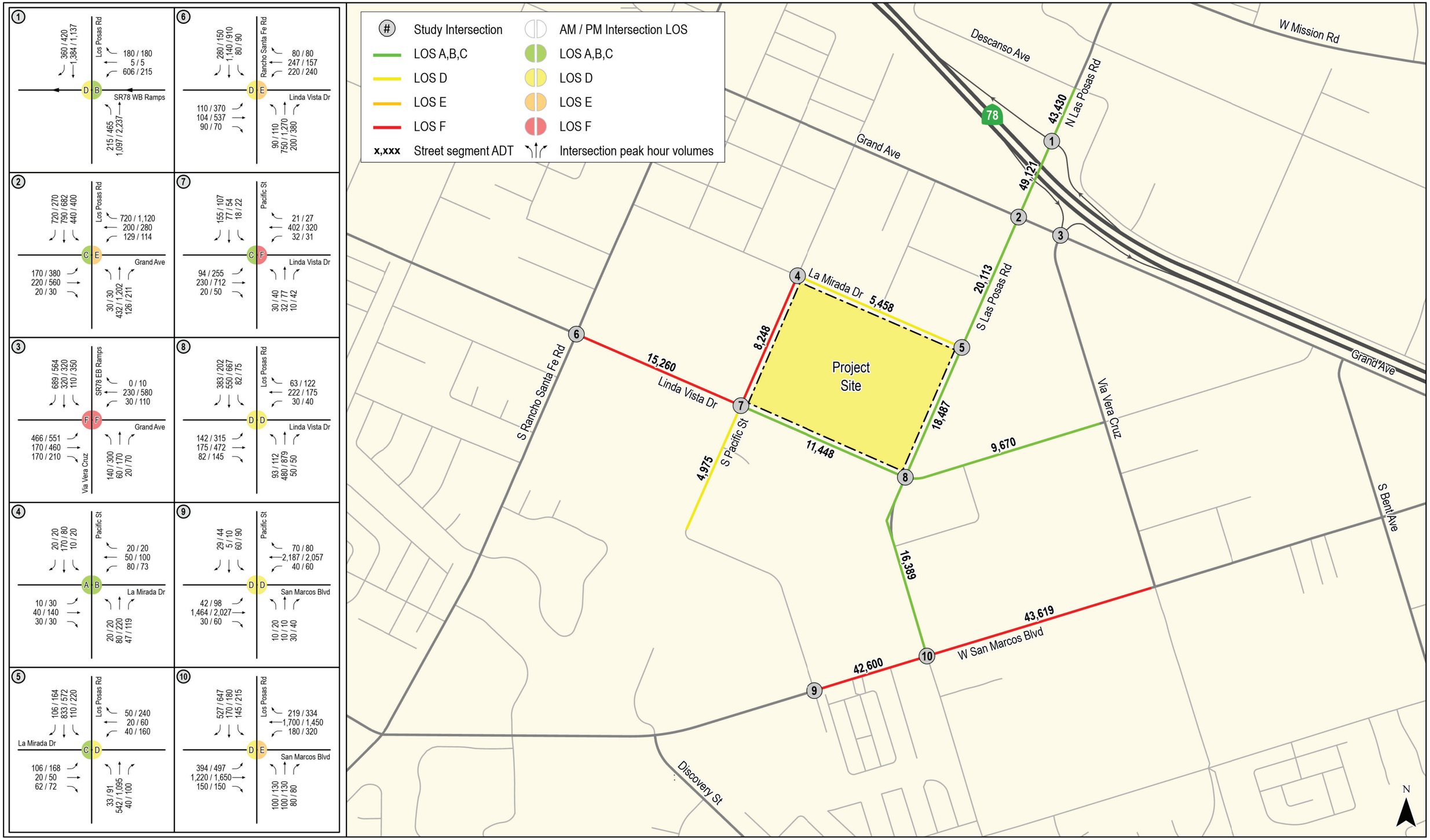

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Figure 9-2
Long-Term + Project Traffic Volumes

10.0 ANALYSIS OF HORIZON YEAR SCENARIOS

10.1 Long-Term Without Project

10.1.1 *Intersection Analysis*

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

- Intersection #2. Las Posas Road / Grand Avenue (LOS E during the PM peak hour)
- Intersection #3. Via Vera Cruz / Grand Avenue / SR-78 EB Ramps (LOS F during the AM/PM peak hours)
- Intersection #6. Rancho Santa Fe Road / Linda Vista Drive (LOS E during the PM peak hour)
- Intersection #7. Pacific Street / Linda Vista Drive (LOS F during the PM peak hour)
- Intersection #10. Las Posas Road / San Marcos Boulevard (LOS E during the PM peak hour)

Appendix K contains the Long-Term without Project intersection analysis calculation worksheets.

10.1.2 *Intersection Queuing*

Table 10–1b presents the 95th percentile peak hour queue lengths for intersection turn pockets where the Project adds traffic within the study area for the Long-Term without Project condition. As shown in *Table 10–1b*, all Long-Term without Project peak hour queues are contained within existing turn pockets except for:

- Intersection #1. La Posas Road / SR-78 Westbound Ramps –
    - Westbound left-turn (AM peak hour)
- Intersection #3. Via Vera Cruz / SR-78 Eastbound Ramps –
    - Southbound right-turn (AM/PM peak hour)
    - Eastbound left-turn (AM/PM peak hour)
- Intersection #5. Las Posas Road / La Mirada Drive –
    - Eastbound left-turn (PM peak hour)
- Intersection #8. Las Posas Road / Linda Vista Drive –
    - Southbound left-turn (PM peak hour)
    - Eastbound left-turn (AM/PM peak hour)
- Intersection #10. Las Posas Road / San Marcos Boulevard –
    - Southbound right-turn (AM/PM peak hour)
    - Southbound left-turn (PM peak hour)

- Eastbound left-turn (AM/PM peak hour)

Appendix L contains the Long-Term without Project queueing analysis worksheets.

10.1.3 *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 E or F:

- Segment #6. Pacific Street: La Mirada Drive to Linda Vista Drive (LOS E)
- Segment #9. Linda Vista Drive: Rancho Santa Fe Road to Pacific Street (LOS E)
- Segment #12. San Marcos Boulevard: Pacific Street to Las Posas Road (LOS F)
- Segment #13. San Marcos Boulevard: Las Posas Road to Via Vera Cruz (LOS F)

10.2 Long-Term + Project

10.2.1 *Intersection Analysis*

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

- Intersection #2. Las Posas Road / Grand Avenue (LOS E during the PM peak hour)
- **Intersection #3. Via Vera Cruz / Grand Avenue / SR-78 EB Ramps (LOS F during the AM/PM peak hours)**
- Intersection #6. Rancho Santa Fe Road / Linda Vista Drive (LOS E during the PM peak hour)
- **Intersection #7. Pacific Street / Linda Vista Drive (LOS F during the PM peak hour)**
- Intersection #10. Las Posas Road / San Marcos Boulevard (LOS E during the PM peak hour)

Based on the established Level of Service Standards outlined in *Section 4.3*, the Project is calculated to result in a substantial effect to the two (2) **bolded** intersections above. The Project-related change in delay at the remaining intersections is below the threshold of 2.0 seconds.

Roadway improvements to address these Level of Service deficiencies are proposed and analyzed in *Section 15.0*.

Appendix M contains the Long-Term + Project intersection analysis calculation worksheets.

10.2.2 *Intersection Queuing*

Table 10–1b presents the 95th percentile peak hour queue lengths for intersection turn pockets where the Project adds traffic within the study area for the Long-Term + Project condition. As shown in *Table 10–1b*, all Project driveways operate with minimal queuing. For off-site intersections, all Long-Term + Project peak hour queues are contained within existing turn pockets except for:

- Intersection #1. La Posas Road / SR-78 Westbound Ramps –
    - Westbound left-turn (AM peak hour)

- Intersection #3. Via Vera Cruz / SR-78 Eastbound Ramps –
    - Southbound right-turn (AM/PM peak hour)
    - Eastbound left-turn (AM/PM peak hour)
- Intersection #5. Las Posas Road / La Mirada Drive –
    - Eastbound left-turn (AM/PM peak hour)
- Intersection #8. Las Posas Road / Linda Vista Drive –
    - Southbound left-turn (AM/PM peak hour)
    - Eastbound left-turn (AM/PM peak hour)
- Intersection #10. Las Posas Road / San Marcos Boulevard –
    - Southbound right-turn (AM/PM peak hour)
    - Southbound left-turn (PM peak hour)
    - Eastbound left-turn (AM/PM peak hour)

The maximum queue increase due to the Project is 98 feet at the eastbound left turn from La Mirada Drive to Las Posas Road during the AM peak hour. This is the only location/peak hour where the Project causes a queueing deficiency. ***Appendix N*** contains the Long-Term + Project queueing analysis worksheets.

10.2.3 *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 E or F:

- **Segment #6. Pacific Street: La Mirada Drive to Linda Vista Drive (LOS F)**
- Segment #9. Linda Vista Drive: Rancho Santa Fe Road to Pacific Street (LOS F)
- Segment #12. San Marcos Boulevard: Pacific Street to Las Posas Road (LOS F)
- Segment #13. San Marcos Boulevard: Las Posas Road to Via Vera Cruz (LOS F)

Based on the established Level of Service Standards outlined in *Section 4.3*, the Project is calculated to result in substantial effects to the one (1) study segment bolded and underlined above. The Project-related increase in V/C ratio at the remaining segments operating at LOS E or F is below 0.02.

TABLE 10–1A
LONG-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Long-Term Without Project		Long-Term + Project		Δ [c]	Substantial Effect?
			Delay [a]	LOS [b]	Delay	LOS		
1. Las Posas Rd / SR-78 WB Ramps	Signal	AM	41.5	D	44.6	D	3.1	No
		PM	17.9	B	19.3	B	1.4	No
2. Las Posas Rd / Grand Ave	Signal	AM	35.7	D	35.7	D	0.0	No
		PM	59.8	E	61.2	E	1.4	No
3. Via Vera Cruz / Grand Ave / SR-78 EB Ramps	Signal	AM	**>80.0**	**F**	**>80.0**	**F**	**>2.0**	**Yes**
		PM	**>80.0**	**F**	**>80.0**	**F**	**>2.0**	**Yes**
4. Pacific St / La Mirada Dr	AWSC	AM	9.5	A	9.9	A	0.4	No
		PM	11.7	B	12.0	B	0.3	No
5. Las Posas Rd / La Mirada Dr	Signal	AM	19.9	B	22.8	C	2.9	No
		PM	50.0	D	54.1	D	4.1	No
6. Rancho Santa Fe Rd / Linda Vista Dr	Signal	AM	39.0	D	39.5	D	0.5	No
		PM	55.9	E	56.2	E	0.3	No
7. Pacific St / Linda Vista Dr	AWSC [d]	AM	20.6	C	21.8	C	1.2	No
		PM	**>50.0**	**F**	**>50.0**	**F**	**>2.0**	**Yes**
8. Las Posas Rd / Linda Vista Dr	Signal	AM	35.8	D	38.6	D	2.8	No
		PM	49.9	D	54.3	D	4.4	No
9. Pacific St / San Marcos Blvd	Signal	AM	41.4	D	43.6	D	2.2	No
		PM	47.8	D	49.4	D	1.6	No
10. Las Posas Rd / San Marcos Blvd	Signal	AM	53.5	D	54.2	D	0.7	No
		PM	65.7	E	67.2	E	1.5	No
A. Project Driveway (W) / La Mirada Dr	MSSC [e]	AM	—	—	9.3	A	—	No
		PM	—	—	10.7	B	—	No
B. Project Driveway (M) / La Mirada Dr	MSSC	AM	—	—	9.4	A	—	No
		PM	—	—	10.7	B	—	No
C. Project Driveway (E) / La Mirada Dr	MSSC	AM	—	—	9.7	A	—	No
		PM	—	—	10.9	B	—	No

Continued on Next Page

TABLE 10–1A
LONG-TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Long-Term Without Project		Long-Term + Project		Δ [c]	Substantial Effect?
			Delay [a]	LOS [b]	Delay	LOS		
Continued from Previous Page								
D. Project Driveway (W) / Linda Vista Dr	MSSC	AM	—	—	23.5	C	—	No
		PM	—	—	19.6	C	—	No
E. Project Driveway (E) / Linda Vista Dr	MSSC	AM	—	—	13.9	B	—	No
		PM	—	—	11.5	B	—	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. AWSC = All-Way Stop Controlled intersection.

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 10–1B
LONG-TERM INTERSECTION QUEUING

Intersection	Movement	Storage (ft)	Peak Hour	Long-Term without Project	Long-Term + Project
				Queue (ft) [a]	Queue (ft) [a]
1. Las Posas Rd / SR-78 WB Ramps	WBL	340	AM	**506**	**513**
			PM	196	222
	NBL	300	AM	213	275
			PM	283	291
2. Las Posas Rd / Grand Ave	WBL	200	AM	70	71
			PM	51	79
3. Via Vera Cruz / SR-78 EB Ramps	SBR	220	AM	**1,229**	**1,242**
			PM	**999**	**1,048**
	EBL	140	AM	**164**	**179**
			PM	**299**	**271**
5. Las Posas Rd / La Mirada Dr	NBL	250	AM	37	54
			PM	75	181
	EBL	110	AM	59	**157**
			PM	**251**	**313**
	EBR	110	AM	0	0
			PM	0	0
8. Las Posas Rd / Linda Vista Dr	SBL	130	AM	121	147
			PM	154	167
	NBL	240	AM	163	168
			PM	209	234
	EBL	170	AM	**214**	**236**
			PM	**492**	**522**
9. Pacific St / San Marcos Blvd	EBL	240	AM	75	78
			PM	174	191

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TABLE 10–1B
LONG-TERM INTERSECTION QUEUING

Intersection	Movement	Storage (ft)	Peak Hour	Long-Term without Project	Long-Term + Project
				Queue (ft) [a]	Queue (ft) [a]
Continued from Previous Page					
10. Las Posas Road / San Marcos Blvd	SBR	240	AM	**528**	**555**
			PM	**656**	**667**
	SBL	240	AM	156	203
			PM	324	359
	NBL	670	AM	48	48
			PM	67	106
	EBR	240	AM	**691**	**701**
			PM	**760**	**799**
A. La Mirada Dr / Project Driveway (W)	WBL	345 [b]	AM	—	11
			PM	—	31
B. La Mirada Dr / Project Driveway (M)	WBL	370 [b]	AM	—	10
			PM	—	27
C. La Mirada Dr / Project Driveway (E)	WBL	130 [b]	AM	—	11
			PM	—	31
D. Linda Vista Dr / Project Driveway (W)	EBL	640 [b]	AM	—	10
			PM	—	12

Footnotes:

a. 95th percentile queue length.
b. Storage shown at this location is distance to upstream project driveway or public street.

General Notes:

- **BOLD** indicates queue is calculated to exceed available storage.
- Ft = Feet
- SBR = Direction/Turn Lane, e.g., southbound right-turn lane.

TABLE 10–2
LONG-TERM STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS E) [a]	Long-Term without Project			Long-Term + Project			Δ[e]	Substantial Effect?
		ADT[b]	LOS[c]	V/C[d]	ADT	LOS	V/C		
Las Posas Road									
1. Descanso Ave to SR-78 WB Ramps	60,000	43,160	C	0.719	43,430	C	0.724	0.005	No
2. SR-78 WB Ramps to Grand Ave	60,000	48,380	C	0.806	49,121	C	0.819	0.013	No
3. Grand Ave to La Mirada Dr	40,000	18,900	B	0.473	20,113	B	0.503	0.030	No
4. La Mirada Dr to Linda Vista Dr	40,000	17,490	B	0.437	18,487	B	0.462	0.025	No
5. Linda Vista Dr to San Marcos Blvd	30,000	15,580	C	0.519	16,389	C	0.546	0.027	No
Pacific Street									
6. La Mirada Dr to Linda Vista Dr	8,000	7,790	E	0.974	**8,248**	**F**	**1.031**	**0.057**	**Yes**
7. Linda Vista Dr to San Marcos Blvd	8,000	4,840	C	0.605	4,975	C	0.622	0.017	No
La Mirada Drive									
8. Pacific St to Las Posas Rd	8,000	4,030	C	0.504	5,458	D	0.682	0.178	No
Linda Vista Drive									
9. Rancho Santa Fe Rd to Pacific St	15,000	14,990	E	0.999	15,260	F	1.017	0.018	No
10. Pacific St to Las Posas Rd	30,000	10,990	B	0.366	11,448	B	0.382	0.016	No
11. Las Posas Rd to Via Vera Cruz	15,000	9,400	C	0.627	9,670	C	0.645	0.018	No
San Marcos Boulevard									
12. Pacific St to Las Posas Rd	40,000	42,330	F	1.058	42,600	F	1.065	0.007	No
13. Las Posas Rd to Via Vera Cruz	40,000	43,080	F	1.077	43,619	F	1.090	0.013	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.

11.0 SITE ACCESS, ON-SITE CIRCULATION, AND PARKING

11.1 Site Access

Site access, based on the Project's conceptual site plan (see *Figure 2–3*), will be from driveways located on La Mirada Drive, Las Posas Road, and Linda Vista Drive. The following recommendations and requirements with respect to site access are noted:

- All access points shall provide adequate driveway sight distance. Driveway sight distance for each access point is shown to be adequate as illustrated on the Project's Tentative Map.
- Any driveways located on La Mirada Drive or Linda Vista Drive should be located as far from Las Posas Road as practically allowable with other site constraints.
- The easterly driveway on Linda Vista Drive should be limited to right turns only given its proximity to Las Posas Road. The analysis presented in this report assumes that the easterly driveway on Linda Vista Drive is limited to right turns.
- The easterly driveway on La Mirada Drive may provide full access turning movements if queued vehicles at Las Posas Road do not interfere with access. Improvements are proposed in *Section 13.4* to provide additional capacity and storage area to left turns from eastbound La Mirada Drive to Las Posas Road, thus minimizing queues and potential interference with any Project driveways.
- If appropriate, driveways to Las Posas Road should be limited to right turns only. The sole access point on Las Posas Road is proposed to be emergency-access only.
- Provide a two-way left-turn lane on La Mirada Drive, between Pacific Street and Las Posas Road, to facilitate turning movements to/from Project driveways.

11.2 On-Site Circulation

The Project will provide adequate on-site circulation for passenger vehicles, heavy vehicles, bicyclists and pedestrians and any issues identified should be addressed in the site design and improvements.

11.3 Parking

The Project is required to provide 633 parking spaces and will provide 927 off-street parking spaces, which exceeds the requirement.

Parking requirements were calculated under the Density Bonus Law, Government Code section 65915 at a rate of 1 space/unit for studio or one-bedroom units, 1.5 spaces/unit for two- or three-bedroom units, and 2.5 spaces/unit for four-bedroom units.

LLG completed a detailed Project Parking Assessment, provided under separate cover.

12.0 ACTIVE TRANSPORTATION REVIEW

12.1 Existing Bicycle Network

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

- Las Posas Road, from SR-78 to San Marcos Boulevard (both sides)
- Grand Avenue, from Rancho Santa Fe Road to Las Posas Road (both sides);
- Linda Vista Drive, from Rancho Santa Fe Road to Pacific Street (north side); and
- San Marcos Boulevard, from Pacific Street to Via Vera Cruz (both sides).

Figure 12–1 illustrates the existing bicycle network. No other bicycle facilities are currently constructed within the study area.

12.2 Proposed Bicycle Network

In the City of San Marcos *Bicycle and Pedestrian Master Plan*, bike facilities are recommended in the following study street segments:

- Las Posas Road, from Linda Vista Drive to San Marcos Boulevard (Class I: Shared Use Path)
- Linda Vista Drive, from Rancho Santa Fe Road to Las Posas Road (Class I: Shared Use Path)
- Linda Vista Drive, from Las Posas Road to Grand Avenue (Class II: Bike Lane)

12.3 Existing Pedestrian Conditions

Pedestrian sidewalks are generally provided throughout the study area, except for:

- La Mirada Drive, from Rancho Santa Fe Road to Las Posas Road (both sides)
- Pacific Street, from Grand Avenue to San Marcos Boulevard (both sides)
- Linda Vista Drive, from Rancho Santa Fe Road to Las Posas Road (north side)

Pedestrian crossings are provided in all directions at the intersections of S. Rancho Santa Fe Road / Linda Vista Drive, Las Posas Road / La Mirada Drive, Las Posas Road / Linda Vista Drive and Las Posas Road / San Marcos Boulevard. Pedestrian crossings are prohibited at the following locations:

- Las Posas Road / SR-78 WB Ramps (across the north and south legs)
- Las Posas Road / Grand Avenue (across the north leg)
- Grand Avenue / Via Vera Cruz / SR-78 EB Ramps (across the north, east, and west legs)
- San Marcos Boulevard / Pacific Street (across the east leg)

Figure 12–2 illustrates the existing pedestrian network.

12.4 Proposed Pedestrian Conditions

The City of San Marcos *Bicycle and Pedestrian Master Plan* notes the same missing sidewalks in the study area on La Mirada Drive, Pacific Street, and Linda Vista Drive as described in *Section 12.3*.

La Mirada Drive and Pacific Street are considered "Collector" routes in the *Bicycle and Pedestrian Master Plan*. Collector sidewalks are typically along roads that support institutional, industrial, open space, agricultural, or low density residential with limited lateral access and low pedestrian levels. According to the *Bicycle and Pedestrian Master Plan*, Collector sidewalks typically warrant the "basic level" sidewalk treatment adequate to provide the minimum level of safety, connectivity, access, and walkability, though special circumstances may warrant enhanced treatments.

Linda Vista Drive is considered an "Arterial" route in the *Bicycle and Pedestrian Master Plan*. Arterial sidewalks are typically along roads that support moderate density business and shopping districts with moderate pedestrian levels. Arterial sidewalks typically warrant the "enhanced" walkway treatment level according to the *Bicycle and Pedestrian Master Plan*, which may include features such as street trees or other buffer between the sidewalk and vehicle lanes, among other treatments.

12.5 Existing Transit Conditions

Transit service is provided to the project area via NCTD bus routes 347 and 445.

Route 347 provides bus service between Cal State San Marcos and Palomar College, with stops within the study area along San Marcos Boulevard, Via Vera Cruz, and Las Posas Road. This route provides a direct connection to Palomar College Station with transfers to SPRINTER, Route 304, and Route 305 bus service. 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.

Route 445 provides bus service between Palomar College and Carlsbad Poinsettia Station with stops within the study area along Las Posas Road and San Marcos Boulevard. This route provides a direct connection to Palomar College Station with transfers to SPRINTER, Route 304, and Route 305 bus service, and to Poinsettia Station with transfers to COASTER service. The route operates hourly between the hours of 6:30AM and 5:00PM, Monday through Friday. This route is not operation during the weekends.

The project site is located within ¼ mile walking distance, depending on ultimate pedestrian site access, from two stop pairs serving both Route 347 and Route 445 located along Las Posas Road. The closest bus stops to the project site are located near the intersection of Las Posas Road / La Mirada Drive and the intersection of Las Posas Road / Linda Vista Drive on both sides of the street. The project site is also approximately one mile walking or biking distance from Palomar College Station.

At the intersection of Las Posas Road / La Mirada Drive, the bus stop in the northbound direction provides route signage, route designations, seating with shade, and a trash receptacle and in the southbound direction the stop provides route signage only. At the intersection of Las Posas Road / Linda Vista Drive, the bus stop in the northbound direction provides route signage, route

designation, seating with shade, and a trash receptacle and in the southbound direction it provides route signage only.

12.6 Recommendations

The Project will implement the following active transportation improvements:

- Provide a 6' sidewalk and Class II buffered bike lane along the Project's frontage on Pacific Street.
- Provide a 12' urban trail (shared use path) along the Project's frontage on Linda Vista Drive.
- Provide a 12' urban trail (shared use path) along the Project's frontage on La Mirada Drive.
- Provide transit stop amenities including, at a minimum bench, shelter, and trash can at the southbound stop at the intersection of Las Posas Road / La Mirada Drive located on the southwest corner of the intersection. Provide a bus turnout for this stop along the Project frontage.

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Figure 12-1
Bicycle Network

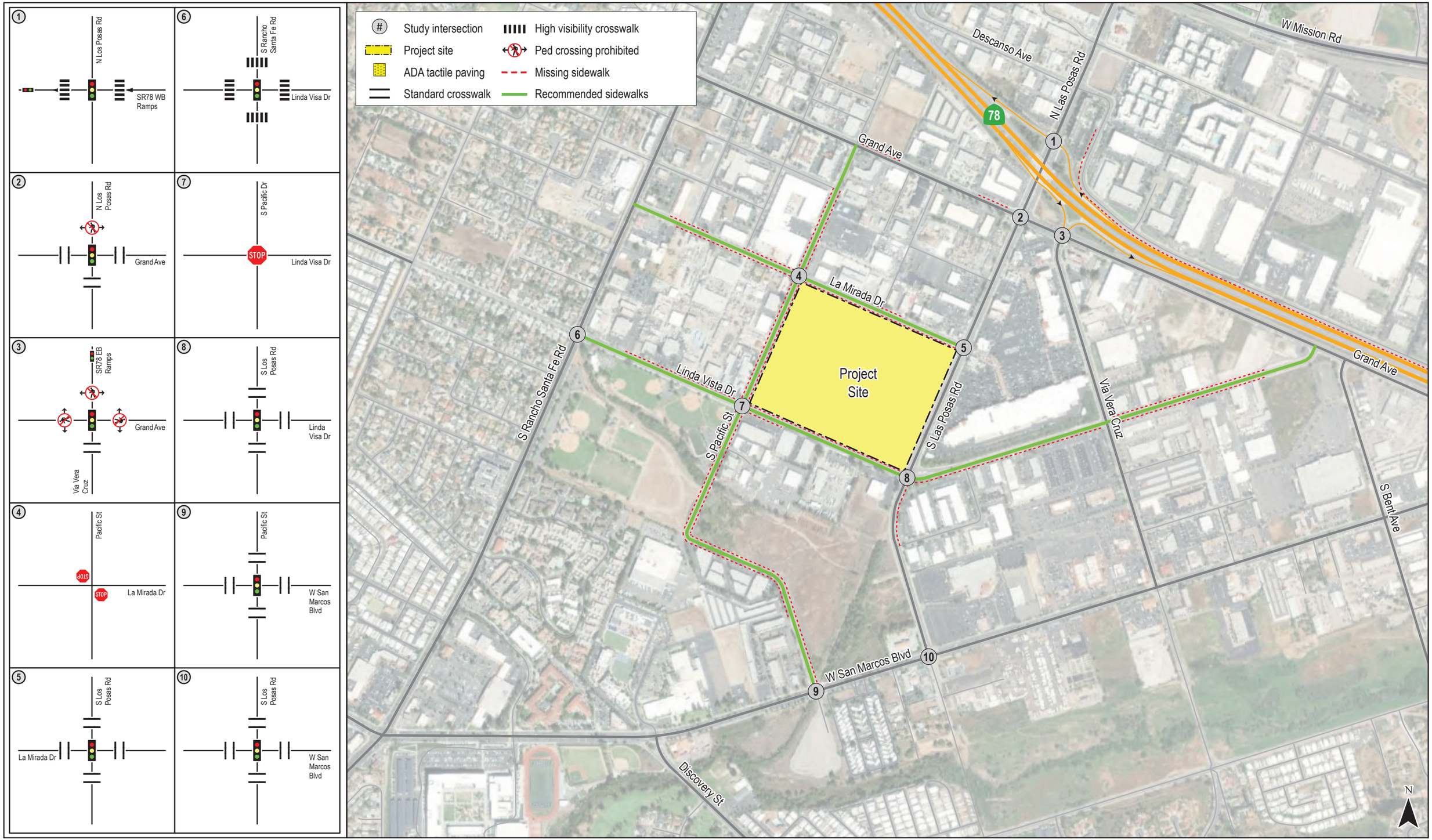

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Figure 12-2
Pedestrian Network

13.0 CONCLUSIONS

13.1 Active Transportation Recommendations

The following active transportation improvements are recommended as described in *Section 12.6*:

- Provide a 6' sidewalk and Class II buffered bike lane along the Project's frontage on Pacific Street.
- Provide a 12' urban trail (shared use path) along the Project's frontage on Linda Vista Drive.
- Provide a 12' urban trail (shared use path) along the Project's frontage on La Mirada Drive.
- Provide transit stop amenities including bench, shelter, and trash can at the southbound stop at the intersection of Las Posas Road / La Mirada Drive located on the southwest corner of the intersection. Provide a bus turnout for this stop along the Project frontage.

13.2 Site Access Recommendations

The following recommendations, as discussed in *Section 11.0* are made with respect to site access for the future site development:

- All access points shall provide adequate driveway sight distance. Driveway sight distance for each access point is shown to be adequate as illustrated on the Project's Tentative Map.
- Any driveways located on La Mirada Drive or Linda Vista Drive should be located as far from Las Posas Road as practically allowable with other site constraints.
- The easterly driveway on Linda Vista Drive should be limited to right turns only given its proximity to Las Posas Road. The analysis presented in this report assumes that the easterly driveway on Linda Vista Drive is limited to right turns.
- The easterly driveway on La Mirada Drive may provide full access turning movements if queued vehicles at Las Posas Road do not interfere with access. Improvements are proposed in *Section 13.4* to provide additional capacity and storage area to left turns from eastbound La Mirada Drive to Las Posas Road, thus minimizing queues and potential interference with any Project driveways.
- If appropriate, driveways to Las Posas Road should be limited to right turns only.
- Provide a two-way left-turn lane on La Mirada Drive, between Pacific Street and Las Posas Road, to facilitate turning movements to/from Project driveways.

13.3 Intersection and Roadway Operations Analysis Results

The intersection and segment analysis provided in this study shows that the following facilities are calculated to operate at unacceptable LOS with a substantial effect due to traffic generated from the Project:

Intersections

The intersection analysis provided in this study shows that the following intersections are calculated to operate at unacceptable LOS with a substantial effect due to traffic generated from the Project:

- Intersection #3. Via Vera Cruz / Grand Avenue / SR-78 EB Ramps *(Near-Term & Long Term)*
- Intersection #7. Pacific Street / Linda Vista Drive *(Near-Term & Long Term)*

Additionally, the 95th percentile vehicular queues are calculated to exceed existing turn pocket storage due to Project traffic at the following locations:

- Intersection #5. Las Posas Road / La Mirada Drive – Eastbound left-turn, AM peak hour *(Near-Term & Long-Term)*

Street Segments

The segment analysis provided in this study shows that the following street segments are calculated to operate at unacceptable LOS with a substantial effect due to traffic generated from the Project:

- Segment #6. Pacific Street: La Mirada Drive to Linda Vista Drive *(Long-Term only)*

13.4 Intersection and Roadway Improvements

The following roadway improvements if implemented would increase performance to acceptable or pre-Project conditions under each scenario.

1. **Intersection #3. Via Vera Cruz / Grand Avenue / SR-78 EB Ramps** – Provide a fair share contribution for a dedicated southbound right turn lane on the SR-78 eastbound off-ramp. Given that this intersection operates at LOS E or worse under existing conditions and the deficiency is not directly caused by the Project, a fair share contribution is appropriate.

   With the construction of a dedicated southbound right-turn lane, the intersection is calculated to operate at substantially better than pre-Project conditions in both Near- Term and Long-Term scenarios as shown in ***Table 13–1*** and ***Table 13–2***.

   Appendix O contains the Near-Term + Project and Long-Term + Project Improvements Intersection Analysis worksheets for all intersection improvements discussed in this section.

   The Project fair share is **7.1%** based on the Project traffic at Intersection #3, as shown in the formula below.

$$\frac{\text{Project Traffic}}{\text{(Buildout with Project Traffic – Existing Traffic)}} = \frac{35}{(2{,}405 - 1{,}914)} = 7.1\%$$

2. **Intersection #5. Las Posas Road / La Mirada Drive** – Restripe the eastbound (La Mirada Drive) intersection approach to provide two (2) left turn lanes and one (1) shared through/right-turn lane and provide necessary signal modifications to accommodate new

striping. This improvement will provide additional capacity and storage area for left turning traffic which will reduce queues and, in conjunction with the recommended two-way left turn lane on La Mirada Drive, improve accessibility for existing and proposed Project driveways.

The overall intersection LOS will continue to be acceptable LOS D or better in both Near-Term and Long-Term scenarios as shown in *Table 13–1* and *Table 13–2*. ***Table 13–3*** provides the Near-Term and Long-Term queue analysis illustrating the reduced queues provided by this improvement.

Post-improvement queueing worksheets are also provided in *Appendix O*.

3. **Intersection #7. Pacific Street / Linda Vista Drive** – Provide a traffic signal with the following lane geometry:

   - Southbound – one left turn lane, one shared through/right turn lane
   - Westbound – one left turn lane, one shared through/right turn lane
   - Northbound – one left turn lane, one through lane, one right turn lane
   - Eastbound – one left turn lane, one through lane, one right turn lane

   The traffic signal should provide protected left-turn phasing for all approaches. The traffic signal would provide LOS C or better operations under Near-Term with Project and Long-Term with Project conditions as shown in *Table 13–1* and *Table 13–2*.

   A signal warrant evaluation for this intersection is provided in *Section 13.5*.

4. **Intersection #8. Las Posas Road / Linda Vista Drive**

   This intersection operates at acceptable LOS D or better with the addition of Project traffic and does not require improvements to enhance the LOS. However, in conjunction with the Urban Trail to be provided on Linda Vista Drive and to align with the proposed cross-section of Linda Vista Drive between Pacific Street and Las Posas Road the existing shared through/right-turn lane on the westbound approach will be converted to right turn only. The curb along the southwest corner of the intersection will also be revised to improve intersection alignment. This entails removal of the existing eastbound right-turn lane. No changes will be made to the southbound or northbound approaches. The following lane geometry is proposed:

   - Southbound – one shared through/right-turn lane, one through lane, one left-turn lane
   - Westbound – one right-turn lane, one through lane, one left-turn lane
   - Northbound – one shared through/right-turn lane, one through lane, one left-turn lane
   - Eastbound – one shared through/right-turn lane, one through lane, one left-turn lane

   Tables 13–1 & 13–2 also show Near-Term and Long-Term intersection operations for Las Posas Road / Linda Vista Drive under the proposed conditions. As shown in *Tables 13–1 &*

13–2, this intersection would continue to operate at acceptable LOS D or better under the proposed conditions including Project traffic.

TABLE 13–1
NEAR-TERM POST IMPROVEMENT INTERSECTION ANALYSIS

Intersection	Control Type	Peak Hour	Near-Term Without Project		Near-Term + Project		Near-Term + Project + Improvements	
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS
3. Via Vera Cruz / Grand Ave / SR-78 EB Ramps	Signal	AM	181.9	F	185.1	F	69.7	E
		PM	79.4	E	86.1	F	54.6	D
5. Las Posas Rd / La Mirada Dr	Signal	AM	18.4	B	21.2	C	21.0	C
		PM	46.0	D	51.2	D	41.9	D
7. Pacific St. / Linda Vista Dr	AWSC [c] */Signal*	AM	17.5	C	18.8	C	17.9	B
		PM	91.3	F	99.3	F	19.9	B
8. Las Posas Rd / Linda Vista Dr	Signal	AM	30.5	C	32.8	C	33.7	C
		PM	45.8	D	48.0	D	49.0	D

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. All-Way Stop Control. Average delay reported.

General Notes:

- *Italics* indicates intersection control type with improvements.

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 13–2
LONG-TERM POST IMPROVEMENT INTERSECTION ANALYSIS

Intersection	Control Type	Peak Hour	Long-Term Without Project		Long-Term + Project		Long-Term + Project + Improvements	
			Delay[a]	LOS[b]	Delay	LOS	Delay	LOS
3. Via Vera Cruz / Grand Ave / SR-78 EB Ramps	Signal	AM	229.3	F	232.0	F	87.8	F
		PM	103.0	F	110.4	F	63.6	E
5. Las Posas Rd / La Mirada Dr	Signal	AM	19.9	B	22.8	C	22.7	C
		PM	50.0	D	54.1	D	44.4	D
7. Pacific St. / Linda Vista Dr	AWSC [c] */Signal*	AM	20.6	C	21.8	C	19.7	B
		PM	125.8	F	131.1	F	22.0	C
8. Las Posas Rd / Linda Vista Dr	Signal	AM	35.8	D	38.6	D	40.1	D
		PM	49.9	D	54.3	D	54.6	D

Footnotes:

a. Average delay expressed in seconds per vehicle.
b. Level of Service.
c. All-Way Stop Control. Average delay reported.

General Notes:

- *Italics* indicates intersection control type with improvements.

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 13–3
POST-IMPROVEMENT QUEUING: LAS POSAS RD / LA MIRADA DR

Intersection	Movement	Peak Hour	Near-Term + Project + Improvement	Long-Term + Project + Improvements
			Queue (ft) [a]	Queue (ft) [a]
5. Las Posas Rd / La Mirada Dr	EBL	AM	62	62
		PM	96	113
	EBT/R	AM	40	43
		PM	81	109

Footnotes:

a. 95th percentile queue length.

General Notes:

- Ft = Feet
- SBR = Direction/Turn Lane, e.g., southbound right-turn lane.

5. **Street Segment #6. Pacific Street: La Mirada Drive to Linda Vista Drive** – Intersections operations are generally the controlling factor for roadway segment operations. With the provision of the proposed improvements at the intersection of Pacific Street and Linda Vista Drive described in this section, intersections at both ends of this roadway segment would operate at acceptable LOS C or better during the AM/PM peak hours. Therefore, provision of intersection improvements at Pacific Street and Linda Vista Drive will adequately address the calculated segment LOS deficiency.

6. **Street Segment #10. Linda Vista Drive: Pacific Street to Las Posas Road** – Provision of the proposed active transportation improvements will reduce the number of westbound travel lanes from two to one. Notwithstanding this reduction in vehicular capacity, this street segment is calculated to continue to operate at acceptable LOS D or better under Near-Term conditions and Long-Term future conditions as shown in ***Table 13–4*** and ***Table 13–5***.

TABLE 13–4
NEAR-TERM POST-IMPROVEMENT STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS E) [a]	Near-Term Without Project			Near-Term + Project			Near-Term+ Project + Improvements	
		ADT[b]	LOS[c]	V/C[d]	ADT	LOS	V/C	LOS	V/C
Linda Vista Drive Pacific St to Las Posas Rd	30,000/ *15,000*	9,470	A	0.316	9,928	A	0.331	C	0.662

Footnotes:
a. Capacity based on roadway classification operating at LOS E.
b. Average Daily Traffic.
c. Level of Service.
d. Volume to Capacity.

General Notes:
- *Italics* indicates street segment capacity with proposed improvements.

TABLE 13–5
LONG-TERM POST-IMPROVEMENT STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS E) [a]	Long-Term Without Project			Long-Term + Project			Long-Term+ Project + Improvements	
		ADT[b]	LOS[c]	V/C[d]	ADT	LOS	V/C	LOS	V/C
Linda Vista Drive									
Pacific St to Las Posas Rd	30,000 / *15,000*	10,990	B	0.366	11,448	B	0.382	D	0.763

Footnotes:

a. Capacity based on roadway classification operating at LOS E.
b. Average Daily Traffic.
c. Level of Service.
d. Volume to Capacity.

General Notes:

- *Italics* indicates street segment capacity with proposed improvements.

13.5 Traffic Signal Warrants

Based on the analysis shown in *Table 8–1*, the Linda Vista Drive / South Pacific Street intersection is calculated to operate at LOS F in Near-Term conditions with the addition of Project traffic. Installation of a traffic signal and associated improvements to improve intersection delay and LOS to pre-Project or better conditions are proposed in *Section 13.4* of this report. Traffic signal warrant analysis has been completed to determine if a signal would be warranted at that intersection under future conditions.

Warrants were prepared for the Near-Term with Project scenarios. As outlined in Chapter 4C, "Traffic Control Signal Needs Studies," of the 2014 California Manual on Uniform Traffic Control Devices (California MUTCD), the peak hour warrant (Warrant 3) was analyzed.

The existing lane configurations at Linda Vista Drive / South Pacific Street are as follows:

- South Pacific Street (southbound): 1 shared left/thru/right-turn lane
- Linda Vista Drive (westbound): 1 left turn lane, 1 thru lane, 1 right turn lane
- South Pacific Street (northbound): 1 shared left/thru/right-turn lane
- Linda Vista Drive (eastbound): 1 left turn lane, 1 thru lane, 1 right turn lane

Note that the above lane configurations are existing and do not reflect proposed improvements discussed in *Section 13.4*. Linda Vista Drive (west / east) is the major street at this location.

Warrant 3 consists of two categories. The need for a traffic shall be considered if the criteria in either of the two categories are met. Category A requires three (3) conditions to be met for the same one (1) hour of an average day: 1) minor street delay exceeding four (4) vehicle-hours, 2) minor street volume exceeding 100 vehicles per hour, and 3) total entering volume at the intersection exceeding 800 vehicles. Category B plots the AM and PM entering volumes on a linear graphic (Figure 4C-3 of the MUTCD) to determine if the volumes exceed the allowable thresholds. For the signal warrant to be met, either Category A or B must be satisfied.

Table 13–6 below illustrates the two categories and summarize results for the Linda Vista Drive / South Pacific Street intersection under Near-Term with Project scenarios.

Appendix P contains the complete details of the warrant analysis including Figure 4C-4.

As shown in the table below, both Category A and Category B are satisfied under the Near-Term with Project scenario.

TABLE 13–6
WARRANT 3: PEAK HOUR – NEAR-TERM WITH PROJECT
LINDA VISTA DRIVE / S. PACIFIC STREET

Warrant 3 – Peak Hour	Category A ***or*** Category B Satisfied *		**Yes**	✓	**No**	
Category A (All Parts 1, 2, and 3 below must be satisfied)	Satisfied *		**Yes**	✓	**No**	
1. The total delay experienced for traffic on one minor-street approach controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach and five vehicle-hours for a two-lane approach; AND			**Yes**	✓	**No**	
2. The volume on the same-minor street approach equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND			**Yes**	✓	**No**	
3. The entering volume serviced during the hour equals or exceeds 800 vph for the intersections with four or more approaches or 650 vehicles per hour for intersections with three approaches.			**Yes**	✓	**No**	
Category B	Satisfied *		**Yes**	✓	**No**	

Approach Lanes	**One**	**Two**	**Warrant Volume**	**AM**	**PM**
Both Approaches -Major Street	X		See Figure 4C-4 below	755	1,296
Highest Approach -Minor Street	X		See Figure 4C-4 below	297	317

The plotted point falls above the applicable curve on Figure 4C-4.	**Yes**	✓	**No**	

LINSCOTT
LAW &
GREENSPAN
engineers

TECHNICAL APPENDICES – LTA
PACIFIC PROJECT

San Marcos, California
February 16, 2023

LLG Ref. 3-20-3279

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APPENDIX A

INTERSECTION AND SEGMENT COUNT SHEETS

1. YEAR 2021 COUNTS

Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#01	File Name:	ITM-21-012-01
Intersection:	North Las Posas Road & SR-78 WB Ramps	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	N. Las Posas Road Southbound			SR-78 Off Ramp Westbound			N. Las Posas Road Northbound			SR-78 On Ramp Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	0	152	43	92	0	44	23	68	0	0	0	0	422
7:15	0	174	60	79	4	36	34	73	0	0	0	0	460
7:30	0	203	64	67	0	32	34	70	0	0	0	0	470
7:45	0	217	59	108	0	23	29	104	4	0	0	0	544
8:00	0	167	55	119	2	40	34	98	0	0	0	0	515
8:15	0	199	56	116	0	32	36	112	0	0	0	0	551
8:30	0	179	68	96	0	40	39	104	0	0	0	0	526
8:45	0	148	58	77	1	33	52	103	0	0	0	0	472
Total	0	1439	463	754	7	280	281	732	4	0	0	0	3960
Approach%	-	75.7	24.3	72.4	0.7	26.9	27.6	72.0	0.4	-	-	-	
Total%	-	36.3	11.7	19.0	0.2	7.1	7.1	18.5	0.1	-	-	-	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	-	762	238	439	2	135	138	418	4	-	-	-	2,136
Approach%	-	76.2	23.8	76.2	0.3	23.4	24.6	74.6	0.7	-	-	-	
Total%	-	35.7	11.1	20.6	0.1	6.3	6.5	19.6	0.2	-	-	-	
PHF			0.91			0.89			0.95			#DIV/0!	0.97

PM	N. Las Posas Road Southbound			SR-78 Off Ramp Westbound			N. Las Posas Road Northbound			SR-78 On Ramp Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	0	155	83	81	0	32	107	231	0	0	0	0	689
16:15	0	167	71	66	0	44	103	238	0	0	0	0	689
16:30	0	155	72	63	1	42	115	267	0	0	0	0	715
16:45	0	164	59	64	0	64	96	243	0	0	0	0	690
17:00	0	191	65	68	0	44	85	266	0	0	0	0	719
17:15	0	169	53	81	0	45	95	286	0	0	0	0	729
17:30	0	140	68	64	1	72	98	259	0	0	0	0	702
17:45	0	135	51	58	0	50	84	230	0	0	0	0	608
Total	0	1276	522	545	2	393	783	2020	0	0	0	0	5541
Approach%	-	71.0	29.0	58.0	0.2	41.8	27.9	72.1	-	-	-	-	
Total%	-	23.0	9.4	9.8	0.0	7.1	14.1	36.5	-	-	-	-	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	-	679	249	276	1	195	391	1,062	-	-	-	-	2,853
Approach%	-	73.2	26.8	58.5	0.2	41.3	26.9	73.1	-	-	-	-	
Total%	-	23.8	8.7	9.7	0.0	6.8	13.7	37.2	-	-	-	-	
PHF			0.91			0.92			0.95			#DIV/0!	0.98

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#01	File Name:	ITM-21-012-01
Intersection:	North Las Posas Road & SR-78 WB Ramps	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

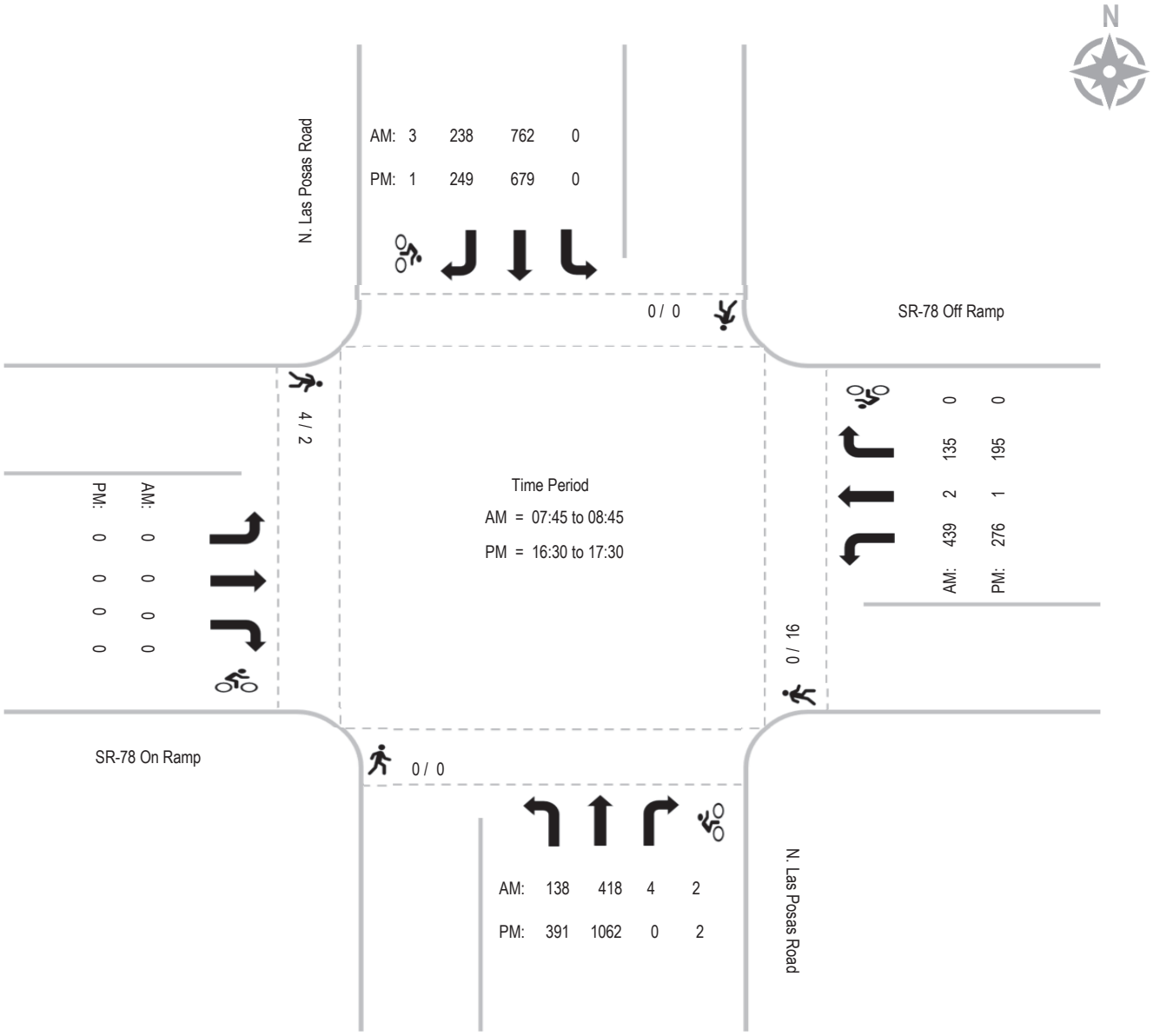
AM	N. Las Posas Road Southbound				SR-78 Off Ramp Westbound				N. Las Posas Road Northbound				SR-78 On Ramp Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
7:30	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
7:45	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
8:00	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				4				4	
Bike Total		0	3	0		0	0	0		0	2	0		0	0	0		5

PM	N. Las Posas Road Southbound				SR-78 Off Ramp Westbound				N. Las Posas Road Northbound				SR-78 On Ramp Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	1	1
16:30	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	1
16:45	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	4	1
17:00	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0
17:15	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0
17:30	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	4	0
Ped Total	0				16				0				2				18	
Bike Total		0	1	0		0	0	0		0	2	0		0	0	0		3

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers

Location:	#01	File Name:	ITM-21-012-01
Intersection:	North Las Posas Road & SR-78 WB Ramps	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#02	File Name:	ITM-21-012-02
Intersection:	South Las Posas Road & Grand Avenue	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Las Posas Road Southbound			Grand Avenue Westbound			S. Las Posas Road Northbound			Grand Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	66	104	64	12	22	54	0	27	13	12	17	0	391
7:15	78	120	53	5	17	65	2	43	16	15	24	4	442
7:30	85	112	85	10	17	61	2	44	16	14	31	1	478
7:45	79	130	113	22	31	74	5	43	21	19	27	1	565
8:00	68	111	94	7	16	68	5	38	25	21	30	7	490
8:15	63	129	79	5	20	81	1	47	20	26	37	6	514
8:30	89	111	66	8	21	90	8	43	19	23	40	9	527
8:45	79	90	51	12	18	78	4	57	21	18	39	2	469
Total	607	907	605	81	162	571	27	342	151	148	245	30	3876
Approach%	28.6	42.8	28.6	10.0	19.9	70.1	5.2	65.8	29.0	35.0	57.9	7.1	
Total%	15.7	23.4	15.6	2.1	4.2	14.7	0.7	8.8	3.9	3.8	6.3	0.8	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	299	481	352	42	88	313	19	171	85	89	134	23	2,096
Approach%	26.4	42.5	31.1	9.5	19.9	70.7	6.9	62.2	30.9	36.2	54.5	9.3	
Total%	14.3	22.9	16.8	2.0	4.2	14.9	0.9	8.2	4.1	4.2	6.4	1.1	
PHF			0.88			0.87			0.98			0.85	0.93

PM	S. Las Posas Road Southbound			Grand Avenue Westbound			S. Las Posas Road Northbound			Grand Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	66	88	49	9	28	140	4	149	37	49	99	15	733
16:15	73	108	52	6	29	140	6	145	29	49	82	5	724
16:30	68	95	53	15	26	155	10	136	32	81	75	11	757
16:45	70	93	45	13	25	134	10	139	27	61	98	12	727
17:00	79	102	49	9	33	118	8	166	28	64	81	5	742
17:15	69	142	46	9	26	156	4	159	49	73	70	2	805
17:30	79	83	46	11	26	158	4	137	48	51	73	5	721
17:45	69	94	36	20	32	114	3	119	33	55	39	3	617
Total	573	805	376	92	225	1115	49	1150	283	483	617	58	5826
Approach%	32.7	45.9	21.4	6.4	15.7	77.9	3.3	77.6	19.1	41.7	53.3	5.0	
Total%	9.8	13.8	6.5	1.6	3.9	19.1	0.8	19.7	4.9	8.3	10.6	1.0	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	286	432	193	46	110	563	32	600	136	279	324	30	3,031
Approach%	31.4	47.4	21.2	6.4	15.3	78.3	4.2	78.1	17.7	44.1	51.2	4.7	
Total%	9.4	14.3	6.4	1.5	3.6	18.6	1.1	19.8	4.5	9.2	10.7	1.0	
PHF			0.89			0.92			0.91			0.93	0.94

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#02	File Name:	ITM-21-012-02
Intersection:	South Las Posas Road & Grand Avenue	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

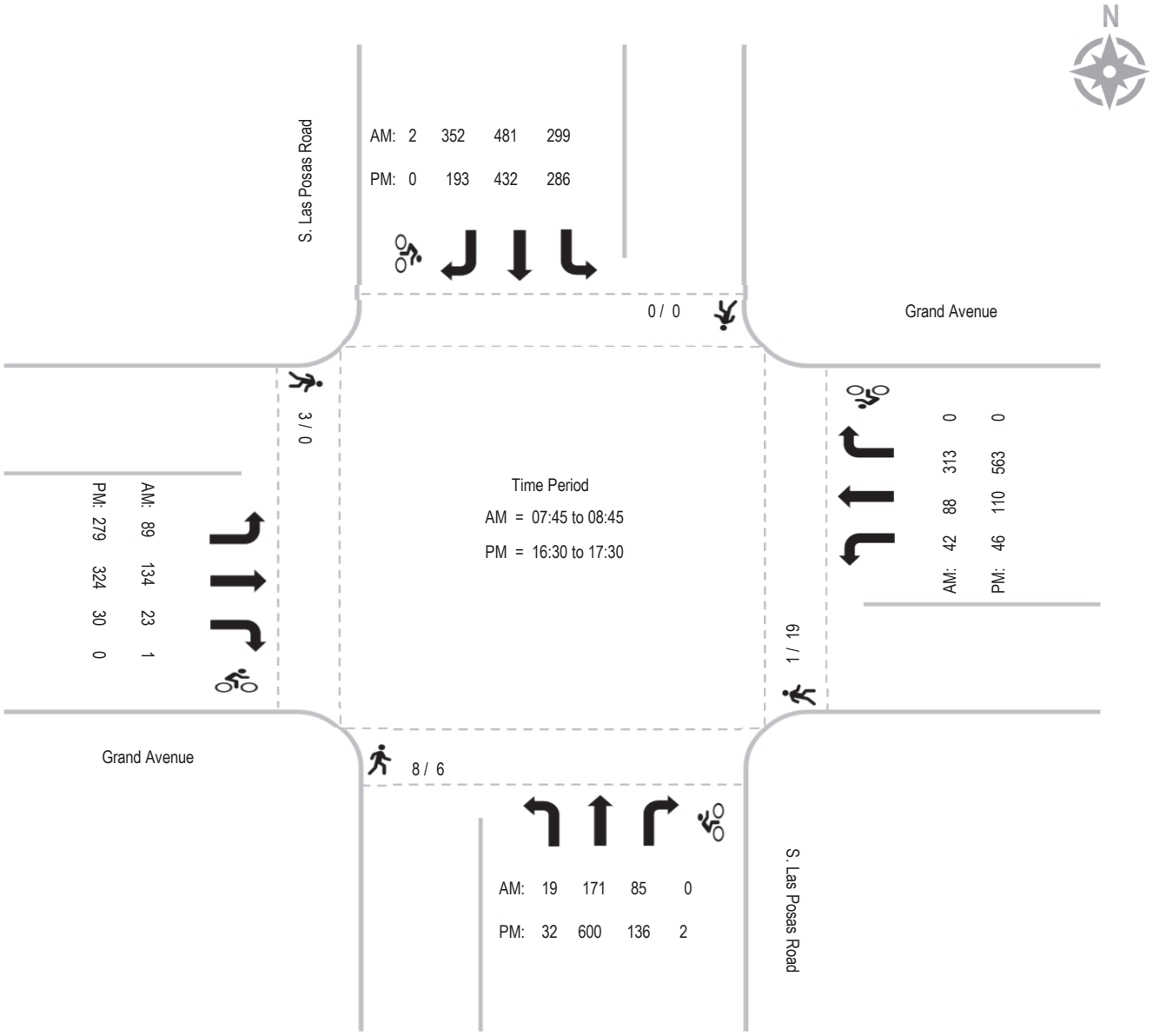
AM	S. Las Posas Road Southbound				Grand Avenue Westbound				S. Las Posas Road Northbound				Grand Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	3	0
7:15	0	0	0	0	1	0	0	0	3	0	0	0	0	0	0	0	4	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:45	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
8:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:15	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				1				8				3				12	
Bike Total		1	1	0		0	0	0		0	0	0		1	0	0		3

PM	S. Las Posas Road Southbound				Grand Avenue Westbound				S. Las Posas Road Northbound				Grand Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	3	0
16:30	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0
16:45	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0
17:00	0	0	0	0	6	0	0	0	1	0	1	0	0	0	0	0	7	1
17:15	0	0	0	0	2	0	0	0	1	0	0	1	0	0	0	0	3	1
17:30	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	3	0
17:45	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	0
Ped Total	0				19				6				0				25	
Bike Total		0	0	0		0	0	0		0	1	1		0	0	0		2

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers

Location:	#02	File Name:	ITM-21-012-02
Intersection:	South Las Posas Road & Grand Avenue	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#03	File Name:	ITM-21-012-03
Intersection:	SR-78 EB Ramps / Via Vera Cruz & Grand Avenue	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	SR-78 EB Ramps Southbound			Grand Avenue Westbound			Via Vera Cruz Northbound			Grand Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	18	28	59	5	14	1	17	8	0	65	16	11	242
7:15	12	39	57	5	9	0	19	9	0	80	21	18	269
7:30	8	56	49	0	21	1	21	11	0	86	18	23	294
7:45	19	69	82	7	20	1	26	4	3	74	14	28	347
8:00	18	54	52	5	21	1	32	15	1	69	19	21	308
8:15	12	80	66	5	22	1	26	9	3	81	10	29	344
8:30	17	50	54	4	25	4	34	14	1	83	28	28	342
8:45	23	58	58	9	23	4	33	13	4	69	33	30	357
Total	127	434	477	40	155	13	208	83	12	607	159	188	2503
Approach%	12.2	41.8	46.0	19.2	74.5	6.3	68.6	27.4	4.0	63.6	16.7	19.7	
Total%	5.1	17.3	19.1	1.6	6.2	0.5	8.3	3.3	0.5	24.3	6.4	7.5	

AM Intersection Peak Hour: **08:00 to 09:00**

Volume	70	242	230	23	91	10	125	51	9	302	90	108	1,351
Approach%	12.9	44.6	42.4	18.5	73.4	8.1	67.6	27.6	4.9	60.4	18.0	21.6	
Total%	5.2	17.9	17.0	1.7	6.7	0.7	9.3	3.8	0.7	22.4	6.7	8.0	
PHF			0.86			0.86			0.93			0.90	0.95

PM	SR-78 EB Ramps Southbound			Grand Avenue Westbound			Via Vera Cruz Northbound			Grand Avenue Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	30	50	62	14	79	3	64	41	9	112	59	32	555
16:15	59	75	71	12	72	3	49	38	14	71	58	35	557
16:30	40	84	73	14	61	1	61	26	12	101	51	24	548
16:45	33	70	75	12	51	2	65	45	14	96	59	32	554
17:00	21	59	60	17	54	4	61	54	3	94	50	48	525
17:15	28	72	70	11	63	4	45	32	10	92	49	33	509
17:30	29	55	82	9	67	1	42	43	6	87	48	33	502
17:45	13	54	66	10	51	0	47	31	10	61	45	20	408
Total	253	519	559	99	498	18	434	310	78	714	419	257	4158
Approach%	19.0	39.0	42.0	16.1	81.0	2.9	52.8	37.7	9.5	51.4	30.1	18.5	
Total%	6.1	12.5	13.4	2.4	12.0	0.4	10.4	7.5	1.9	17.2	10.1	6.2	

PM Intersection Peak Hour: **16:00 to 17:00**

Volume	162	279	281	52	263	9	239	150	49	380	227	123	2,214
Approach%	22.4	38.6	38.9	16.0	81.2	2.8	54.6	34.2	11.2	52.1	31.1	16.8	
Total%	7.3	12.6	12.7	2.3	11.9	0.4	10.8	6.8	2.2	17.2	10.3	5.6	
PHF			0.88			0.84			0.88			0.90	0.99

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

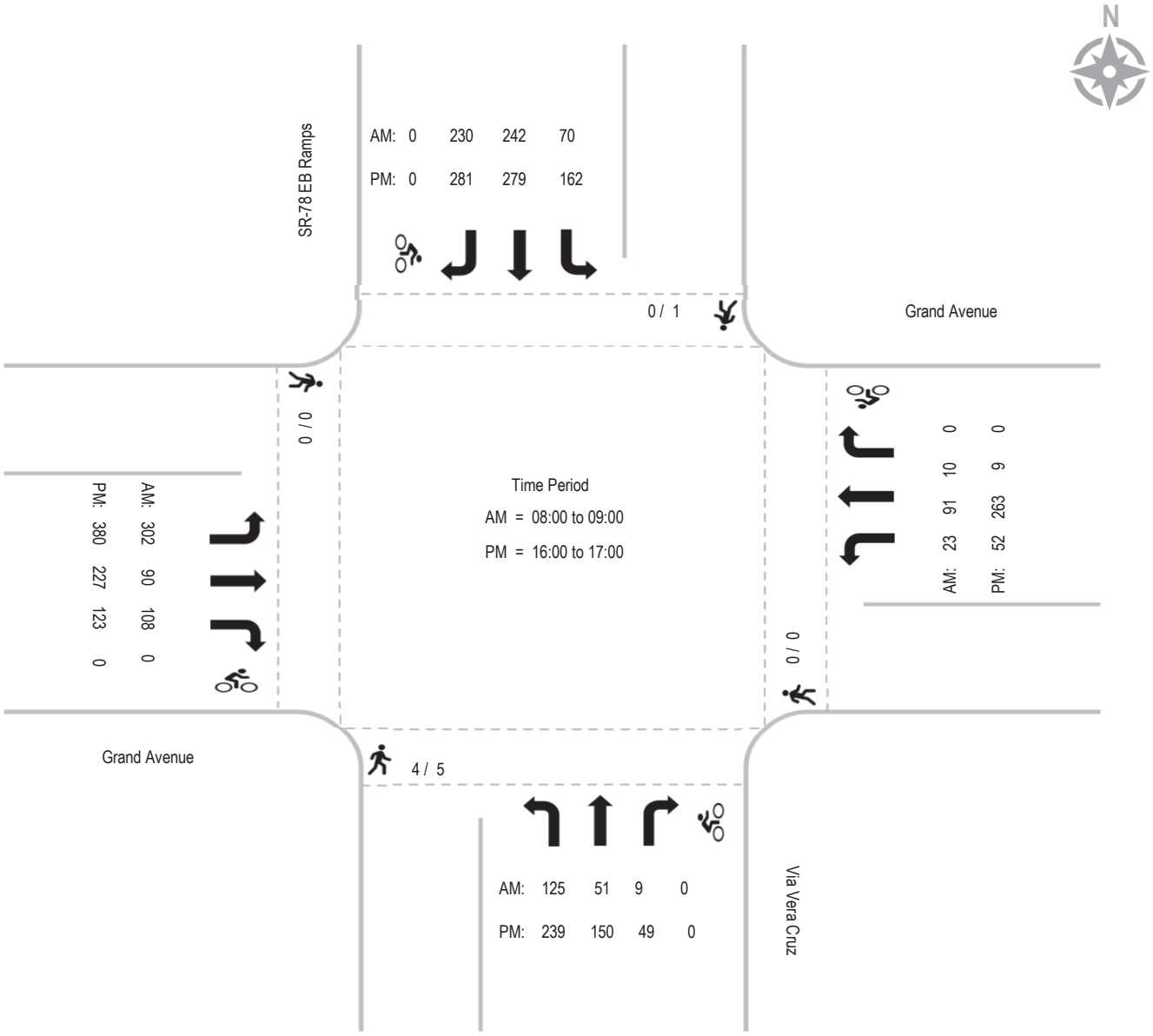
Location:	#03	File Name:	ITM-21-012-03
Intersection:	SR-78 EB Ramps / Via Vera Cruz & Grand Avenue	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	SR-78 EB Ramps Southbound				Grand Avenue Westbound				Via Vera Cruz Northbound				Grand Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				4				0				4	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	SR-78 EB Ramps Southbound				Grand Avenue Westbound				Via Vera Cruz Northbound				Grand Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
17:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0
17:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
17:30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	1				0				5				0				6	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary

Location:	#03	File Name:	ITM-21-012-03
Intersection:	SR-78 EB Ramps / Via Vera Cruz & Grand Avenue	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#04	File Name:	ITM-21-012-04
Intersection:	South Pacific Street & La Mirada Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Pacific Street Southbound			La Mirada Drive Westbound			S. Pacific Street Northbound			La Mirada Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	1	34	3	6	2	0	1	7	2	1	3	6	66
7:15	0	18	2	7	6	1	4	11	1	3	5	5	63
7:30	3	18	5	5	10	3	1	8	2	2	4	3	64
7:45	0	40	3	10	12	2	3	10	1	2	9	6	98
8:00	3	25	4	10	7	5	4	21	8	1	8	6	102
8:15	1	27	3	7	7	3	4	13	8	2	4	4	83
8:30	1	19	1	8	8	5	3	10	6	1	8	1	71
8:45	4	15	1	8	11	5	2	16	2	3	3	8	78
Total	13	196	22	61	63	24	22	96	30	15	44	39	625
Approach%	5.6	84.8	9.5	41.2	42.6	16.2	14.9	64.9	20.3	15.3	44.9	39.8	
Total%	2.1	31.4	3.5	9.8	10.1	3.8	3.5	15.4	4.8	2.4	7.0	6.2	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	5	111	11	35	34	15	14	54	23	6	29	17	354
Approach%	3.9	87.4	8.7	41.7	40.5	17.9	15.4	59.3	25.3	11.5	55.8	32.7	
Total%	1.4	31.4	3.1	9.9	9.6	4.2	4.0	15.3	6.5	1.7	8.2	4.8	
PHF			0.74			0.88			0.69			0.76	0.87

PM	S. Pacific Street Southbound			La Mirada Drive Westbound			S. Pacific Street Northbound			La Mirada Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	2	16	3	11	17	2	4	36	17	4	20	6	138
16:15	5	13	2	3	16	3	3	36	18	8	26	7	140
16:30	1	15	5	8	13	2	5	49	17	5	19	6	145
16:45	5	17	1	5	14	0	4	28	6	4	28	4	116
17:00	2	8	1	9	16	6	3	35	20	6	25	4	135
17:15	2	15	3	19	24	6	3	30	14	7	26	4	153
17:30	2	19	0	9	12	2	3	42	11	4	16	3	123
17:45	0	14	0	6	8	2	3	29	10	2	20	6	100
Total	19	117	15	70	120	23	28	285	113	40	180	40	1050
Approach%	12.6	77.5	9.9	32.9	56.3	10.8	6.6	66.9	26.5	15.4	69.2	15.4	
Total%	1.8	11.1	1.4	6.7	11.4	2.2	2.7	27.1	10.8	3.8	17.1	3.8	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	10	55	10	41	67	14	15	142	57	22	98	18	549
Approach%	13.3	73.3	13.3	33.6	54.9	11.5	7.0	66.4	26.6	15.9	71.0	13.0	
Total%	1.8	10.0	1.8	7.5	12.2	2.6	2.7	25.9	10.4	4.0	17.9	3.3	
PHF			0.82			0.62			0.75			0.93	0.90

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

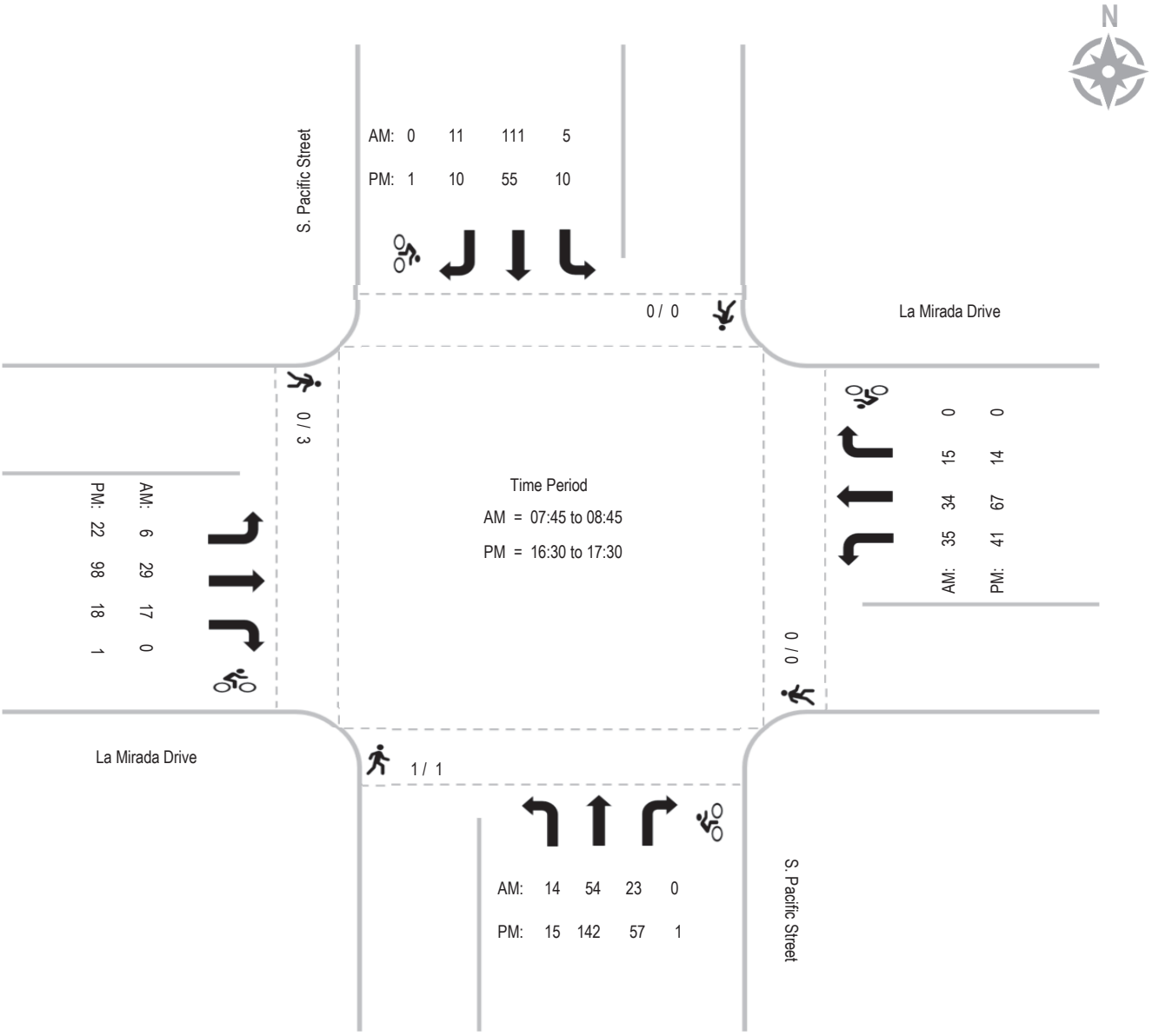
Location:	#04	File Name:	ITM-21-012-04
Intersection:	South Pacific Street & La Mirada Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Pacific Street Southbound				La Mirada Drive Westbound				S. Pacific Street Northbound				La Mirada Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				1				0				1	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	S. Pacific Street Southbound				La Mirada Drive Westbound				S. Pacific Street Northbound				La Mirada Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	1	0	0	2	0	0	0	2	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
17:45	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	1
Ped Total	0				0				1				3				4	
Bike Total		0	1	0		0	0	0		1	0	0		0	1	0		3

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#04	File Name: ITM-21-012-04
	Intersection:	South Pacific Street & La Mirada Drive	Project: LLG Ref. 3-20-3279
	Date of Count:	Tuesday, March 23, 2021	San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#05	File Name:	ITM-21-012-05
Intersection:	South Las Posas Road & La Mirada Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Las Posas Road Southbound			Shopping Center Drwy Westbound			S. Las Posas Road Northbound			La Mirada Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	16	93	10	3	3	2	1	29	3	5	3	1	169
7:15	18	99	12	7	4	2	0	38	5	4	2	2	193
7:30	7	93	13	8	5	6	2	39	2	3	2	1	181
7:45	7	115	23	2	2	6	4	46	4	6	3	2	220
8:00	20	99	15	4	3	12	1	37	4	9	3	3	210
8:15	24	110	10	4	2	3	3	45	9	7	2	1	220
8:30	25	86	13	2	4	6	5	29	6	9	3	2	190
8:45	22	65	18	2	3	6	1	42	9	8	3	1	180
Total	139	760	114	32	26	43	17	305	42	51	21	13	1563
Approach%	13.7	75.0	11.3	31.7	25.7	42.6	4.7	83.8	11.5	60.0	24.7	15.3	
Total%	8.9	48.6	7.3	2.0	1.7	2.8	1.1	19.5	2.7	3.3	1.3	0.8	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	76	410	61	12	11	27	13	157	23	31	11	8	840
Approach%	13.9	75.0	11.2	24.0	22.0	54.0	6.7	81.3	11.9	62.0	22.0	16.0	
Total%	9.0	48.8	7.3	1.4	1.3	3.2	1.5	18.7	2.7	3.7	1.3	1.0	
PHF			0.94			0.66			0.85			0.83	0.95

PM	S. Las Posas Road Southbound			Shopping Center Drwy Westbound			S. Las Posas Road Northbound			La Mirada Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	47	61	10	27	14	38	3	106	13	30	9	5	363
16:15	39	80	10	14	11	32	3	87	11	25	15	5	332
16:30	37	99	7	26	9	35	3	105	14	20	7	6	368
16:45	39	66	18	18	13	41	5	92	9	25	7	5	338
17:00	38	76	22	35	10	51	8	99	18	25	6	1	389
17:15	44	87	23	19	7	45	8	102	18	29	15	15	412
17:30	31	60	12	26	6	37	1	94	19	18	9	6	319
17:45	27	72	8	29	7	40	1	69	14	18	6	8	299
Total	302	601	110	194	77	319	32	754	116	190	74	51	2820
Approach%	29.8	59.3	10.9	32.9	13.1	54.1	3.5	83.6	12.9	60.3	23.5	16.2	
Total%	10.7	21.3	3.9	6.9	2.7	11.3	1.1	26.7	4.1	6.7	2.6	1.8	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	158	328	70	98	39	172	24	398	59	99	35	27	1,507
Approach%	28.4	59.0	12.6	31.7	12.6	55.7	5.0	82.7	12.3	61.5	21.7	16.8	
Total%	10.5	21.8	4.6	6.5	2.6	11.4	1.6	26.4	3.9	6.6	2.3	1.8	
PHF			0.90			0.80			0.94			0.68	0.91

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

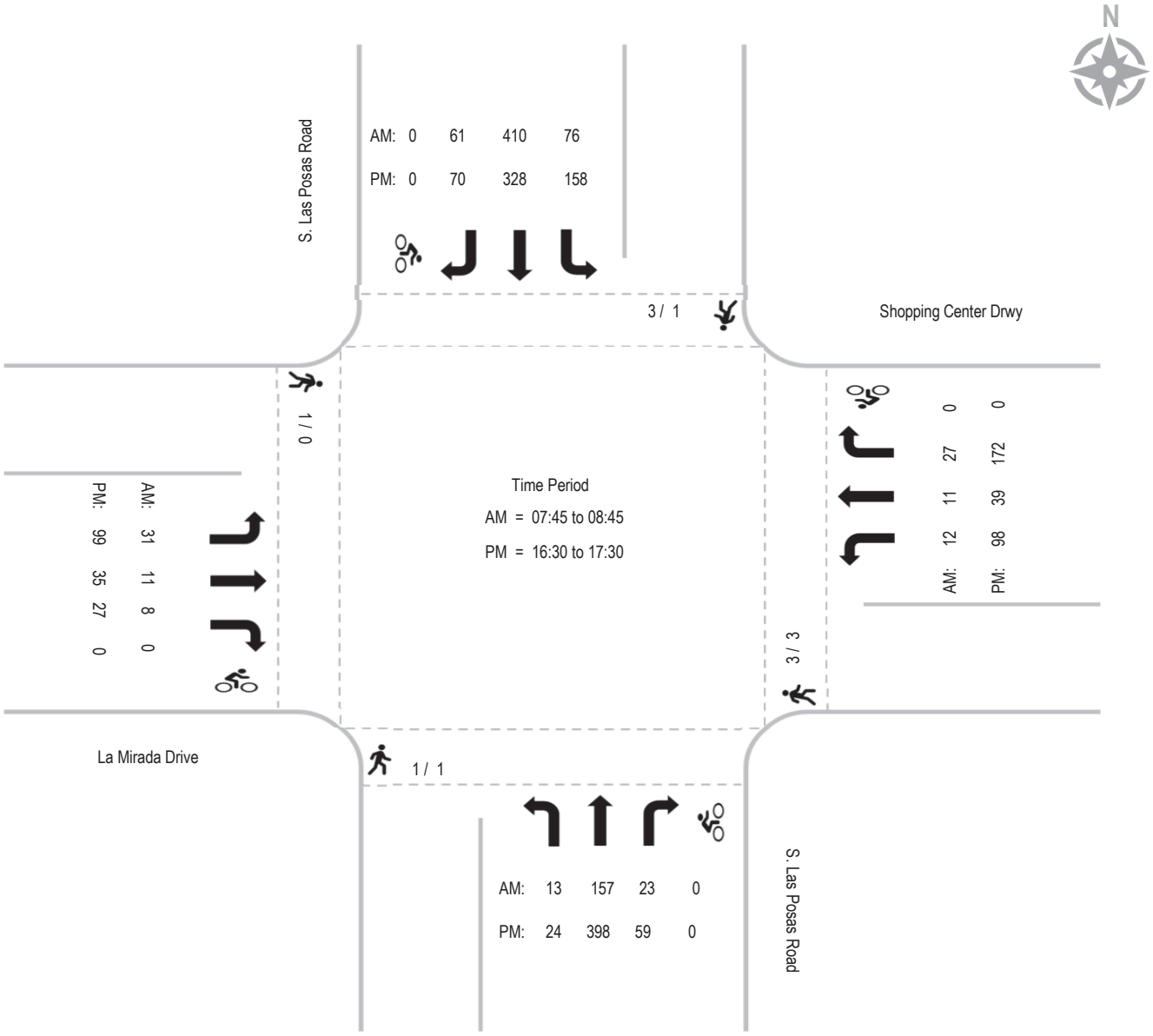
Location:	#05	File Name:	ITM-21-012-05
Intersection:	South Las Posas Road & La Mirada Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Las Posas Road Southbound				Shopping Center Drwy Westbound				S. Las Posas Road Northbound				La Mirada Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0
7:15	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	3				3				1				1				8	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	S. Las Posas Road Southbound				Shopping Center Drwy Westbound				S. Las Posas Road Northbound				La Mirada Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0
16:45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Ped Total	1				3				1				0				5	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#05	File Name: ITM-21-012-05
	Intersection:	South Las Posas Road & La Mirada Drive	Project: LLG Ref. 3-20-3279
	Date of Count:	Tuesday, March 23, 2021	San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#06	File Name:	ITM-21-012-06
Intersection:	South Rancho Santa Fe Road & Linda Vista Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S.Rancho Santa Fe Rd Southbound			Linda Vista Drive Westbound			S.Rancho Santa Fe Rd Northbound			Linda Vista Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	26	152	56	30	38	8	12	79	13	17	19	11	461
7:15	10	204	56	25	27	10	8	112	12	19	10	6	499
7:30	19	190	47	33	29	9	12	142	25	20	15	21	562
7:45	12	244	69	30	45	14	24	137	38	21	15	10	659
8:00	14	219	51	41	42	18	14	124	39	26	22	17	627
8:15	13	196	40	51	50	19	18	154	36	19	16	16	628
8:30	10	177	40	30	30	12	12	113	16	22	19	8	489
8:45	38	218	45	23	22	11	4	123	37	24	18	9	572
Total	142	1600	404	263	283	101	104	984	216	168	134	98	4497
Approach%	6.6	74.6	18.8	40.6	43.7	15.6	8.0	75.5	16.6	42.0	33.5	24.5	
Total%	3.2	35.6	9.0	5.8	6.3	2.2	2.3	21.9	4.8	3.7	3.0	2.2	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	58	849	207	155	166	60	68	557	138	86	68	64	2,476
Approach%	5.2	76.2	18.6	40.7	43.6	15.7	8.9	73.0	18.1	39.4	31.2	29.4	
Total%	2.3	34.3	8.4	6.3	6.7	2.4	2.7	22.5	5.6	3.5	2.7	2.6	
PHF			0.86			0.79			0.92			0.84	0.69

PM	S.Rancho Santa Fe Rd Southbound			Linda Vista Drive Westbound			S.Rancho Santa Fe Rd Northbound			Linda Vista Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	18	134	18	47	27	18	18	241	77	76	100	15	789
16:15	15	225	43	31	22	19	19	254	64	39	83	13	827
16:30	13	165	29	51	21	11	18	222	64	95	114	14	817
16:45	21	153	22	38	37	10	24	231	58	67	72	11	744
17:00	16	122	23	47	24	11	18	242	49	63	83	22	720
17:15	18	156	20	60	28	14	20	206	42	59	87	15	725
17:30	14	184	21	51	22	8	26	235	57	46	50	14	728
17:45	17	160	26	32	25	8	23	200	38	44	40	13	626
Total	132	1299	202	357	206	99	166	1831	449	489	629	117	5976
Approach%	8.1	79.5	12.4	53.9	31.1	15.0	6.8	74.9	18.4	39.6	50.9	9.5	
Total%	2.2	21.7	3.4	6.0	3.4	1.7	2.8	30.6	7.5	8.2	10.5	2.0	

PM Intersection Peak Hour: **16:00 to 17:00**

Volume	67	677	112	167	107	58	79	948	263	277	369	53	3,177
Approach%	7.8	79.1	13.1	50.3	32.2	17.5	6.1	73.5	20.4	39.6	52.8	7.6	
Total%	2.1	21.3	3.5	5.3	3.4	1.8	2.5	29.8	8.3	8.7	11.6	1.7	
PHF			0.76			0.90			0.96			0.78	0.96

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

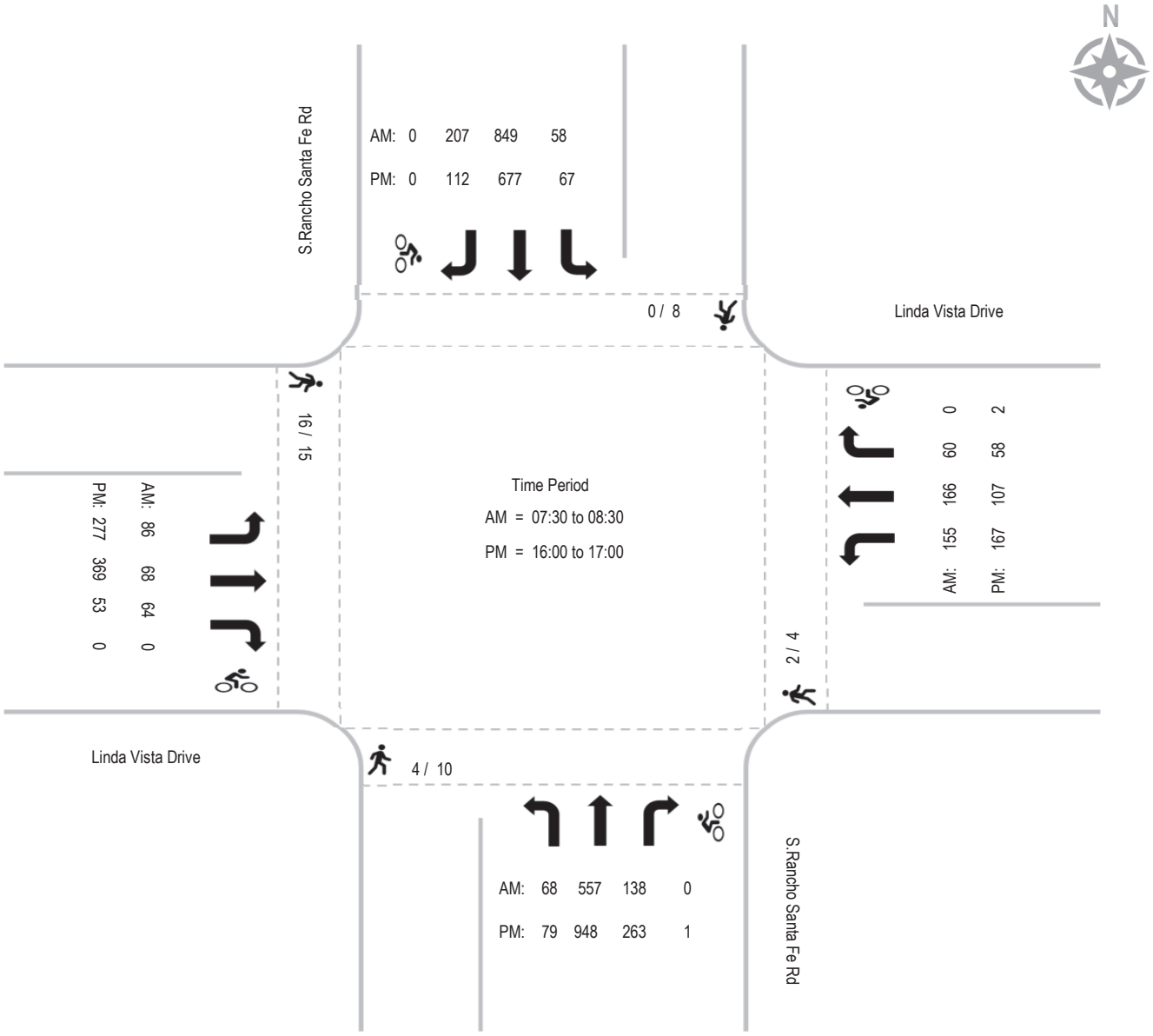
Location:	#06	File Name:	ITM-21-012-06
Intersection:	South Rancho Santa Fe Road & Linda Vista Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S.Rancho Santa Fe Rd Southbound				Linda Vista Drive Westbound				S.Rancho Santa Fe Rd Northbound				Linda Vista Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0
7:45	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	5	0
8:00	0	0	0	0	1	0	0	0	3	0	0	0	5	0	0	0	9	0
8:15	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	3	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				2				4				16				22	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	S.Rancho Santa Fe Rd Southbound				Linda Vista Drive Westbound				S.Rancho Santa Fe Rd Northbound				Linda Vista Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	3	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	7	0
16:15	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	5	0
16:30	4	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	8	0
16:45	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	3	0	1	0	4	0	0	0	7	1
17:45	0	0	0	0	1	2	0	0	2	0	0	0	2	0	0	0	5	2
Ped Total	8				4				10				15				37	
Bike Total		0	0	0		2	0	0		0	1	0		0	0	0		3

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#06	File Name: ITM-21-012-06
	Intersection:	South Rancho Santa Fe Road & Linda Vista Drive	Project: LLG Ref. 3-20-3279
	Date of Count:	Tuesday, March 23, 2021	San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#06	File Name:	ITM-21-012-06R
Intersection:	South Rancho Santa Fe Road & Linda Vista Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S.Rancho Santa Fe Rd Southbound			Linda Vista Drive Westbound			S.Rancho Santa Fe Rd Northbound			Linda Vista Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	26	152	56	30	38	8	12	79	13	17	19	11	461
7:15	10	204	56	25	27	10	8	112	12	19	10	6	499
7:30	19	190	47	33	29	9	12	142	25	20	15	21	562
7:45	12	244	69	30	45	14	24	137	38	21	15	10	659
8:00	14	219	51	41	42	18	14	124	39	26	22	17	627
8:15	13	196	40	51	50	19	18	154	36	19	16	16	628
8:30	10	177	40	30	30	12	12	113	16	22	19	8	489
8:45	38	218	45	23	22	11	4	123	37	24	18	9	572
Total	142	1600	404	263	283	101	104	984	216	168	134	98	4497
Approach%	6.6	74.6	18.8	40.6	43.7	15.6	8.0	75.5	16.6	42.0	33.5	24.5	
Total%	3.2	35.6	9.0	5.8	6.3	2.2	2.3	21.9	4.8	3.7	3.0	2.2	

AM Intersection Peak Hour: **07:30 to 08:30**

Volume	58	849	207	155	166	60	68	557	138	86	68	64	2,476
Approach%	5.2	76.2	18.6	40.7	43.6	15.7	8.9	73.0	18.1	39.4	31.2	29.4	
Total%	2.3	34.3	8.4	6.3	6.7	2.4	2.7	22.5	5.6	3.5	2.7	2.6	
PHF			0.86			0.79			0.92			0.84	0.94

PM	S.Rancho Santa Fe Rd Southbound			Linda Vista Drive Westbound			S.Rancho Santa Fe Rd Northbound			Linda Vista Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	18	134	18	47	27	18	18	241	77	76	100	15	789
16:15	15	225	43	31	22	19	19	254	64	39	83	13	827
16:30	13	165	29	51	21	11	18	222	64	95	114	14	817
16:45	21	153	22	38	37	10	24	231	58	67	72	11	744
17:00	16	122	23	47	24	11	18	242	49	63	83	22	720
17:15	18	156	20	60	28	14	20	206	42	59	87	15	725
17:30	14	184	21	51	22	8	26	235	57	46	50	14	728
17:45	17	160	26	32	25	8	23	200	38	44	40	13	626
Total	132	1299	202	357	206	99	166	1831	449	489	629	117	5976
Approach%	8.1	79.5	12.4	53.9	31.1	15.0	6.8	74.9	18.4	39.6	50.9	9.5	
Total%	2.2	21.7	3.4	6.0	3.4	1.7	2.8	30.6	7.5	8.2	10.5	2.0	

PM Intersection Peak Hour: **16:00 to 17:00**

Volume	67	677	112	167	107	58	79	948	263	277	369	53	3,177
Approach%	7.8	79.1	13.1	50.3	32.2	17.5	6.1	73.5	20.4	39.6	52.8	7.6	
Total%	2.1	21.3	3.5	5.3	3.4	1.8	2.5	29.8	8.3	8.7	11.6	1.7	
PHF			0.76			0.90			0.96			0.78	0.96

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

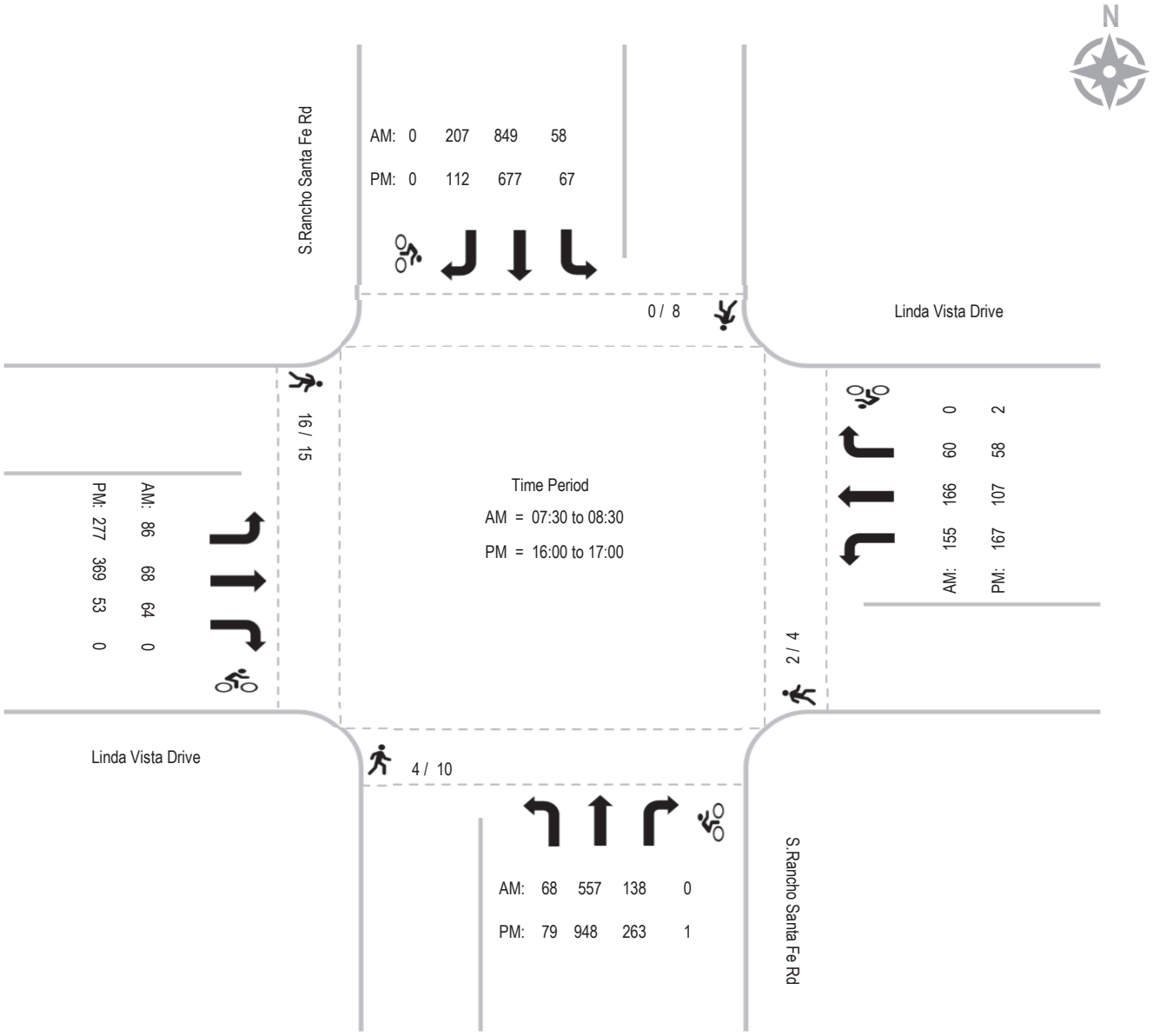
Location:	#06	File Name:	ITM-21-012-06R
Intersection:	South Rancho Santa Fe Road & Linda Vista Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S.Rancho Santa Fe Rd Southbound				Linda Vista Drive Westbound				S.Rancho Santa Fe Rd Northbound				Linda Vista Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0
7:45	0	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	5	0
8:00	0	0	0	0	1	0	0	0	3	0	0	0	5	0	0	0	9	0
8:15	0	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	3	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				2				4				16				22	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	S.Rancho Santa Fe Rd Southbound				Linda Vista Drive Westbound				S.Rancho Santa Fe Rd Northbound				Linda Vista Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	3	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	7	0
16:15	0	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	5	0
16:30	4	0	0	0	3	0	0	0	0	0	0	0	1	0	0	0	8	0
16:45	1	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	3	0	1	0	4	0	0	0	7	1
17:45	0	0	0	0	1	2	0	0	2	0	0	0	2	0	0	0	5	2
Ped Total	8				4				10				15				37	
Bike Total		0	0	0		2	0	0		0	1	0		0	0	0		3

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#06	File Name: ITM-21-012-06R
	Intersection:	South Rancho Santa Fe Road & Linda Vista Drive	Project: LLG Ref. 3-20-3279
	Date of Count:	Tuesday, March 23, 2021	San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#07	File Name:	ITM-21-012-07
Intersection:	South Pacific Street & Linda Vista Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Pacific Street Southbound			Linda Vista Drive Westbound			S. Pacific Street Northbound			Linda Vista Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	3	10	20	3	53	0	1	2	5	9	27	5	138
7:15	0	9	20	4	45	3	3	2	1	6	22	6	121
7:30	1	4	14	4	42	5	2	2	3	4	36	5	122
7:45	3	16	34	8	63	2	2	4	0	12	42	2	188
8:00	4	14	22	6	54	7	4	10	2	16	43	2	184
8:15	1	8	9	3	84	3	7	5	2	15	39	5	181
8:30	0	7	19	2	50	4	4	1	3	12	28	5	135
8:45	3	6	19	2	37	5	1	4	2	13	45	5	142
Total	15	74	157	32	428	29	24	30	18	87	282	35	1211
Approach%	6.1	30.1	63.8	6.5	87.5	5.9	33.3	41.7	25.0	21.5	69.8	8.7	
Total%	1.2	6.1	13.0	2.6	35.3	2.4	2.0	2.5	1.5	7.2	23.3	2.9	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	8	45	84	19	251	16	17	20	7	55	152	14	688
Approach%	5.8	32.8	61.3	6.6	87.8	5.6	38.6	45.5	15.9	24.9	68.8	6.3	
Total%	1.2	6.5	12.2	2.8	36.5	2.3	2.5	2.9	1.0	8.0	22.1	2.0	
PHF			0.65			0.79			0.69			0.91	0.93

PM	S. Pacific Street Southbound			Linda Vista Drive Westbound			S. Pacific Street Northbound			Linda Vista Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	2	14	16	8	48	3	8	10	5	35	144	9	302
16:15	4	3	12	4	49	4	7	14	8	35	131	3	274
16:30	3	6	20	3	55	5	4	15	5	43	128	11	298
16:45	3	7	16	7	61	3	12	7	9	35	106	11	277
17:00	3	12	20	1	53	5	2	15	5	39	103	9	267
17:15	4	9	26	4	54	5	7	12	7	33	97	5	263
17:30	2	10	19	1	47	3	9	17	5	33	86	9	241
17:45	2	11	15	6	42	2	11	10	6	23	58	15	201
Total	23	72	144	34	409	30	60	100	50	276	853	72	2123
Approach%	9.6	30.1	60.3	7.2	86.5	6.3	28.6	47.6	23.8	23.0	71.0	6.0	
Total%	1.1	3.4	6.8	1.6	19.3	1.4	2.8	4.7	2.4	13.0	40.2	3.4	

PM Intersection Peak Hour: **16:00 to 17:00**

Volume	12	30	64	22	213	15	31	46	27	148	509	34	1,151
Approach%	11.3	28.3	60.4	8.8	85.2	6.0	29.8	44.2	26.0	21.4	73.7	4.9	
Total%	1.0	2.6	5.6	1.9	18.5	1.3	2.7	4.0	2.3	12.9	44.2	3.0	
PHF			0.83			0.88			0.90			0.92	0.95

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

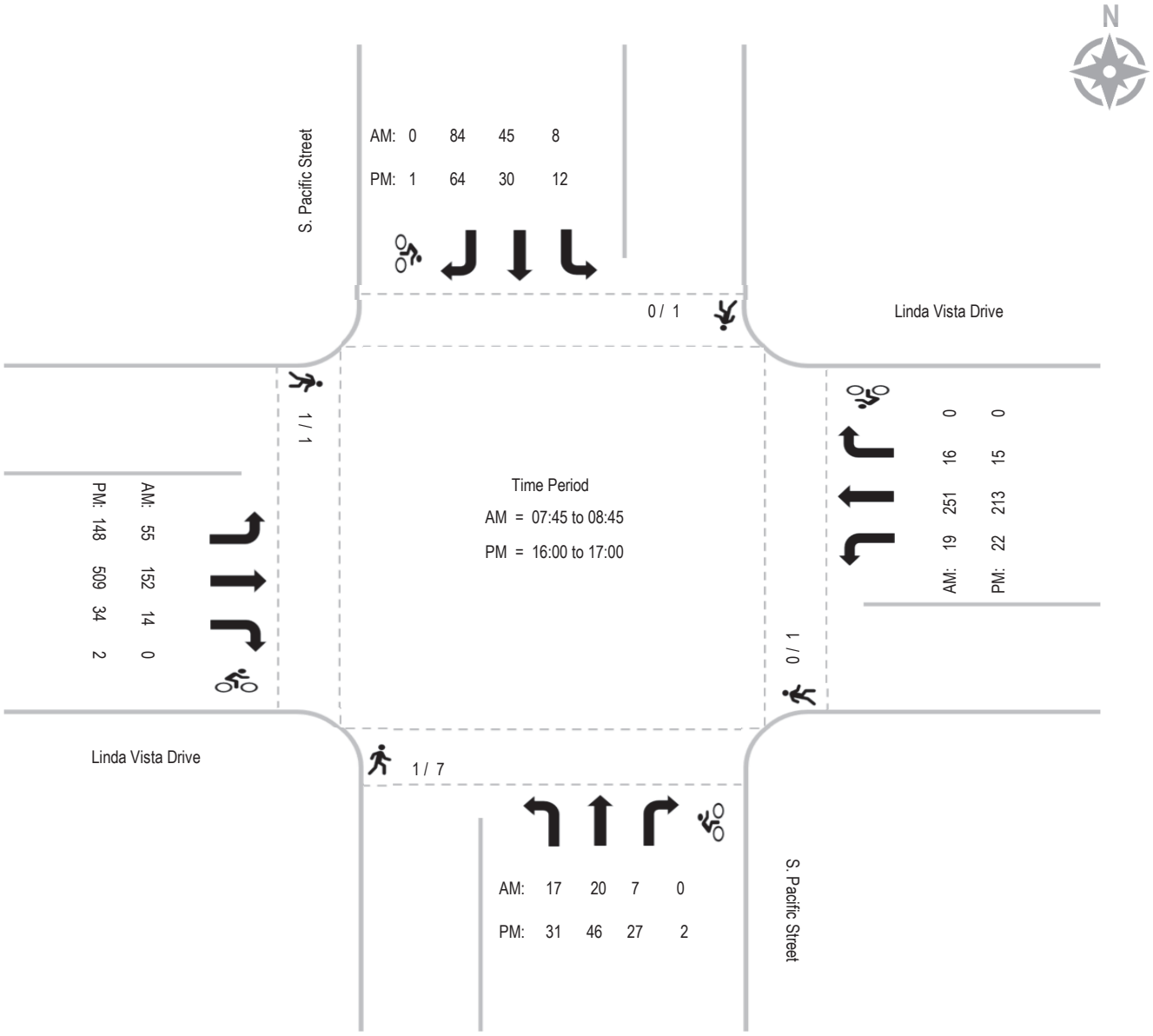
Location:	#07	File Name:	ITM-21-012-07
Intersection:	South Pacific Street & Linda Vista Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Pacific Street Southbound				Linda Vista Drive Westbound				S. Pacific Street Northbound				Linda Vista Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				1				1				2	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

PM	S. Pacific Street Southbound				Linda Vista Drive Westbound				S. Pacific Street Northbound				Linda Vista Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
16:45	1	0	0	0	0	0	0	0	3	1	0	0	1	0	0	0	5	1
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
17:15	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3	0
17:30	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Ped Total	1				1				7				1				10	
Bike Total		0	0	1		0	0	0		1	0	1		0	0	2		5

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#07	File Name: ITM-21-012-07
	Intersection:	South Pacific Street & Linda Vista Drive	Project: LLG Ref. 3-20-3279
	Date of Count:	Tuesday, March 23, 2021	San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#08	File Name:	ITM-21-012-08
Intersection:	South Las Posas Road & Linda Vista Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Las Posas Road Southbound			Linda Vista Drive Westbound			S. Las Posas Road Northbound			Linda Vista Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	2	59	39	0	13	1	4	21	1	14	14	5	173
7:15	5	63	35	2	17	3	4	27	1	12	12	5	186
7:30	7	60	37	2	15	2	3	25	1	20	17	2	191
7:45	14	62	46	1	29	6	9	33	1	19	25	5	250
8:00	5	62	39	1	24	6	4	23	1	19	26	13	223
8:15	10	49	50	2	20	5	20	26	2	23	25	5	237
8:30	6	50	41	1	21	3	9	37	3	16	19	3	209
8:45	5	36	18	2	12	9	3	33	1	17	19	6	161
Total	54	441	305	11	151	35	56	225	11	140	157	44	1630
Approach%	6.8	55.1	38.1	5.6	76.6	17.8	19.2	77.1	3.8	41.1	46.0	12.9	
Total%	3.3	27.1	18.7	0.7	9.3	2.1	3.4	13.8	0.7	8.6	9.6	2.7	

AM Intersection Peak Hour: **07:45 to 08:45**

Volume	35	223	176	5	94	20	42	119	7	77	95	26	919
Approach%	8.1	51.4	40.6	4.2	79.0	16.8	25.0	70.8	4.2	38.9	48.0	13.1	
Total%	3.8	24.3	19.2	0.5	10.2	2.2	4.6	12.9	0.8	8.4	10.3	2.8	
PHF			0.89			0.83			0.86			0.85	0.92

PM	S. Las Posas Road Southbound			Linda Vista Drive Westbound			S. Las Posas Road Northbound			Linda Vista Drive Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	8	60	32	2	18	9	8	62	1	61	80	11	352
16:15	6	63	20	1	21	14	10	46	1	59	78	9	328
16:30	6	92	31	0	21	14	6	68	5	51	82	13	389
16:45	7	63	36	3	28	13	9	64	1	51	57	10	342
17:00	7	76	28	2	23	17	7	70	0	56	45	9	340
17:15	11	84	26	3	27	16	8	67	1	51	58	12	364
17:30	9	55	29	0	18	13	7	61	3	44	40	7	286
17:45	12	76	25	4	18	9	7	59	1	26	40	6	283
Total	66	569	227	15	174	105	62	497	13	399	480	77	2684
Approach%	7.7	66.0	26.3	5.1	59.2	35.7	10.8	86.9	2.3	41.7	50.2	8.1	
Total%	2.5	21.2	8.5	0.6	6.5	3.9	2.3	18.5	0.5	14.9	17.9	2.9	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	31	315	121	8	99	60	30	269	7	209	242	44	1,435
Approach%	6.6	67.5	25.9	4.8	59.3	35.9	9.8	87.9	2.3	42.2	48.9	8.9	
Total%	2.2	22.0	8.4	0.6	6.9	4.2	2.1	18.7	0.5	14.6	16.9	3.1	
PHF			0.91			0.91			0.97			0.85	0.92

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

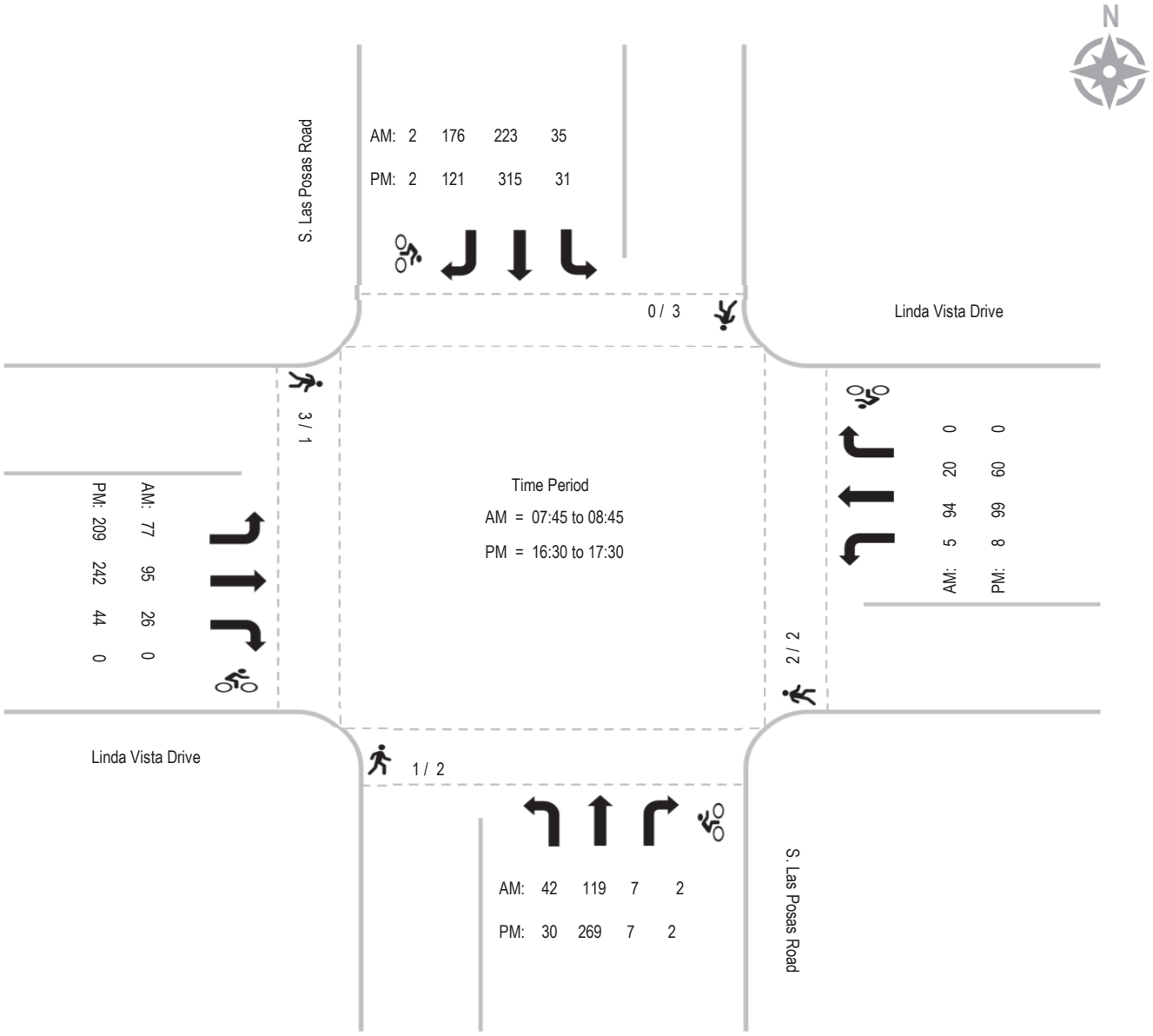
Location:	#08	File Name:	ITM-21-012-08
Intersection:	South Las Posas Road & Linda Vista Drive	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Las Posas Road Southbound				Linda Vista Drive Westbound				S. Las Posas Road Northbound				Linda Vista Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0
7:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
8:15	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	1	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	0
Ped Total	0				2				1				3				6	
Bike Total		1	1	0		0	0	0		0	2	0		0	0	0		4

PM	S. Las Posas Road Southbound				Linda Vista Drive Westbound				S. Las Posas Road Northbound				Linda Vista Drive Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2
16:30	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	3	1
17:15	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	1
17:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
17:45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Ped Total	3				2				2				1				8	
Bike Total		0	2	0		0	0	0		0	2	0		0	0	0		4

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#08	File Name: ITM-21-012-08
	Intersection:	South Las Posas Road & Linda Vista Drive	Project: LLG Ref. 3-20-3279
	Date of Count:	Tuesday, March 23, 2021	San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#09	File Name:	ITM-21-012-09
Intersection:	South Pacific Street & West San Marcos Boulevard	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S. Pacific Street Southbound			W. San Marcos Blvd Westbound			S. Pacific Street Northbound			W. San Marcos Blvd Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	8	1	3	0	321	5	0	0	0	2	149	0	489
7:15	2	0	6	0	364	6	0	0	0	3	163	0	544
7:30	4	0	0	0	342	2	0	0	0	5	175	0	528
7:45	5	0	1	0	318	14	0	0	0	7	206	0	551
8:00	5	1	2	0	325	5	0	0	0	5	144	0	487
8:15	1	0	1	0	298	10	0	0	0	4	182	1	497
8:30	1	0	3	0	249	5	0	0	0	3	213	0	474
8:45	4	0	7	0	266	5	0	0	0	3	167	1	453
Total	30	2	23	0	2483	52	0	0	0	32	1399	2	4023
Approach%	54.5	3.6	41.8	-	97.9	2.1	-	-	-	2.2	97.6	0.1	
Total%	0.7	0.0	0.6	-	61.7	1.3	-	-	-	0.8	34.8	0.0	

AM Intersection Peak Hour: **07:00 to 08:00**

Volume	19	1	10	-	1,345	27	-	-	-	17	693	-	2,112
Approach%	63.3	3.3	33.3	-	98.0	2.0	-	-	-	2.4	97.6	-	
Total%	0.9	0.0	0.5	-	63.7	1.3	-	-	-	0.8	32.8	-	
PHF			0.63			0.93			#DIV/0!			0.83	0.96

PM	S. Pacific Street Southbound			W. San Marcos Blvd Westbound			S. Pacific Street Northbound			W. San Marcos Blvd Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	17	0	9	0	232	4	0	0	0	1	301	1	565
16:15	11	0	3	0	243	9	0	0	0	12	308	2	588
16:30	6	1	8	0	242	8	0	0	0	11	293	0	569
16:45	8	1	3	0	257	11	0	0	0	11	302	0	593
17:00	11	1	3	0	240	13	0	0	0	7	309	1	585
17:15	10	0	4	0	258	9	0	0	0	15	293	0	589
17:30	6	3	6	0	265	4	0	0	0	9	280	3	576
17:45	5	1	6	0	265	4	0	0	0	9	283	0	573
Total	74	7	42	0	2002	62	0	0	0	75	2369	7	4638
Approach%	60.2	5.7	34.1	-	97.0	3.0	-	-	-	3.1	96.7	0.3	
Total%	1.6	0.2	0.9	-	43.2	1.3	-	-	-	1.6	51.1	0.2	

PM Intersection Peak Hour: **16:45 to 17:45**

Volume	35	5	16	-	1,020	37	-	-	-	42	1,184	4	2,343
Approach%	62.5	8.9	28.6	-	96.5	3.5	-	-	-	3.4	96.3	0.3	
Total%	1.5	0.2	0.7	-	43.5	1.6	-	-	-	1.8	50.5	0.2	
PHF			0.93			0.98			#DIV/0!			0.97	0.99

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#09	File Name:	ITM-21-012-09
Intersection:	South Pacific Street & West San Marcos Boulevard	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

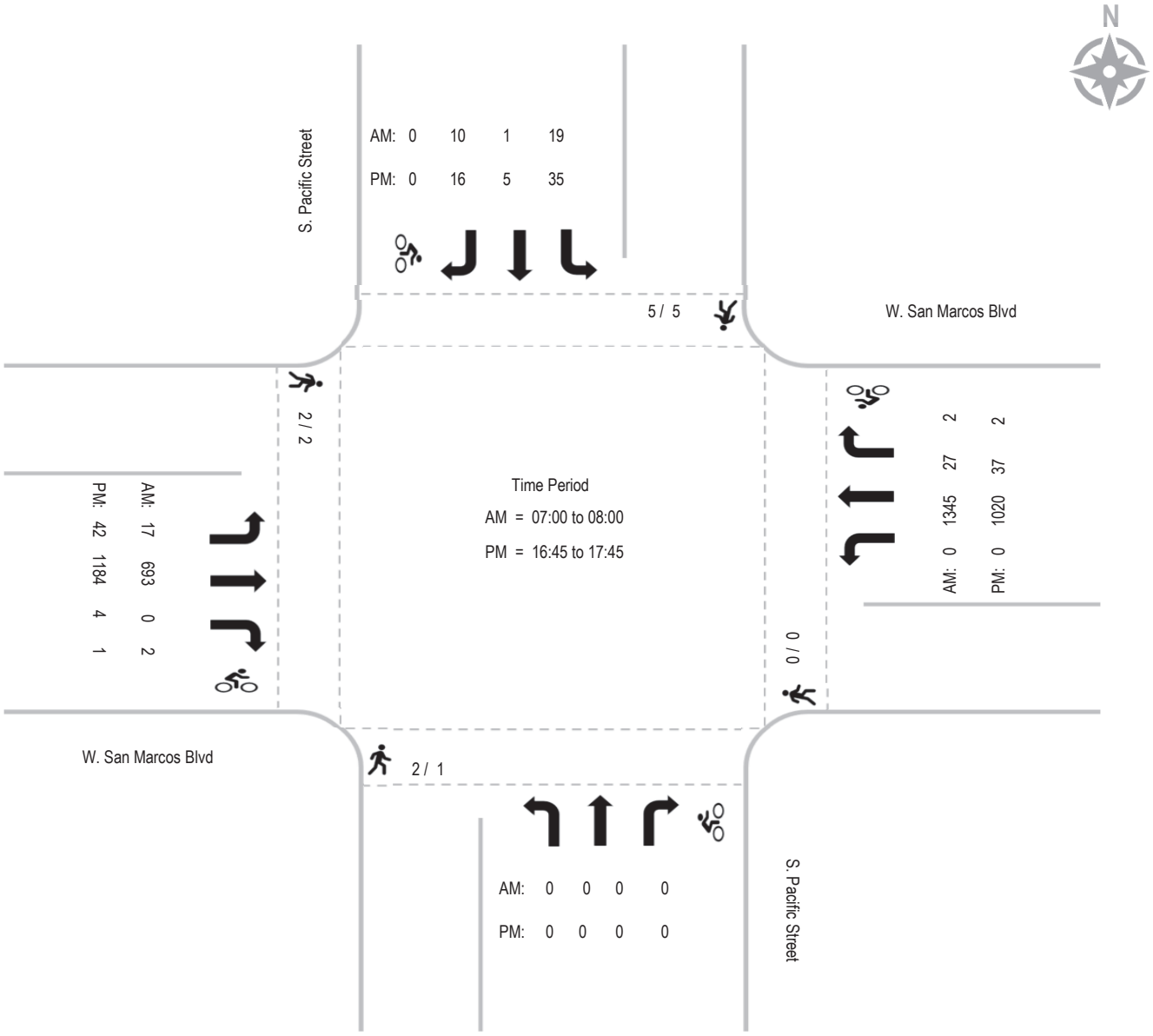
AM	S. Pacific Street Southbound				W. San Marcos Blvd Westbound				S. Pacific Street Northbound				W. San Marcos Blvd Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
7:15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
7:30	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	1	1
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	2
8:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0
Ped Total	5				0				2				2				9	
Bike Total		0	0	0		0	2	0		0	0	0		0	2	0		4

PM	S. Pacific Street Southbound				W. San Marcos Blvd Westbound				S. Pacific Street Northbound				W. San Marcos Blvd Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	2	0
16:15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
16:45	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:15	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	2	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Ped Total	5				0				1				2				8	
Bike Total		0	0	0		0	2	0		0	0	0		0	1	0		3

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers

Location:	#09	File Name:	ITM-21-012-09
Intersection:	South Pacific Street & West San Marcos Boulevard	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN engineers

Location:	#10	File Name:	ITM-21-012-10
Intersection:	South Las Posas Rd / McMahr Rd & West San Marcos Blvd	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S.Las Posas Road Southbound			W. San Marcos Blvd Westbound			McMahr Road Northbound			W. San Marcos Blvd Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
7:00	4	5	42	3	308	16	5	1	2	15	130	0	531
7:15	6	4	52	6	297	10	5	3	2	18	140	6	549
7:30	3	8	46	4	298	8	3	5	2	22	157	6	562
7:45	3	4	59	4	250	8	6	4	3	26	166	8	541
8:00	7	9	51	4	311	7	4	1	4	19	133	2	552
8:15	8	2	31	2	232	13	2	4	5	27	157	5	488
8:30	11	3	41	8	226	14	2	2	3	25	176	3	514
8:45	7	7	35	8	218	11	4	2	1	21	151	1	466
Total	49	42	357	39	2140	87	31	22	22	173	1210	31	4203
Approach%	10.9	9.4	79.7	1.7	94.4	3.8	41.3	29.3	29.3	12.2	85.6	2.2	
Total%	1.2	1.0	8.5	0.9	50.9	2.1	0.7	0.5	0.5	4.1	28.8	0.7	

AM Intersection Peak Hour: **07:15 to 08:15**

Volume	19	25	208	18	1,156	33	18	13	11	85	596	22	2,204
Approach%	7.5	9.9	82.5	1.5	95.8	2.7	42.9	31.0	26.2	12.1	84.8	3.1	
Total%	0.9	1.1	9.4	0.8	52.5	1.5	0.8	0.6	0.5	3.9	27.0	1.0	
PHF			0.94			0.94			0.81			0.88	0.98

PM	S.Las Posas Road Southbound			W. San Marcos Blvd Westbound			McMahr Road Northbound			W. San Marcos Blvd Eastbound			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
16:00	14	3	46	4	187	12	2	1	7	46	252	3	577
16:15	20	7	48	9	206	10	4	2	1	43	253	4	607
16:30	26	8	59	7	198	15	9	2	5	33	266	4	632
16:45	16	2	52	6	186	24	2	5	3	39	249	3	587
17:00	9	6	56	5	202	20	2	7	4	37	265	8	621
17:15	16	9	71	5	205	29	2	1	3	39	249	8	637
17:30	12	1	45	6	213	13	4	4	0	41	256	3	598
17:45	12	3	62	8	197	12	3	1	1	54	229	4	586
Total	125	39	439	50	1594	135	28	23	24	332	2019	37	4845
Approach%	20.7	6.5	72.8	2.8	89.6	7.6	37.3	30.7	32.0	13.9	84.5	1.5	
Total%	2.6	0.8	9.1	1.0	32.9	2.8	0.6	0.5	0.5	6.9	41.7	0.8	

PM Intersection Peak Hour: **16:30 to 17:30**

Volume	67	25	238	23	791	88	15	15	15	148	1,029	23	2,477
Approach%	20.3	7.6	72.1	2.5	87.7	9.8	33.3	33.3	33.3	12.3	85.8	1.9	
Total%	2.7	1.0	9.6	0.9	31.9	3.6	0.6	0.6	0.6	6.0	41.5	0.9	
PHF			0.86			0.94			0.70			0.97	0.97

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN engineers

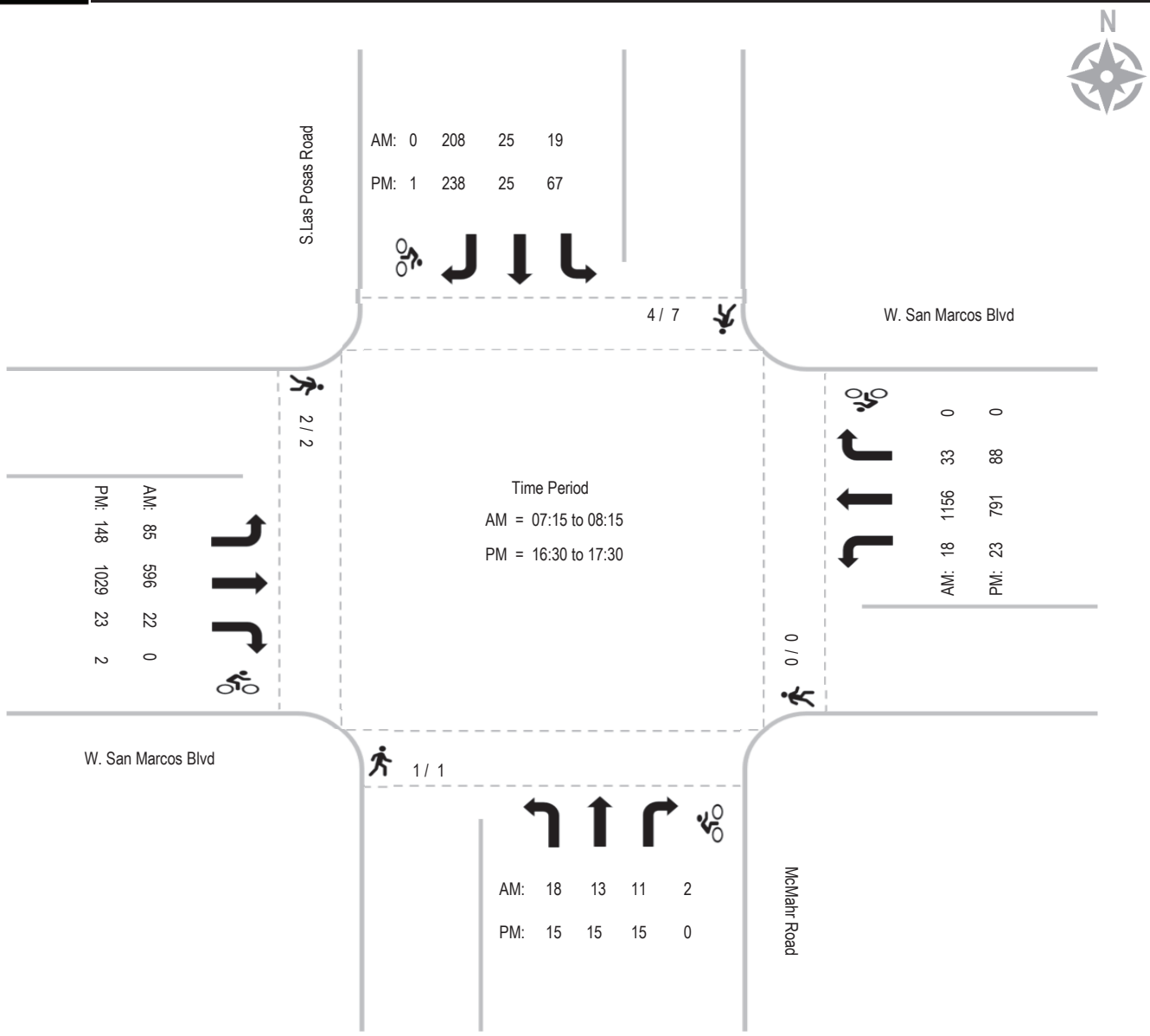
Location:	#10	File Name:	ITM-21-012-10
Intersection:	South Las Posas Rd / McMahr Rd & West San Marcos Blvd	Project:	LLG Ref. 3-20-3279
Date of Count:	Tuesday, March 23, 2021		San Marcos-Upham Pacific

AM	S.Las Posas Road Southbound				W. San Marcos Blvd Westbound				McMahr Road Northbound				W. San Marcos Blvd Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
8:15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
8:45	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
Ped Total	4				0				1				2				7	
Bike Total		0	0	0		0	0	0		0	2	0		0	0	0		2

PM	S.Las Posas Road Southbound				W. San Marcos Blvd Westbound				McMahr Road Northbound				W. San Marcos Blvd Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0
16:15	2	0	1	0	0	0	0	0	0	0	0	0	2	0	2	0	4	3
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
17:15	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	7				0				1				2				10	
Bike Total		0	1	0		0	0	0		0	0	0		0	2	0		3

Intersection Turning Movement - Peak Hour Summary

LINSCOTT LAW & GREENSPAN engineers	Location:	#10	File Name: ITM-21-012-10
	Intersection:	South Las Posas Rd / McMahr Rd & West San Marcos Blvd	Project: LLG Ref. 3-20-3279
	Date of Count:	Tuesday, March 23, 2021	San Marcos-Upham Pacific



Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#A Las Posas Road, between Descanso Avenue and SR-78 WB Ramps**

Date: **Thursday, March 25, 2021** Total Daily Volume: **27318** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
144	100	109	130	251	515	1017	1573	1673	1462	1459	1626	1826	1825	1940	2232	2306	2264	1669	1143	853	552	384	265
48	26	26	28	75	67	206	313	419	358	357	379	454	451	442	515	546	557	486	344	241	143	93	78
27	24	30	26	43	103	222	367	425	401	333	381	469	437	500	566	566	571	439	296	227	163	100	81
43	24	23	34	56	156	249	445	400	317	390	429	452	468	423	580	593	593	390	252	209	129	87	55
26	26	30	42	77	189	340	448	429	386	379	437	451	469	575	571	601	543	354	251	176	117	104	51

Date: **Thursday, March 25, 2021** Total Daily Volume: **13743** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
97	43	62	78	126	172	368	560	652	546	683	740	898	921	1034	1237	1365	1346	950	645	499	350	216	155
33	13	19	16	50	24	84	118	152	134	159	165	199	231	240	295	325	317	279	191	145	102	46	54
21	10	16	15	21	43	73	125	160	135	156	178	242	222	239	303	325	344	260	158	129	95	58	37
25	5	11	20	21	44	84	158	173	132	186	194	226	234	222	327	346	375	229	142	119	86	49	32
18	15	16	27	34	61	127	159	167	145	182	203	231	234	333	312	369	310	182	154	106	67	63	32

Date: **Thursday, March 25, 2021** Total Daily Volume: **13575** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
47	57	47	52	125	343	649	1013	1021	916	776	886	928	904	906	995	941	918	719	498	354	202	168	110
15	13	7	12	25	43	122	195	267	224	198	214	255	220	202	220	221	240	207	153	96	41	47	24
6	14	14	11	22	60	149	242	265	266	177	203	227	215	261	263	241	227	179	138	98	68	42	44
18	19	12	14	35	112	165	287	227	185	204	235	226	234	201	253	247	218	161	110	90	43	38	23
8	11	14	15	43	128	213	289	262	241	197	234	220	235	242	259	232	233	172	97	70	50	41	19

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#B Las Posas Road, between SR-78 WB Ramps and Grand Avenue**

Date: **Thursday, March 25, 2021** Total Daily Volume: **31014** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
133	84	112	134	264	619	1128	1726	1851	1507	1729	1988	2239	2198	2379	2614	2688	2445	1786	1270	906	587	372	255
40	18	29	24	60	85	211	350	467	359	356	457	570	548	537	638	663	648	498	398	262	173	97	79
26	18	35	26	51	131	259	379	480	409	401	508	544	521	624	654	652	617	501	322	232	164	91	65
32	24	26	46	61	168	291	480	462	338	502	467	547	582	577	672	692	611	405	283	228	138	88	68
35	24	22	38	92	235	367	517	442	401	470	556	578	547	641	650	681	569	382	267	184	112	96	43

Date: **Thursday, March 25, 2021** Total Daily Volume: **16247** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
89	33	45	76	97	111	331	564	679	617	815	990	1139	1175	1357	1588	1763	1562	1098	758	565	384	247	164
29	9	13	15	38	16	63	113	156	159	152	228	269	304	284	397	435	429	326	239	174	120	68	51
22	6	9	12	18	28	88	123	176	152	179	277	290	285	330	400	410	409	319	190	136	103	61	41
20	8	13	28	16	26	85	158	179	147	252	232	282	306	343	429	464	398	240	161	137	92	56	46
18	10	10	21	25	41	95	170	168	159	232	253	298	280	400	362	454	326	213	168	118	69	62	26

Date: **Thursday, March 25, 2021** Total Daily Volume: **14767** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
44	51	67	58	167	508	797	1162	1172	890	914	998	1100	1023	1022	1026	925	883	688	512	341	203	125	91
11	9	16	9	22	69	148	237	311	200	204	229	301	244	253	241	228	219	172	159	88	53	29	28
4	12	26	14	33	103	171	256	304	257	222	231	254	236	294	254	242	208	182	132	96	61	30	24
12	16	13	18	45	142	206	322	283	191	250	235	265	276	234	243	228	213	165	122	91	46	32	22
17	14	12	17	67	194	272	347	274	242	238	303	280	267	241	288	227	243	169	99	66	43	34	17

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#C Las Posas Road, between Grand Avenue and La Miranda Drive**

Date: **Thursday, March 25, 2021** Total Daily Volume: **14075** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
94	51	34	62	95	296	479	663	751	678	791	920	1045	987	1082	1151	1218	1014	834	599	466	368	241	156
35	9	11	10	18	44	90	123	191	170	178	228	298	237	266	279	281	286	235	183	110	121	54	40
17	13	10	10	13	70	110	177	185	179	194	236	238	253	287	300	322	250	221	169	135	98	54	33
20	14	8	22	36	83	117	185	190	147	213	221	259	256	247	270	297	239	189	134	112	87	66	57
22	15	5	20	28	99	162	178	185	182	206	235	250	241	282	302	318	239	189	113	109	62	67	26

Date: **Thursday, March 25, 2021** Total Daily Volume: **6814** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
71	22	16	31	25	38	98	162	228	253	300	409	480	468	579	643	738	570	455	343	303	270	184	128
28	3	7	8	8	3	21	28	54	68	62	105	133	110	132	167	170	179	134	106	64	90	42	31
15	8	5	3	3	8	25	43	60	64	68	114	105	123	153	170	203	136	117	101	96	65	42	26
16	4	3	11	13	13	22	44	61	59	92	107	118	129	132	154	181	137	104	71	69	65	52	49
12	7	1	9	1	14	30	47	53	62	78	83	124	106	162	152	184	118	100	65	74	50	48	22

Date: **Thursday, March 25, 2021** Total Daily Volume: **7261** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
23	29	18	31	70	258	381	501	523	425	491	511	565	519	503	508	480	444	379	256	163	98	57	28
7	6	4	2	10	41	69	95	137	102	116	123	165	127	134	112	111	107	101	77	46	31	12	9
2	5	5	7	10	62	85	134	125	115	126	122	133	130	134	130	119	114	104	68	39	33	12	7
4	10	5	11	23	70	95	141	129	88	121	114	141	127	115	116	116	102	85	63	43	22	14	8
10	8	4	11	27	85	132	131	132	120	128	152	126	135	120	150	134	121	89	48	35	12	19	4

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#D Las Posas Road, between La Miranda Drive and Linda Vista Drive**

Date: **Thursday, March 25, 2021** Total Daily Volume: **11301** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
80	52	27	52	81	194	394	580	647	607	666	696	791	793	863	940	922	788	655	445	383	294	213	138
28	10	10	10	17	31	69	108	159	158	157	196	198	187	221	244	209	201	187	143	90	101	42	37
15	13	8	9	14	38	90	154	159	171	138	154	179	203	221	232	231	201	172	121	112	77	47	32
16	15	7	18	31	52	109	152	176	136	183	165	217	205	179	233	230	199	151	106	82	60	64	47
21	14	2	15	19	73	126	166	153	142	188	181	197	198	242	231	252	187	145	75	99	56	60	22

Date: **Thursday, March 25, 2021** Total Daily Volume: **5462** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
63	21	13	27	26	28	75	155	231	238	293	313	365	370	443	507	541	429	352	240	248	210	161	113
24	2	6	8	9	2	12	29	51	60	69	96	85	88	106	137	128	114	100	78	48	73	33	28
15	8	5	2	3	6	17	38	62	69	55	68	86	96	116	129	132	112	94	63	77	49	37	27
13	6	2	9	12	11	19	41	60	61	86	77	101	97	89	124	135	109	86	61	56	47	50	39
11	5	0	8	2	9	27	47	58	48	83	72	93	89	132	117	146	94	72	38	67	41	41	19

Date: **Thursday, March 25, 2021** Total Daily Volume: **5839** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
17	31	14	25	55	166	319	425	416	369	373	383	426	423	420	433	381	359	303	205	135	84	52	25
4	8	4	2	8	29	57	79	108	98	88	100	113	99	115	107	81	87	87	65	42	28	9	9
0	5	3	7	11	32	73	116	97	102	83	86	93	107	105	103	99	89	78	58	35	28	10	5
3	9	5	9	19	41	90	111	116	75	97	88	116	108	90	109	95	90	65	45	26	13	14	8
10	9	2	7	17	64	99	119	95	94	105	109	104	109	110	114	106	93	73	37	32	15	19	3

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#E Las Posas Road, between Linda Vista Drive and San Marcos Boulevard**

Date: **Thursday, March 25, 2021** Total Daily Volume: **7211** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
49	36	25	34	59	117	214	387	372	396	452	505	560	549	509	545	510	500	478	339	226	168	115	66
19	12	4	3	15	13	39	68	86	100	104	128	127	150	137	131	124	109	138	103	63	61	31	23
14	4	7	12	14	30	57	98	84	111	115	128	144	128	122	129	126	122	120	102	68	39	18	14
11	11	10	11	17	31	60	109	97	89	111	113	158	125	105	136	136	133	109	72	46	39	27	17
5	9	4	8	13	43	58	112	105	96	122	136	131	146	145	149	124	136	111	62	49	29	39	12

Date: **Thursday, March 25, 2021** Total Daily Volume: **2926** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
6	6	3	3	7	31	60	125	150	157	209	216	264	243	222	238	253	242	229	151	70	27	7	7
2	3	0	1	1	2	10	27	29	42	54	62	60	65	68	63	72	53	66	47	27	13	1	5
3	2	1	0	0	7	13	28	37	36	47	51	69	64	55	63	55	61	64	41	23	5	1	1
0	1	1	2	4	12	14	31	40	44	51	47	77	52	41	53	65	67	56	38	9	6	2	1
1	0	1	0	2	10	23	39	44	35	57	56	58	62	58	59	61	61	43	25	11	3	3	0

Date: **Thursday, March 25, 2021** Total Daily Volume: **4285** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
43	30	22	31	52	86	154	262	222	239	243	289	296	306	287	307	257	258	249	188	156	141	108	59
17	9	4	2	14	11	29	41	57	58	50	66	67	85	69	68	52	56	72	56	36	48	30	18
11	2	6	12	14	23	44	70	47	75	68	77	75	64	67	66	71	61	56	61	45	34	17	13
11	10	9	9	13	19	46	78	57	45	60	66	81	73	64	83	71	66	53	34	37	33	25	16
4	9	3	8	11	33	35	73	61	61	65	80	73	84	87	90	63	75	68	37	38	26	36	12

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#F Pacific Street, between La Miranda Drive and Linda Vista Drive**

Date: **Wednesday, March 24, 2021** Total Daily Volume: **3740** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
13	12	19	17	21	54	148	214	235	185	202	262	257	244	294	308	348	284	156	125	127	122	69	24
5	3	9	3	3	6	30	51	61	45	53	59	68	48	57	63	111	91	42	35	31	32	23	7
1	1	5	6	2	10	20	53	60	50	46	63	55	53	67	78	78	90	35	31	30	33	23	4
4	3	2	6	10	20	43	49	66	49	47	76	62	72	89	91	84	58	43	38	34	28	13	4
3	5	3	2	6	18	55	61	48	41	56	64	72	71	81	76	75	45	36	21	32	29	10	9

Date: **Wednesday, March 24, 2021** Total Daily Volume: **1965** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
12	11	10	9	10	9	37	68	84	85	102	122	115	122	161	167	249	163	89	64	89	106	61	20
4	3	5	1	2	0	5	19	24	22	29	30	37	27	24	35	87	60	27	20	14	28	21	5
1	1	1	4	0	3	4	18	18	20	27	29	19	22	31	43	55	45	18	13	20	27	19	4
4	2	2	4	7	4	13	13	22	25	22	29	28	38	58	49	58	36	29	24	29	23	12	4
3	5	2	0	1	2	15	18	20	18	24	34	31	35	48	40	49	22	15	7	26	28	9	7

Date: **Wednesday, March 24, 2021** Total Daily Volume: **1775** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
1	1	9	8	11	45	111	146	151	100	100	140	142	122	133	141	99	121	67	61	38	16	8	4
1	0	4	2	1	6	25	32	37	23	24	29	31	21	33	28	24	31	15	15	17	4	2	2
0	0	4	2	2	7	16	35	42	30	19	34	36	31	36	35	23	45	17	18	10	6	4	0
0	1	0	2	3	16	30	36	44	24	25	47	34	34	31	42	26	22	14	14	5	5	1	0
0	0	1	2	5	16	40	43	28	23	32	30	41	36	33	36	26	23	21	14	6	1	1	2

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **# G Pacific Street, between Linda Vista Drive and San Marcos Boulevard**

Date: **Wednesday, March 24, 2021** Total Daily Volume: **3481** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
119	42	33	38	22	49	74	108	115	109	91	201	198	147	167	172	177	127	123	87	392	405	297	188
42	10	12	7	8	15	24	15	27	28	23	49	58	30	36	46	56	37	36	29	19	116	89	66
34	9	4	12	1	4	11	31	24	22	21	48	43	33	42	41	44	33	26	18	111	108	76	39
20	13	7	10	4	19	14	15	38	28	21	58	44	48	50	43	43	34	32	22	131	87	73	43
23	10	10	9	9	11	25	47	26	31	26	46	53	36	39	42	34	23	29	18	131	94	59	40

Date: **Wednesday, March 24, 2021** Total Daily Volume: **2425** Description: **Northbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
116	39	30	33	9	13	25	28	50	51	40	111	102	84	87	94	102	72	69	49	363	390	287	181
42	9	12	6	7	4	11	1	14	12	12	27	28	16	21	27	34	28	20	19	9	111	87	63
32	9	2	10	0	0	3	11	11	8	8	32	24	15	17	26	25	14	11	13	104	103	72	38
20	11	6	9	2	5	5	4	17	14	8	31	25	34	28	22	21	20	20	11	123	84	71	42
22	10	10	8	0	4	6	12	8	17	12	21	25	19	21	19	22	10	18	6	127	92	57	38

Date: **Wednesday, March 24, 2021** Total Daily Volume: **1056** Description: **Southbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
3	3	3	5	13	36	49	80	65	58	51	90	96	63	80	78	75	55	54	38	29	15	10	7
0	1	0	1	1	11	13	14	13	16	11	22	30	14	15	19	22	9	16	10	10	5	2	3
2	0	2	2	1	4	8	20	13	14	13	16	19	18	25	15	19	19	15	5	7	5	4	1
0	2	1	1	2	14	9	11	21	14	13	27	19	14	22	21	22	14	12	11	8	3	2	1
1	0	0	1	9	7	19	35	18	14	14	25	28	17	18	23	12	13	11	12	4	2	2	2

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#H La Miranda Drive, between Pacific Street and Las Posas Road**

Date: **Wednesday, March 24, 2021** Total Daily Volume: **2755** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
7	3	5	8	8	75	97	130	148	119	136	183	215	164	211	259	268	262	115	146	79	73	30	14
4	1	0	1	0	10	20	42	37	22	32	49	48	16	47	51	76	77	32	33	19	19	11	4
0	1	2	0	3	13	23	17	47	33	32	44	55	40	37	60	76	98	26	58	22	36	11	7
2	0	2	5	0	22	22	23	36	27	28	49	57	45	68	63	64	50	36	31	19	15	5	1
1	1	1	2	5	30	32	48	28	37	44	41	55	63	59	85	52	37	21	24	19	3	3	2

Date: **Wednesday, March 24, 2021** Total Daily Volume: **1402** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
6	2	3	4	3	24	46	62	51	55	55	80	90	101	91	148	179	149	56	71	40	52	23	11
4	1	0	1	0	4	12	30	17	12	19	19	19	25	24	31	53	37	21	13	9	10	9	4
0	0	0	0	1	4	14	7	17	9	8	16	24	27	12	32	55	68	8	34	11	28	8	5
2	0	2	2	0	5	12	5	9	13	10	21	24	19	26	37	42	30	21	19	9	11	4	1
0	1	1	1	2	11	8	20	8	21	18	24	23	30	29	48	29	14	6	5	11	3	2	1

Date: **Wednesday, March 24, 2021** Total Daily Volume: **1353** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
1	1	2	4	5	51	51	68	97	64	81	103	125	63	120	111	89	113	59	75	39	21	7	3
0	0	0	0	0	6	8	12	20	10	13	30	29	-9	23	20	23	40	11	20	10	9	2	0
0	1	2	0	2	9	9	10	30	24	24	28	31	13	25	28	21	30	18	24	11	8	3	2
0	0	0	3	0	17	10	18	27	14	18	28	33	26	42	26	22	20	15	12	10	4	1	0
1	0	0	1	3	19	24	28	20	16	26	17	32	33	30	37	23	23	15	19	8	0	1	1

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#I Linda Vista Drive, between Rancho Santa Fe Road and Pacific Street**

Date: **Wednesday, March 24, 2021** Total Daily Volume: **9798** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
22	15	13	25	35	140	360	569	651	511	502	667	721	651	827	891	1061	799	475	349	224	135	99	56
9	1	5	1	5	15	66	142	170	114	127	143	181	167	169	204	324	219	148	96	66	49	38	19
5	3	0	9	3	21	70	129	176	126	111	169	197	157	200	224	245	229	140	99	50	32	20	10
6	7	5	4	10	44	96	146	158	124	125	182	173	170	219	230	280	203	97	86	59	24	22	15
2	4	3	11	17	60	128	152	147	147	139	173	170	157	239	233	212	148	90	68	49	30	19	12

Date: **Wednesday, March 24, 2021** Total Daily Volume: **5322** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
12	9	10	15	14	50	111	229	275	247	253	310	367	326	498	560	751	529	282	199	122	65	51	37
4	1	4	0	2	9	23	59	60	52	64	62	105	88	93	123	247	150	99	54	30	22	16	12
4	1	0	7	1	9	23	54	80	56	60	83	100	66	111	138	166	146	84	51	27	15	13	7
3	5	3	2	4	15	32	62	60	61	52	83	85	89	139	136	200	135	51	49	34	10	14	9
1	2	3	6	7	17	33	54	75	78	77	82	77	83	155	163	138	98	48	45	31	18	8	9

Date: **Wednesday, March 24, 2021** Total Daily Volume: **4476** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
10	6	3	10	21	90	249	340	376	264	249	357	354	325	329	331	310	270	193	150	102	70	48	19
5	0	1	1	3	6	43	83	110	62	63	81	76	79	76	81	77	69	49	42	36	27	22	7
1	2	0	2	2	12	47	75	96	70	51	86	97	91	89	86	79	83	56	48	23	17	7	3
3	2	2	2	6	29	64	84	98	63	73	99	88	81	80	94	80	68	46	37	25	14	8	6
1	2	0	5	10	43	95	98	72	69	62	91	93	74	84	70	74	50	42	23	18	12	11	3

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#J Linda Vista Drive, between Pacific Street and Las Posas Road**

Date: **Wednesday, March 24, 2021** Total Daily Volume: **8741** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
113	33	25	46	44	138	263	392	496	408	421	547	585	495	663	701	815	606	391	252	446	377	295	189
39	5	10	5	14	11	51	88	131	105	98	124	153	126	140	157	232	174	115	75	46	121	89	65
33	11	2	16	3	17	43	86	130	97	101	129	154	117	166	184	207	161	117	79	116	97	70	41
20	9	4	9	11	53	66	96	117	100	106	156	159	131	169	190	202	151	82	53	148	74	71	41
21	8	9	16	16	57	103	122	118	106	116	138	119	121	188	170	174	120	77	45	136	85	65	42

Date: **Wednesday, March 24, 2021** Total Daily Volume: **5372** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
104	27	24	35	15	39	80	141	211	205	232	279	326	274	414	459	570	406	235	157	360	334	263	182
37	5	10	3	9	5	19	30	54	48	52	58	89	70	85	98	167	116	71	44	23	104	76	64
31	9	2	14	2	4	10	28	62	43	56	67	88	57	99	120	137	106	73	54	93	85	65	38
17	7	4	6	2	14	20	37	35	48	49	82	86	75	102	124	150	102	42	30	121	65	66	40
19	6	8	12	2	16	31	46	60	66	75	72	63	72	128	117	116	82	49	29	123	80	56	40

Date: **Wednesday, March 24, 2021** Total Daily Volume: **3369** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
9	6	1	11	29	99	183	251	285	203	189	268	259	221	249	242	245	200	156	95	86	43	32	7
2	0	0	2	5	6	32	58	77	57	46	66	64	56	55	59	65	58	44	31	23	17	13	1
2	2	0	2	1	13	33	58	68	54	45	62	66	60	67	64	70	55	44	25	23	12	5	3
3	2	0	3	9	39	46	59	82	52	57	74	73	56	67	66	52	49	40	23	27	9	5	1
2	2	1	4	14	41	72	76	58	40	41	66	56	49	60	53	58	38	28	16	13	5	9	2

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#K Linda Vista Drive, between Las Posas Road and Via Vera Cruz**

Date: **Thursday, March 25, 2021** Total Daily Volume: **4672** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
40	14	7	13	17	78	136	251	267	213	244	282	331	317	375	437	542	383	236	119	152	110	66	42
16	7	1	6	1	13	21	40	75	49	63	63	92	79	62	99	135	106	71	42	25	38	24	10
10	4	3	1	3	5	47	63	72	60	56	76	92	91	78	91	127	107	72	35	37	38	13	9
8	2	0	2	6	25	25	60	72	53	67	77	78	82	126	133	132	95	50	27	39	21	17	15
6	1	3	4	7	35	43	88	48	51	58	66	69	65	109	114	148	75	43	15	51	13	12	8

Date: **Thursday, March 25, 2021** Total Daily Volume: **2796** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
25	13	7	7	12	24	42	112	128	113	143	148	181	178	246	277	371	252	150	73	114	91	58	31
8	6	1	2	1	4	7	17	36	28	42	39	53	42	32	69	94	70	38	26	14	29	19	9
7	4	3	1	2	1	16	23	34	25	28	36	44	52	44	55	91	73	54	20	28	33	12	5
5	2	0	0	3	7	10	32	35	34	39	38	42	50	85	82	90	54	35	17	31	19	15	13
5	1	3	4	6	12	9	40	23	26	34	35	42	34	85	71	96	55	23	10	41	10	12	4

Date: **Thursday, March 25, 2021** Total Daily Volume: **1876** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
15	1	0	6	5	54	94	139	139	100	101	134	150	139	129	160	171	131	86	46	38	19	8	11
8	1	0	4	0	9	14	23	39	21	21	24	39	37	30	30	41	36	33	16	11	9	5	1
3	0	0	0	1	4	31	40	38	35	28	40	48	39	34	36	36	34	18	15	9	5	1	4
3	0	0	2	3	18	15	28	37	19	28	39	36	32	41	51	42	41	15	10	8	2	2	2
1	0	0	0	1	23	34	48	25	25	24	31	27	31	24	43	52	20	20	5	10	3	0	4

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#L San Marcos Boulevard, between Pacific Street and Las Posas Road**

Date: **Thursday, March 25, 2021** Total Daily Volume: **31434** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
75	82	70	107	334	972	1482	2122	1967	1830	1865	1928	2084	2207	2212	2236	2154	2232	1837	1377	905	704	411	241
20	28	17	16	43	130	275	460	445	443	443	486	539	501	582	541	485	577	505	396	280	193	108	78
17	12	20	25	44	216	321	518	526	436	461	455	473	558	537	552	532	569	519	353	236	154	115	58
22	26	17	35	105	298	416	608	492	460	463	511	560	554	561	588	554	558	424	321	192	192	89	53
16	16	16	31	142	328	470	536	504	491	498	476	512	594	532	555	583	528	389	307	197	165	99	52

Date: **Thursday, March 25, 2021** Total Daily Volume: **14958** Description: **Eastbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
14	11	8	2	31	193	481	757	843	820	932	948	1084	1126	1162	1234	1198	1247	1010	741	481	339	177	119
5	5	3	2	2	26	94	158	155	189	228	232	276	256	296	307	282	324	272	210	140	83	42	36
0	0	5	0	0	50	112	188	264	189	231	212	259	297	290	312	287	340	306	205	135	74	53	33
3	4	0	0	11	48	120	217	192	220	211	258	286	282	291	306	305	295	258	161	108	95	38	27
6	2	0	0	18	69	155	194	232	222	262	246	263	291	285	309	324	288	174	165	98	87	44	23

Date: **Thursday, March 25, 2021** Total Daily Volume: **16476** Description: **Westbound Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
61	71	62	105	303	779	1001	1365	1124	1010	933	980	1000	1081	1050	1002	956	985	827	636	424	365	234	122
15	23	14	14	41	104	181	302	290	254	215	254	263	245	286	234	203	253	233	186	140	110	66	42
17	12	15	25	44	166	209	330	262	247	230	243	214	261	247	240	245	229	213	148	101	80	62	25
19	22	17	35	94	250	296	391	300	240	252	253	274	272	270	282	249	263	166	160	84	97	51	26
10	14	16	31	124	259	315	342	272	269	236	230	249	303	247	246	259	240	215	142	99	78	55	29

Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **#M San Marcos Boulevard, between Las Posas Road and Via Vera Cruz**

Date: **Thursday, March 25, 2021** Total Daily Volume: **28827** Description: **Total Volume**

0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
89	67	68	114	333	911	1409	1931	1773	1695	1699	1811	1855	2021	2072	2046	2001	2103	1672	1350	780	532	329	166
20	22	15	13	39	112	278	421	387	403	397	434	454	450	527	503	471	551	449	372	288	157	98	58
25	15	15	32	38	208	307	469	485	425	419	451	428	521	516	495	481	530	464	347	160	116	86	40
28	18	16	35	109	291	377	548	450	413	434	455	493	503	516	542	498	537	383	322	145	148	70	35
16	12	22	34	147	300	447	493	451	454	449	471	480	547	513	506	551	485	376	309	187	111	75	33

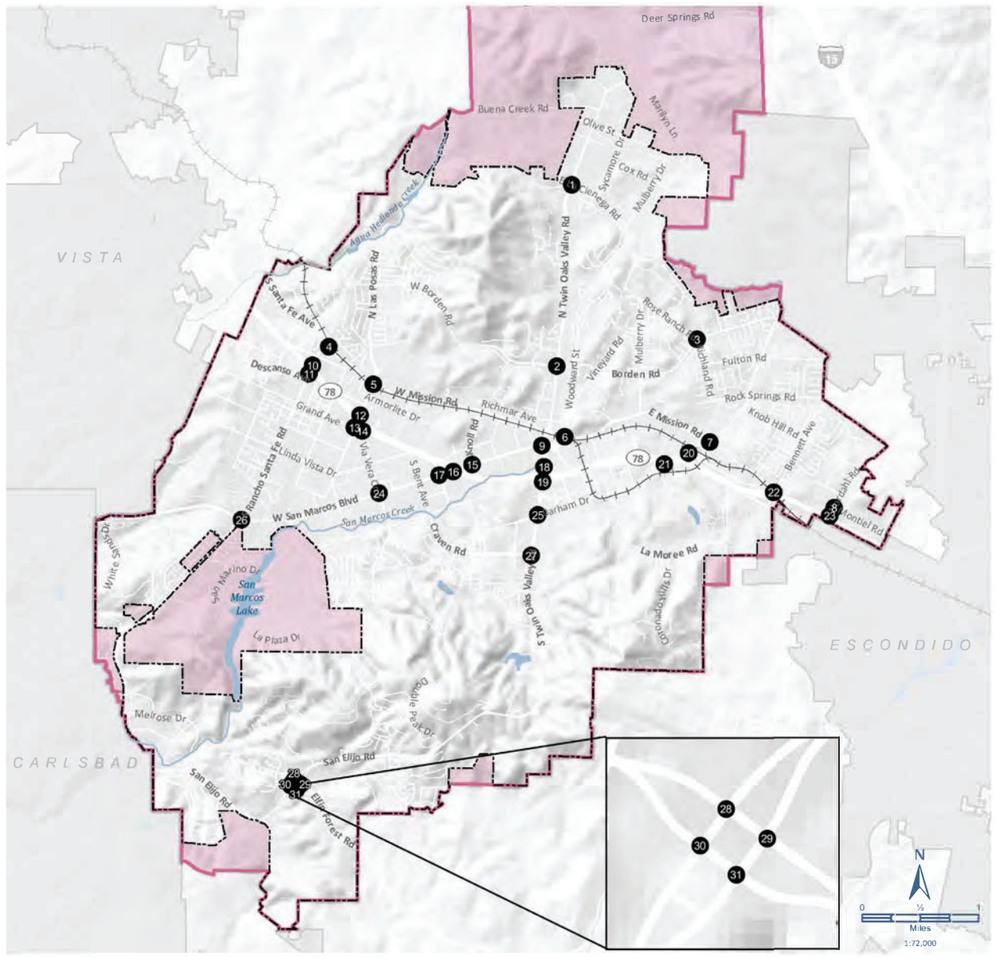
Date: **Thursday, March 25, 2021** Total Daily Volume: **13119** Description: **Eastbound Volume**

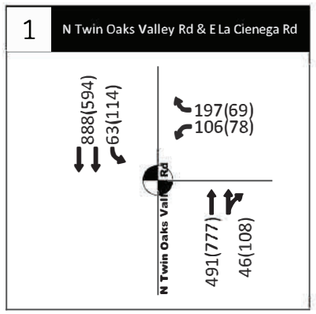
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
33	12	14	18	48	177	450	655	740	758	852	891	956	1041	1106	1152	1077	1150	913	682	217	75	62	40
9	5	4	1	6	23	97	138	141	177	204	215	249	241	278	284	258	300	241	189	129	26	18	11
9	1	4	7	5	46	102	155	222	201	207	213	220	271	273	288	268	312	267	203	27	16	12	10
10	3	3	5	15	43	116	192	169	184	212	233	250	271	274	285	266	276	220	144	30	19	16	14
5	3	3	5	22	65	135	170	208	196	229	230	237	258	281	295	285	262	185	146	31	14	16	5

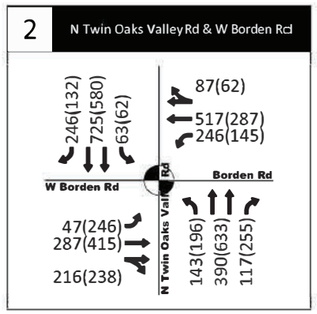
Date: **Thursday, March 25, 2021** Total Daily Volume: **15708** Description: **Westbound Volume**

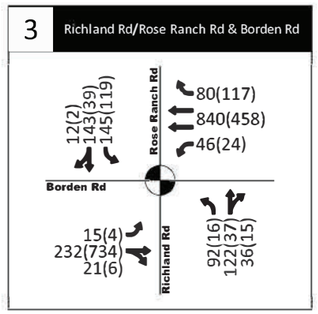
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
56	55	54	96	285	734	959	1276	1033	937	847	920	899	980	966	894	924	953	759	668	563	457	267	126
11	17	11	12	33	89	181	283	246	226	193	219	205	209	249	219	213	251	208	183	159	131	80	47
16	14	11	25	33	162	205	314	263	224	212	238	208	250	243	207	213	218	197	144	133	100	74	30
18	15	13	30	94	248	261	356	281	229	222	222	243	232	242	257	232	261	163	178	115	129	54	21
11	9	19	29	125	235	312	323	243	258	220	241	243	289	232	211	266	223	191	163	156	97	59	28

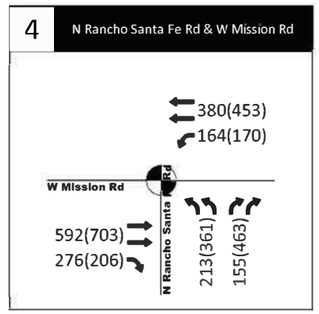
2. YEAR 2017 COUNTS

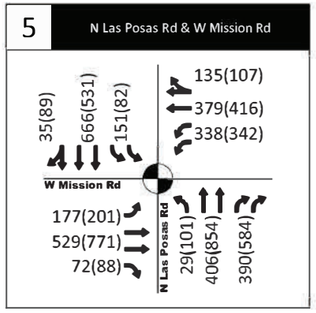


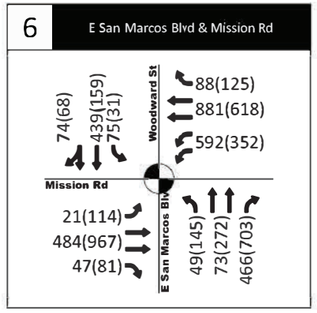


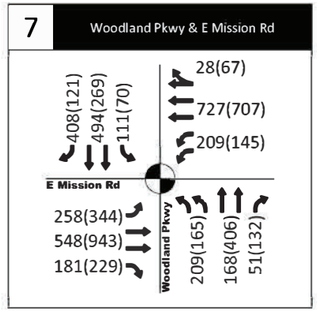


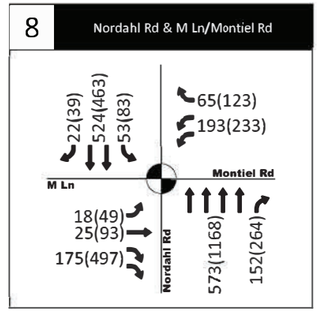


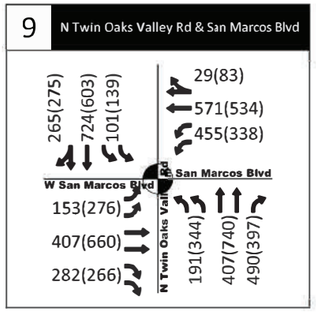


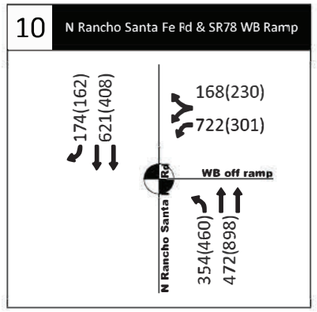


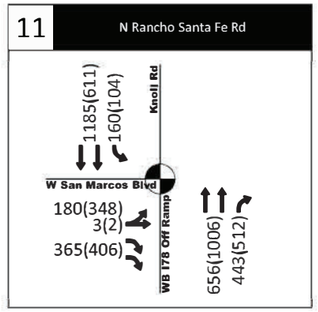


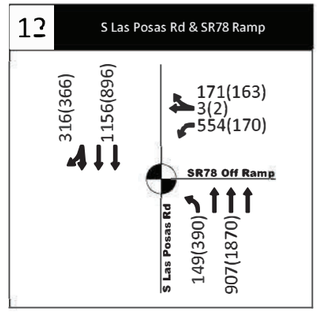


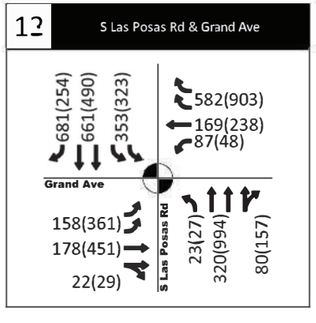


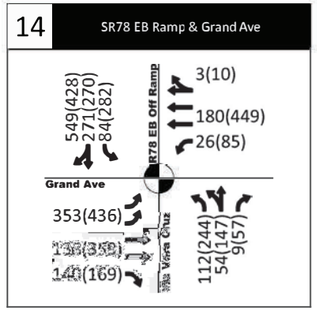


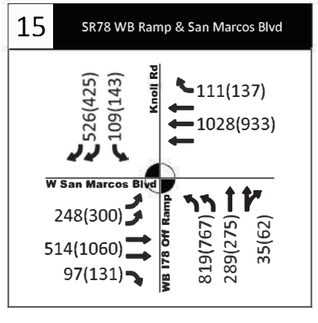


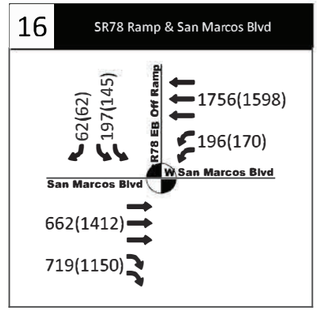












AM(PM) - Traffic Volume

- Traffic Signal

Existing Weekday AM & PM Peak Hour Traffic Volumes and Lane Geometries
San Marcos, CA

Figure
2-8

KITTELSON & ASSOCIATES

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

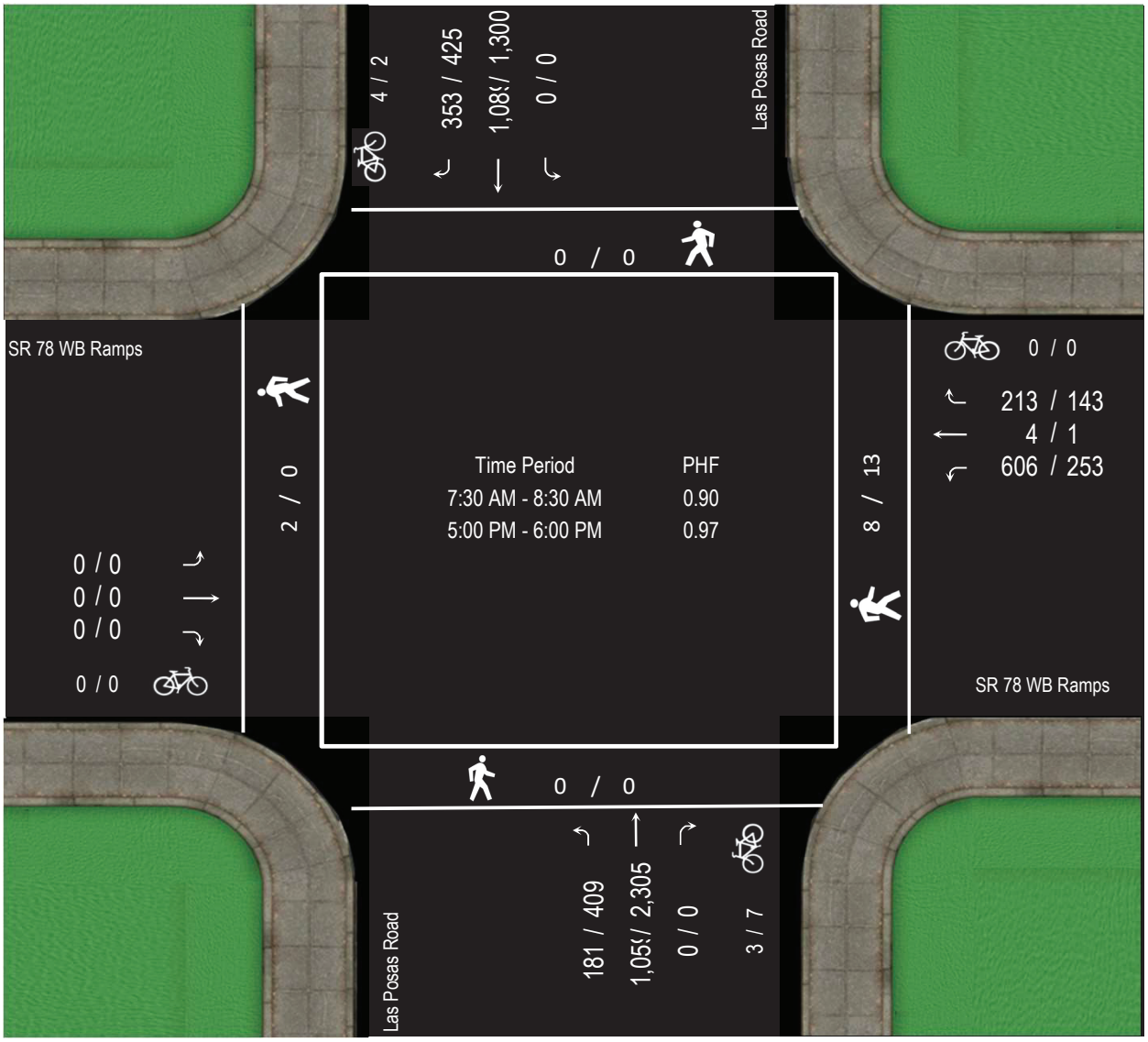
Location: SR 78 WB Ramps @ Las Posas Road

Date of Count: *Tuesday, November 28, 2017*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *17-0786*



LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: SR 78 WB Ramps @ Las Posas Road

AM Period (7:00 AM - 9:00 AM)

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	68	201	0	53	1	95	0	144	35	0	0	0	597
7:15 AM	99	265	0	32	0	99	0	218	30	0	0	0	743
7:30 AM	88	231	0	86	0	168	0	297	30	0	0	0	900
7:45 AM	93	311	0	46	0	129	0	341	50	0	0	0	970
8:00 AM	90	222	0	46	3	131	0	194	55	0	0	0	741
8:15 AM	82	325	0	35	1	178	0	227	46	0	0	0	894
8:30 AM	86	225	0	32	0	174	0	283	48	0	0	0	848
8:45 AM	63	272	0	53	1	110	0	255	52	0	0	0	806
Total	669	2,052	0	383	6	1,084	0	1,959	346	0	0	0	6,499

AM Intersection Peak Hour : **7:30 AM - 8:30 AM** Intersection PHF : **0.90**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	353	1,089	0	213	4	606	0	1,059	181	0	0	0	3,505
PHF	0.95	0.84	#####	0.62	0.33	0.85	#####	0.78	0.82	#####	#####	#####	0.90
Movement PHF		0.89			0.81			0.79			#DIV/0!		0.90

PM Period (4:00 PM - 6:00 PM)

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	169	258	0	45	0	121	0	416	142	0	0	0	1,151
4:15 PM	117	319	0	51	0	100	0	476	106	0	0	0	1,169
4:30 PM	115	296	0	39	0	86	0	499	127	0	0	0	1,162
4:45 PM	77	327	0	35	0	56	0	565	86	0	0	0	1,146
5:00 PM	107	286	0	40	1	74	0	559	103	0	0	0	1,170
5:15 PM	123	346	0	37	0	51	0	600	94	0	0	0	1,251
5:30 PM	120	311	0	25	0	66	0	591	99	0	0	0	1,212
5:45 PM	75	357	0	41	0	62	0	555	113	0	0	0	1,203
Total	903	2500	0	313	1	616	0	4,261	870	0	0	0	9,464

PM Intersection Peak Hour : **5:00 PM - 6:00 PM** Intersection PHF : **0.97**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	425	1300	0	143	1	253	0	2305	409	0	0	0	4836
PHF	0.86	0.91	#####	0.872	0.25	0.855	#####	0.96	0.905	#####	#####	#####	0.97
Movement PHF		0.92			0.86			0.98			#DIV/0!		0.97

LINSCOTT LAW & GREENSPAN engineers

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Grand Avenue @ Las Posas Road

Date of Count: *Tuesday, November 28, 2017*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *17-0786*

LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Grand Avenue @ Las Posas Road

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
7:00 AM	85	121	90	106	81	20	10	46	0	4	34	27	624
7:15 AM	82	196	86	160	60	14	16	54	6	7	27	34	742
7:30 AM	107	205	87	197	33	28	30	82	1	2	44	48	864
7:45 AM	139	205	96	209	24	40	19	129	5	6	49	53	974
8:00 AM	105	173	75	118	125	27	14	99	6	6	113	32	893
8:15 AM	182	226	95	119	48	43	16	110	2	2	117	44	1,004
8:30 AM	108	200	91	151	91	23	21	132	2	4	100	48	971
8:45 AM	91	193	98	152	81	21	32	119	3	6	86	36	918
Total	899	1,519	718	1,212	543	216	158	771	25	37	570	322	6,990

AM Intersection Peak Hour : **7:45 AM - 8:45 AM** Intersection PHF : **0.96**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	534	804	357	597	288	133	70	470	15	18	379	177	3,842
PHF	0.73	0.89	0.93	0.71	0.58	0.77	0.83	0.89	0.63	0.75	0.81	0.83	0.96
Movement PHF		0.84			0.93			0.90			0.88		0.96

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
4:00 PM	68	198	113	202	40	26	88	245	14	19	136	111	1,260
4:15 PM	80	228	111	198	64	30	57	272	12	10	126	112	1,300
4:30 PM	56	221	105	234	61	14	57	299	13	8	165	93	1,326
4:45 PM	65	204	114	251	73	29	53	286	16	4	143	114	1,352
5:00 PM	58	208	94	265	53	31	56	267	21	18	160	130	1,361
5:15 PM	51	261	85	253	10	29	46	309	16	9	155	132	1,356
5:30 PM	48	230	99	289	24	36	48	295	12	2	111	106	1,300
5:45 PM	56	257	106	254	36	24	52	286	13	5	67	128	1,284
Total	482	1807	827	1,946	361	219	457	2,259	117	75	1,063	926	10,539

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** Intersection PHF : **0.99**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	230	894	398	1003	197	103	212	1161	66	39	623	469	5395
PHF	0.88	0.856	0.873	0.946	0.675	0.831	0.93	0.939	0.786	0.542	0.944	0.888	0.99
Movement PHF		0.96			0.92			0.97			0.92		0.99

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Linda Vista Drive @ Las Posas Road

Date of Count: *Tuesday, November 28, 2017*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *17-0786*

LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Linda Vista Drive @ Las Posas Road

AM Period (7:00 AM - 9:00 AM)

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	57	55	3	2	16	1	1	28	1	6	17	19	206
7:15 AM	60	90	6	4	33	2	0	41	2	3	20	13	274
7:30 AM	65	88	5	1	54	0	1	44	8	5	31	36	338
7:45 AM	79	77	11	5	54	0	4	79	13	3	40	32	397
8:00 AM	68	114	12	12	52	1	2	60	15	4	20	14	374
8:15 AM	87	97	9	7	46	4	4	55	10	9	39	27	394
8:30 AM	89	68	16	9	31	1	8	71	9	11	32	30	375
8:45 AM	70	91	17	18	43	6	7	75	13	10	42	31	423
Total	575	680	79	58	329	15	27	453	71	51	241	202	2,781

AM Intersection Peak Hour : **8:00 AM - 9:00 AM** Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	314	370	54	46	172	12	21	261	47	34	133	102	1,566
PHF	0.88	0.81	0.79	0.64	0.83	0.50	0.66	0.87	0.78	0.77	0.79	0.82	0.93
Movement PHF		0.95			0.86			0.87			0.81		0.93

PM Period (4:00 PM - 6:00 PM)

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	37	107	22	23	32	2	4	144	9	12	80	48	520
4:15 PM	31	101	12	23	31	5	6	136	13	6	104	46	514
4:30 PM	37	126	12	20	29	4	9	146	19	12	97	53	564
4:45 PM	44	103	8	20	49	6	3	147	16	13	104	60	573
5:00 PM	45	106	12	21	40	7	4	115	8	9	91	58	516
5:15 PM	27	123	10	20	27	1	6	210	15	23	98	53	613
5:30 PM	31	86	21	18	43	4	5	144	25	20	89	59	545
5:45 PM	40	132	4	5	32	6	6	179	7	19	108	68	606
Total	292	884	101	150	283	35	43	1,221	112	114	771	445	4,451

PM Intersection Peak Hour : **5:00 PM - 6:00 PM** Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	143	447	47	64	142	18	21	648	55	71	386	238	2280
PHF	0.79	0.847	0.56	0.762	0.826	0.643	0.875	0.771	0.55	0.772	0.894	0.875	0.93
Movement PHF		0.90			0.82			0.78			0.89		0.93

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: Linda Vista Drive @ Via Vera Cruz

Date of Count: *Tuesday, November 28, 2017*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *17-0786*

LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: Linda Vista Drive @ Via Vera Cruz

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
7:00 AM	7	52	8	5	22	1	2	24	5	3	11	2	142
7:15 AM	12	46	2	4	35	5	0	23	12	3	11	2	155
7:30 AM	6	50	4	3	37	4	0	38	19	6	21	2	190
7:45 AM	9	75	1	4	41	1	3	43	22	19	25	5	248
8:00 AM	16	64	2	4	44	3	0	45	16	10	14	6	224
8:15 AM	15	71	0	4	35	3	1	47	19	19	24	5	243
8:30 AM	9	80	3	4	23	2	2	56	22	16	33	6	256
8:45 AM	28	80	5	4	30	2	3	43	18	19	32	9	273
Total	102	518	25	32	267	21	11	319	133	95	171	37	1,731

AM Intersection Peak Hour : **8:00 AM - 9:00 AM** Intersection PHF : **0.91**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	68	295	10	16	132	10	6	191	75	64	103	26	996
PHF	0.61	0.92	0.50	1.00	0.75	0.83	0.50	0.85	0.85	0.84	0.78	0.72	0.91
Movement PHF		0.83			0.77			0.85			0.80		0.91

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	TOTAL
4:00 PM	11	115	8	6	16	3	11	107	18	27	79	23	424
4:15 PM	7	96	7	13	18	3	6	68	13	28	74	23	356
4:30 PM	3	133	9	9	30	3	4	104	15	24	81	23	438
4:45 PM	7	139	3	10	32	6	5	100	20	31	70	17	440
5:00 PM	6	140	15	11	28	3	2	83	15	36	80	29	448
5:15 PM	5	124	6	2	16	4	3	85	13	36	58	18	370
5:30 PM	7	95	4	6	32	2	5	82	15	26	53	11	338
5:45 PM	8	95	4	4	26	1	3	66	12	28	70	18	335
Total	54	937	56	61	198	25	39	695	121	236	565	162	3,149

PM Intersection Peak Hour : **4:30 PM - 5:30 PM** Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	21	536	33	32	106	16	14	372	63	127	289	87	1696
PHF	0.75	0.957	0.55	0.727	0.828	0.667	0.7	0.894	0.788	0.882	0.892	0.75	0.95
Movement PHF		0.92			0.80			0.90			0.87		0.95

LINSCOTT LAW & GREENSPAN engineers

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

Location: San Marcos Boulevard @ Las Posas Road

Date of Count: *Tuesday, November 28, 2017*

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *17-0786*

LINSCOTT LAW & GREENSPAN engineers

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: San Marcos Boulevard @ Las Posas Road

AM Period (7:00 AM - 9:00 AM)

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	56	7	3	5	358	5	8	3	10	11	187	30	683
7:15 AM	73	8	5	8	401	5	2	11	6	3	162	26	710
7:30 AM	78	4	9	15	337	4	1	1	4	4	222	44	723
7:45 AM	64	1	5	21	331	5	5	7	4	10	282	70	805
8:00 AM	119	5	8	23	344	8	5	6	4	10	245	70	847
8:15 AM	77	5	15	19	372	16	3	4	3	6	247	54	821
8:30 AM	69	3	22	25	287	21	3	4	10	4	254	70	772
8:45 AM	71	6	17	17	296	12	2	8	4	6	264	74	777
Total	607	39	84	133	2,726	76	29	44	45	54	1,863	438	6,138

AM Intersection Peak Hour : **7:45 AM - 8:45 AM** Intersection PHF : **0.96**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	329	14	50	88	1,334	50	16	21	21	30	1,028	264	3,245
PHF	0.69	0.70	0.57	0.88	0.90	0.60	0.80	0.75	0.53	0.75	0.91	0.94	0.96
Movement PHF		0.74			0.90			0.85			0.91		0.96

PM Period (4:00 PM - 6:00 PM)

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	95	5	30	41	298	18	10	12	6	9	311	102	937
4:15 PM	138	4	9	40	245	9	7	7	7	12	321	121	920
4:30 PM	157	5	11	19	276	13	10	6	7	11	295	148	958
4:45 PM	139	12	15	18	279	8	5	10	11	8	312	138	955
5:00 PM	185	6	11	26	318	15	3	6	7	10	356	116	1,059
5:15 PM	152	4	28	33	285	22	5	6	5	8	308	166	1,022
5:30 PM	81	7	16	23	311	17	2	8	5	12	345	92	919
5:45 PM	135	8	26	22	305	29	1	6	11	5	384	117	1,049
Total	1082	51	146	222	2,317	131	43	61	59	75	2,632	1,000	7,819

PM Intersection Peak Hour : **5:00 PM - 6:00 PM** Intersection PHF : **0.96**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	553	25	81	104	1219	83	11	26	28	35	1393	491	4049
PHF	0.75	0.781	0.723	0.788	0.958	0.716	0.55	0.813	0.636	0.729	0.907	0.739	0.96
Movement PHF		0.82			0.98			0.90			0.95		0.96

LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: A. Las Posas Road between SR 78 Ramps & Grand Avenue

Orientation: *North-South*

Date of Count: *Tuesday, November 28, 2017*

Analysts: *DASH*

Weather: *Sunny*

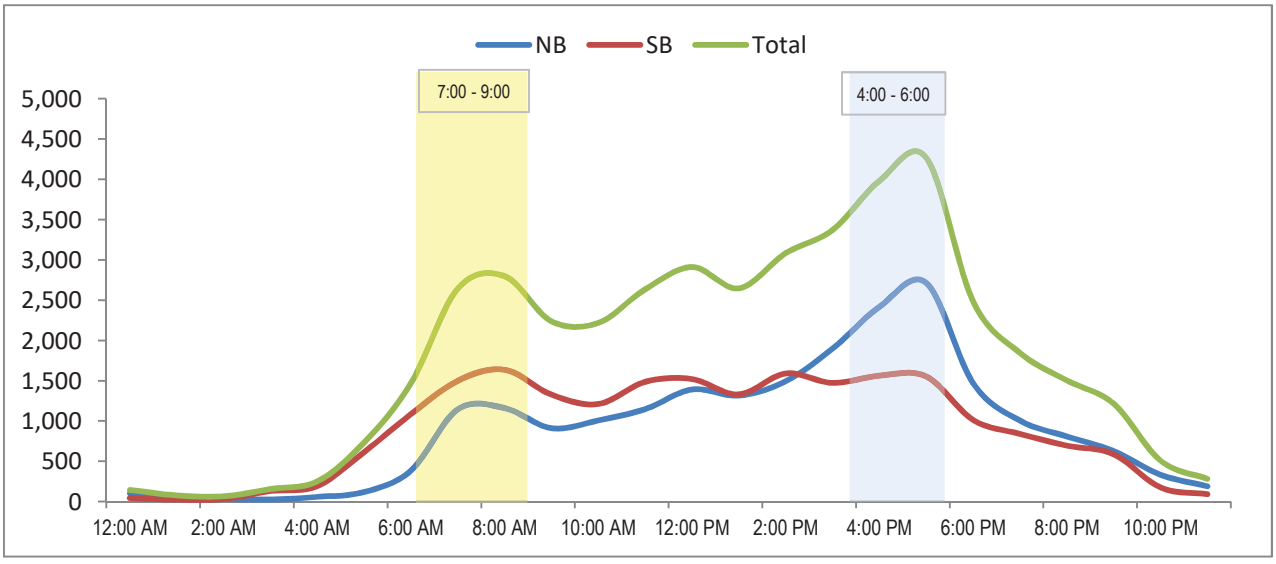
AVC Proj. No: *17-0786*

24 Hour Segment Volume			*43,520*

Time	Hourly Volume		
	NB	SB	Total
12:00 AM - 1:00 AM	102	43	145
1:00 AM - 2:00 AM	54	23	77
2:00 AM - 3:00 AM	33	32	65
3:00 AM - 4:00 AM	26	130	156
4:00 AM - 5:00 AM	59	192	251
5:00 AM - 6:00 AM	119	614	733
6:00 AM - 7:00 AM	384	1,084	1,468
7:00 AM - 8:00 AM	1,145	1,499	2,644
8:00 AM - 9:00 AM	1,160	1,637	2,797
9:00 AM - 10:00 AM	911	1,327	2,238
10:00 AM - 11:00 AM	1,007	1,211	2,218
11:00 AM - 12:00 PM	1,148	1,486	2634
Total	**6,148**	**9,278**	**15,426**

Time	Hourly Volume		
	NB	SB	Total
12:00 PM - 1:00 PM	1,391	1,520	2,911
1:00 PM - 2:00 PM	1,316	1,330	2,646
2:00 PM - 3:00 PM	1,493	1,590	3,083
3:00 PM - 4:00 PM	1,898	1,473	3,371
4:00 PM - 5:00 PM	2,417	1,563	3,980
5:00 PM - 6:00 PM	2,714	1,553	4,267
6:00 PM - 7:00 PM	1,469	1,013	2,482
7:00 PM - 8:00 PM	1,005	840	1,845
8:00 PM - 9:00 PM	809	695	1,504
9:00 PM - 10:00 PM	627	588	1,215
10:00 PM - 11:00 PM	333	175	508
11:00 PM - 12:00 AM	190	92	282
Total	**15,662**	**12,432**	**28,094**

24-Hour	*NB*	*Volume*	*21,810*	*24-Hour*	*SB*	*Volume*	*21,710*



LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: B. Las Posas Road between Grand Avenue & Linda Vista Drive

Orientation: *North-South*

Date of Count: *Tuesday, November 28, 2017*

Analysts: *DASH*

Weather: *Sunny*

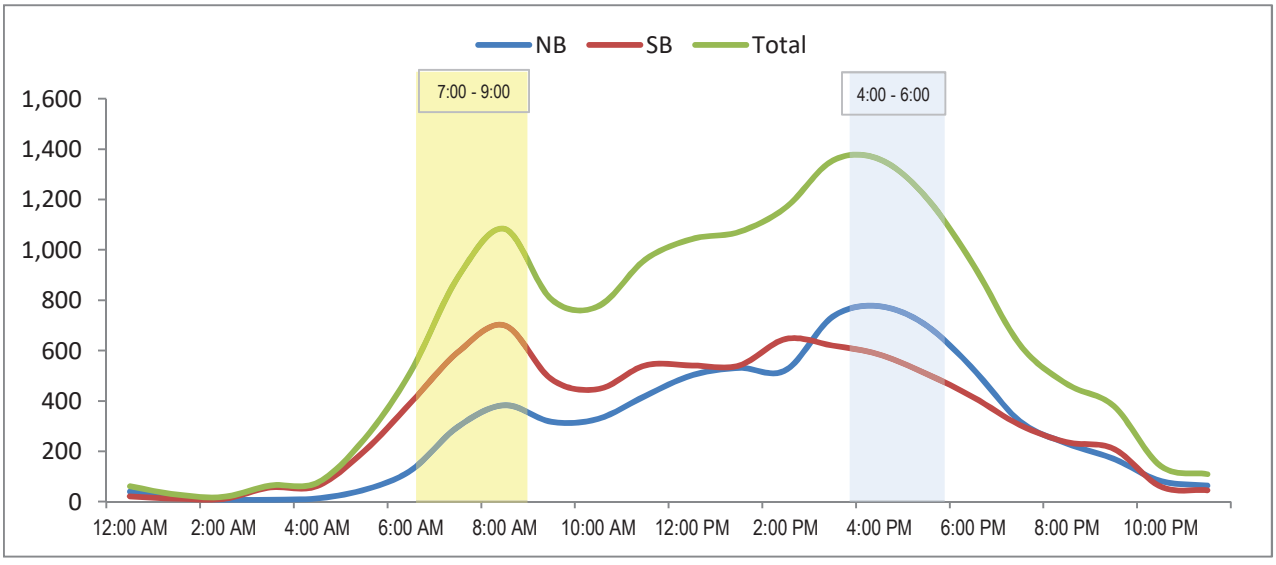
AVC Proj. No: *17-0786*

24 Hour Segment Volume			15,391

Time	Hourly Volume		
	NB	SB	Total
12:00 AM - 1:00 AM	40	21	61
1:00 AM - 2:00 AM	16	12	28
2:00 AM - 3:00 AM	8	11	19
3:00 AM - 4:00 AM	8	56	64
4:00 AM - 5:00 AM	13	62	75
5:00 AM - 6:00 AM	47	200	247
6:00 AM - 7:00 AM	124	393	517
7:00 AM - 8:00 AM	297	593	890
8:00 AM - 9:00 AM	383	700	1,083
9:00 AM - 10:00 AM	317	486	803
10:00 AM - 11:00 AM	329	447	776
11:00 AM - 12:00 PM	420	541	961
Total	**2,002**	**3,522**	**5,524**

Time	Hourly Volume		
	NB	SB	Total
12:00 PM - 1:00 PM	502	541	1,043
1:00 PM - 2:00 PM	531	540	1,071
2:00 PM - 3:00 PM	522	646	1,168
3:00 PM - 4:00 PM	734	620	1,354
4:00 PM - 5:00 PM	776	584	1,360
5:00 PM - 6:00 PM	700	508	1,208
6:00 PM - 7:00 PM	527	415	942
7:00 PM - 8:00 PM	319	304	623
8:00 PM - 9:00 PM	231	236	467
9:00 PM - 10:00 PM	170	210	380
10:00 PM - 11:00 PM	82	60	142
11:00 PM - 12:00 AM	64	45	109
Total	**5,158**	**4,709**	**9,867**

24-Hour NB Volume	7,160	24-Hour SB Volume	8,231



LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: C. Las Posas Road between Linda Vista Drive & San Marcos Boulevard

Orientation: *North-South*

Date of Count: *Tuesday, November 28, 2017*

Analysts: *DASH*

Weather: *Sunny*

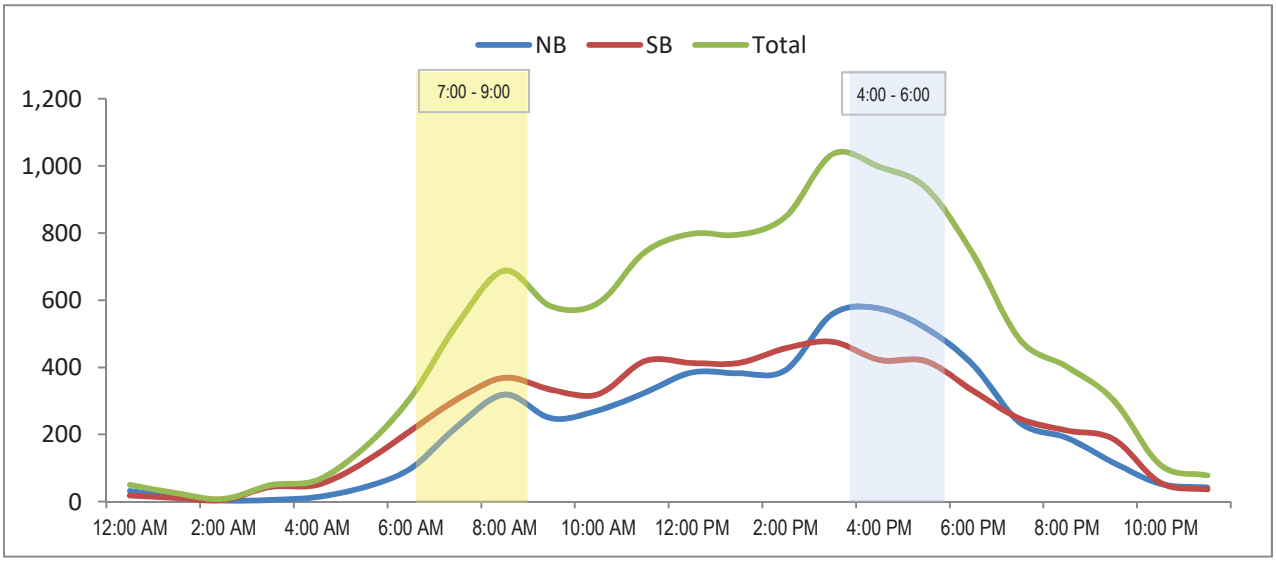
AVC Proj. No: *17-0786*

24 Hour Segment Volume			11,321

Time	Hourly Volume		
	NB	SB	Total
12:00 AM - 1:00 AM	32	18	50
1:00 AM - 2:00 AM	14	11	25
2:00 AM - 3:00 AM	3	5	8
3:00 AM - 4:00 AM	5	44	49
4:00 AM - 5:00 AM	14	50	64
5:00 AM - 6:00 AM	43	117	160
6:00 AM - 7:00 AM	99	212	311
7:00 AM - 8:00 AM	225	306	531
8:00 AM - 9:00 AM	319	369	688
9:00 AM - 10:00 AM	248	333	581
10:00 AM - 11:00 AM	272	320	592
11:00 AM - 12:00 PM	325	419	744
Total	**1,599**	**2,204**	**3,803**

Time	Hourly Volume		
	NB	SB	Total
12:00 PM - 1:00 PM	385	413	798
1:00 PM - 2:00 PM	382	413	795
2:00 PM - 3:00 PM	392	457	849
3:00 PM - 4:00 PM	559	476	1,035
4:00 PM - 5:00 PM	575	422	997
5:00 PM - 6:00 PM	516	418	934
6:00 PM - 7:00 PM	407	330	737
7:00 PM - 8:00 PM	235	247	482
8:00 PM - 9:00 PM	190	212	402
9:00 PM - 10:00 PM	116	186	302
10:00 PM - 11:00 PM	53	56	109
11:00 PM - 12:00 AM	42	36	78
Total	**3,852**	**3,666**	**7,518**

24-Hour	NB	Volume	5,451	24-Hour	SB	Volume	5,870



LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: L. Linda Vista Drive between Pacific Street & Las Posas Road

Orientation: *East-West*

Date of Count: *Tuesday, November 28, 2017*

Analysts: *DASH*

Weather: *Sunny*

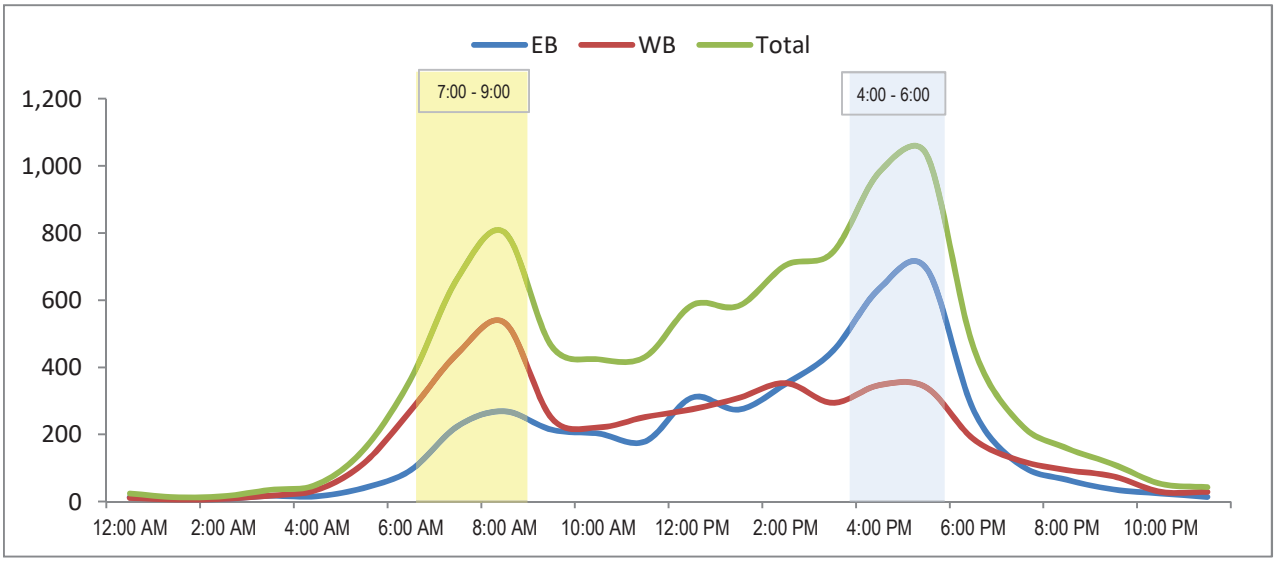
AVC Proj. No: *17-0786*

24 Hour Segment Volume			9,139

Time	Hourly Volume		
	EB	WB	Total
12:00 AM - 1:00 AM	13	11	24
1:00 AM - 2:00 AM	7	6	13
2:00 AM - 3:00 AM	8	8	16
3:00 AM - 4:00 AM	17	18	35
4:00 AM - 5:00 AM	16	35	51
5:00 AM - 6:00 AM	41	115	156
6:00 AM - 7:00 AM	94	272	366
7:00 AM - 8:00 AM	225	442	667
8:00 AM - 9:00 AM	269	533	802
9:00 AM - 10:00 AM	214	249	463
10:00 AM - 11:00 AM	203	221	424
11:00 AM - 12:00 PM	179	252	431
Total	**1,286**	**2,162**	**3,448**

Time	Hourly Volume		
	EB	WB	Total
12:00 PM - 1:00 PM	310	275	585
1:00 PM - 2:00 PM	274	309	583
2:00 PM - 3:00 PM	351	353	704
3:00 PM - 4:00 PM	448	294	742
4:00 PM - 5:00 PM	635	347	982
5:00 PM - 6:00 PM	695	340	1,035
6:00 PM - 7:00 PM	275	187	462
7:00 PM - 8:00 PM	110	122	232
8:00 PM - 9:00 PM	65	94	159
9:00 PM - 10:00 PM	36	75	111
10:00 PM - 11:00 PM	24	29	53
11:00 PM - 12:00 AM	14	29	43
Total	**3,237**	**2,454**	**5,691**

24-Hour EB Volume	4,523	24-Hour WB Volume	4,616



LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: M. Linda Vista Drive between Las Posas Road & Via Vera Cruz

Orientation: *East-West*

Date of Count: *Tuesday, November 28, 2017*

Analysts: *DASH*

Weather: *Sunny*

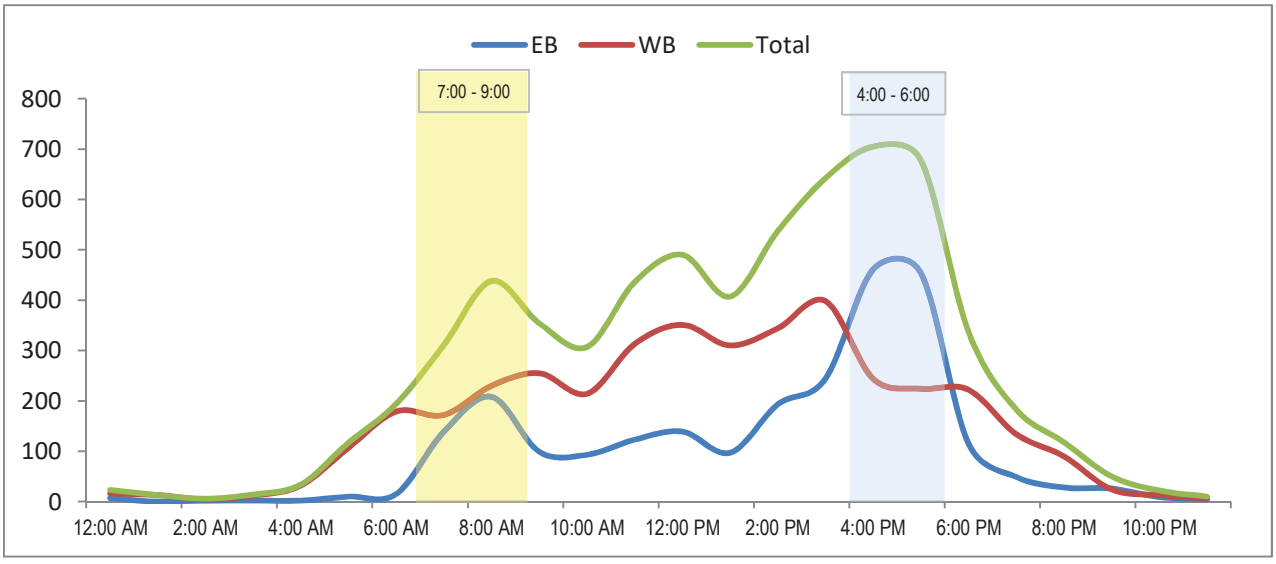
AVC Proj. No: *17-0786*

24 Hour Segment Volume			6,426

Time	Hourly Volume		
	EB	WB	Total
12:00 AM - 1:00 AM	7	16	23
1:00 AM - 2:00 AM	0	13	13
2:00 AM - 3:00 AM	2	4	6
3:00 AM - 4:00 AM	2	12	14
4:00 AM - 5:00 AM	2	32	34
5:00 AM - 6:00 AM	10	107	117
6:00 AM - 7:00 AM	15	179	194
7:00 AM - 8:00 AM	139	172	311
8:00 AM - 9:00 AM	208	230	438
9:00 AM - 10:00 AM	99	255	354
10:00 AM - 11:00 AM	93	214	307
11:00 AM - 12:00 PM	123	313	436
Total	**700**	**1,547**	**2,247**

Time	Hourly Volume		
	EB	WB	Total
12:00 PM - 1:00 PM	139	351	490
1:00 PM - 2:00 PM	97	310	407
2:00 PM - 3:00 PM	193	344	537
3:00 PM - 4:00 PM	244	398	642
4:00 PM - 5:00 PM	461	244	705
5:00 PM - 6:00 PM	454	224	678
6:00 PM - 7:00 PM	115	222	337
7:00 PM - 8:00 PM	49	134	183
8:00 PM - 9:00 PM	28	90	118
9:00 PM - 10:00 PM	26	24	50
10:00 PM - 11:00 PM	9	13	22
11:00 PM - 12:00 AM	4	6	10
Total	**1,819**	**2,360**	**4,179**

24-Hour EB Volume	2,519	24-Hour WB Volume	3,907



LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: N. Linda Vista Drive between Via Vera Cruz & Bent Avenue

Orientation: *East-West*

Date of Count: *Tuesday, November 28, 2017*

Analysts: *DASH*

Weather: *Sunny*

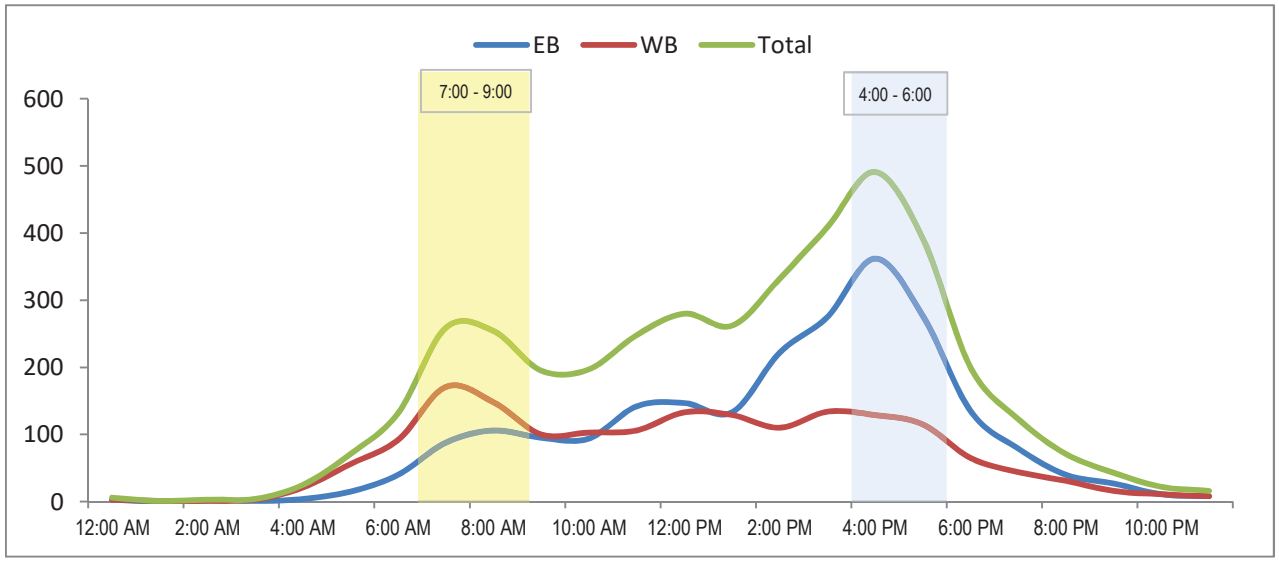
AVC Proj. No: *17-0786*

24 Hour Segment Volume			***4,036***

Time	Hourly Volume		
	EB	WB	Total
12:00 AM - 1:00 AM	3	3	6
1:00 AM - 2:00 AM	0	1	1
2:00 AM - 3:00 AM	2	1	3
3:00 AM - 4:00 AM	1	3	4
4:00 AM - 5:00 AM	4	21	25
5:00 AM - 6:00 AM	15	56	71
6:00 AM - 7:00 AM	40	92	132
7:00 AM - 8:00 AM	88	171	259
8:00 AM - 9:00 AM	106	148	254
9:00 AM - 10:00 AM	95	100	195
10:00 AM - 11:00 AM	94	103	197
11:00 AM - 12:00 PM	142	106	248
Total	**590**	**805**	**1,395**

Time	Hourly Volume		
	EB	WB	Total
12:00 PM - 1:00 PM	147	133	280
1:00 PM - 2:00 PM	133	129	262
2:00 PM - 3:00 PM	222	110	332
3:00 PM - 4:00 PM	275	134	409
4:00 PM - 5:00 PM	362	129	491
5:00 PM - 6:00 PM	277	115	392
6:00 PM - 7:00 PM	135	65	200
7:00 PM - 8:00 PM	79	44	123
8:00 PM - 9:00 PM	40	31	71
9:00 PM - 10:00 PM	27	16	43
10:00 PM - 11:00 PM	11	11	22
11:00 PM - 12:00 AM	8	8	16
Total	**1,716**	**925**	**2,641**

24-Hour	***EB***	***Volume***	***2,306***	***24-Hour***	***WB***	***Volume***	***1,730***



LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: O. San Marcos Boulevard west of Las Posas Road

Orientation: *East-West*

Date of Count: *Tuesday, November 28, 2017*

Analysts: *DASH*

Weather: *Sunny*

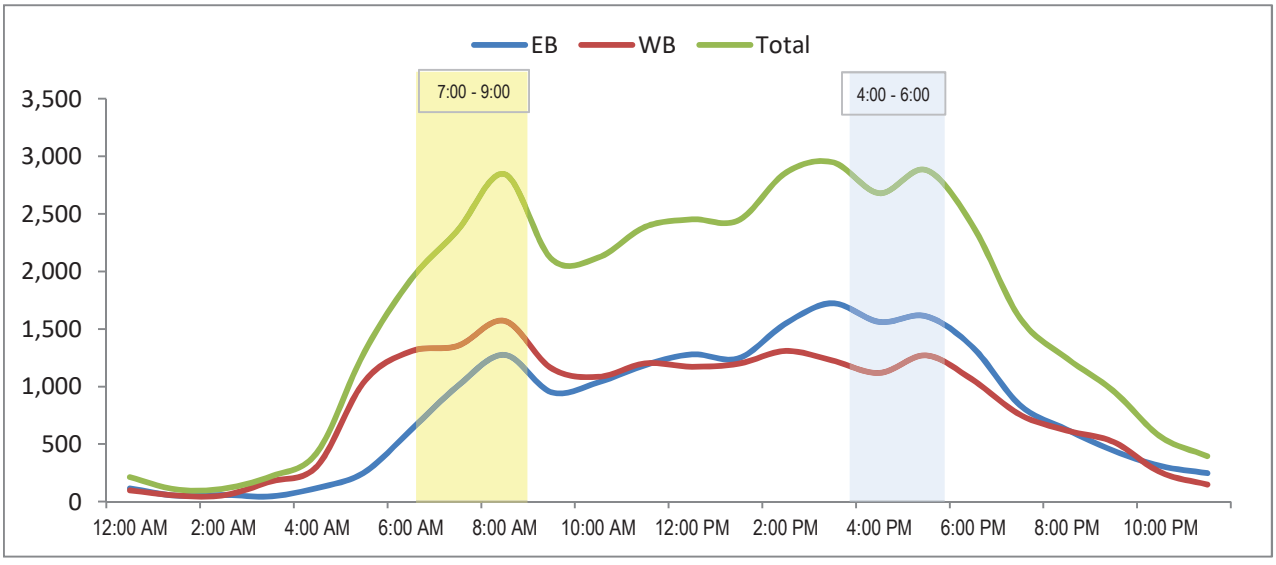
AVC Proj. No: *17-0786*

24 Hour Segment Volume			*39,531*

Time	Hourly Volume		
	EB	WB	Total
12:00 AM - 1:00 AM	115	98	213
1:00 AM - 2:00 AM	52	53	105
2:00 AM - 3:00 AM	58	55	113
3:00 AM - 4:00 AM	45	174	219
4:00 AM - 5:00 AM	119	310	429
5:00 AM - 6:00 AM	253	1,041	1,294
6:00 AM - 7:00 AM	623	1,306	1,929
7:00 AM - 8:00 AM	1,005	1,353	2,358
8:00 AM - 9:00 AM	1,275	1,570	2,845
9:00 AM - 10:00 AM	950	1,158	2,108
10:00 AM - 11:00 AM	1,036	1,084	2,120
11:00 AM - 12:00 PM	1,186	1,201	2387
Total	**6,717**	**9,403**	**16,120**

Time	Hourly Volume		
	EB	WB	Total
12:00 PM - 1:00 PM	1,280	1,172	2,452
1:00 PM - 2:00 PM	1,246	1,199	2,445
2:00 PM - 3:00 PM	1,548	1,309	2,857
3:00 PM - 4:00 PM	1,723	1,226	2,949
4:00 PM - 5:00 PM	1,561	1,118	2,679
5:00 PM - 6:00 PM	1,610	1,270	2,880
6:00 PM - 7:00 PM	1,337	1,055	2,392
7:00 PM - 8:00 PM	838	755	1,593
8:00 PM - 9:00 PM	627	618	1,245
9:00 PM - 10:00 PM	442	518	960
10:00 PM - 11:00 PM	309	255	564
11:00 PM - 12:00 AM	247	148	395
Total	**12,768**	**10,643**	**23,411**

24-Hour	*EB*	*Volume*	*19,485*	*24-Hour*	*WB*	*Volume*	*20,046*



LINSCOTT LAW & GREENSPAN engineers

24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136

AVC

Location: P. San Marcos Boulevard between Las Posas Road & Via Vera Cruz

Orientation: *East-West*

Date of Count: *Tuesday, November 28, 2017*

Analysts: *DASH*

Weather: *Sunny*

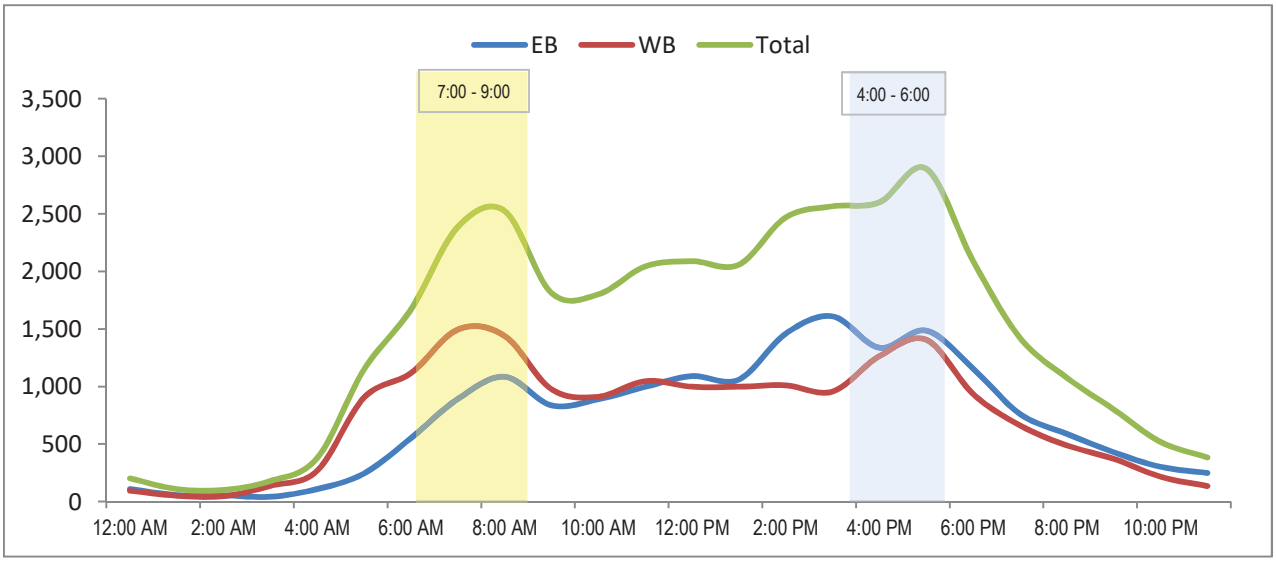
AVC Proj. No: *17-0786*

24 Hour Segment Volume			*35,313*

Time	Hourly Volume		
	EB	WB	Total
12:00 AM - 1:00 AM	108	94	202
1:00 AM - 2:00 AM	57	52	109
2:00 AM - 3:00 AM	54	47	101
3:00 AM - 4:00 AM	42	137	179
4:00 AM - 5:00 AM	109	269	378
5:00 AM - 6:00 AM	244	904	1,148
6:00 AM - 7:00 AM	552	1,116	1,668
7:00 AM - 8:00 AM	891	1,495	2,386
8:00 AM - 9:00 AM	1,085	1,440	2,525
9:00 AM - 10:00 AM	836	976	1,812
10:00 AM - 11:00 AM	889	911	1,800
11:00 AM - 12:00 PM	997	1,046	2043
Total	**5,864**	**8,487**	**14,351**

Time	Hourly Volume		
	EB	WB	Total
12:00 PM - 1:00 PM	1,090	998	2,088
1:00 PM - 2:00 PM	1,060	998	2,058
2:00 PM - 3:00 PM	1,459	1,010	2,469
3:00 PM - 4:00 PM	1,609	956	2,565
4:00 PM - 5:00 PM	1,336	1,264	2,600
5:00 PM - 6:00 PM	1,485	1,406	2,891
6:00 PM - 7:00 PM	1,155	934	2,089
7:00 PM - 8:00 PM	761	662	1,423
8:00 PM - 9:00 PM	588	488	1,076
9:00 PM - 10:00 PM	429	372	801
10:00 PM - 11:00 PM	302	216	518
11:00 PM - 12:00 AM	249	135	384
Total	**11,523**	**9,439**	**20,962**

24-Hour	*EB*	*Volume*	*17,387*	*24-Hour*	*WB*	*Volume*	*17,926*



APPENDIX B

SCOPING MEMO AND CITY REVIEW

March 4, 2021

Mr. Nicholas Abboud
City of San Marcos
City Traffic Engineer

LLG Reference: 3-20-3279

Subject: **Pacific Project – Transportation Impact Analysis Scoping Letter**
San Marcos, CA

Dear Nicholas:

This letter has been prepared to provide information to initiate the Transportation Analysis Scoping process with the City of San Marcos for the Pacific project. The intent of this letter is to provide the City with the necessary information such that key assumptions can be verified and utilized in the Transportation Analysis documents.

PROJECT LOCATION

The Project site is comprised of four parcels, APN's 219-222-01, 02, 03, 04. The Pacific site is approximately 33.2-acres and is located in the northwest corner of Las Posas Road and Linda Vista Drive. La Mirada Road abuts the sites northern boundary and Pacific Street abuts the property's western boundary. The Grand Plaza shopping center is located directly across Las Posas Drive. Light industrial uses are adjacent to the sites northern, southern, and western boundary. Bradley park is located across from the sites southwestern corner.

The land is currently zoned Industrial (I) with a maximum Floor Area Ratio of 0.50. According to the City of San Marcos Municipal Code the Industrial land use zone is intended to provide a setting for the full range of indoor manufacturing, distribution, warehousing, processing, and general service uses that are adequately served by vehicular arterials and utilities. Industries that use hazardous materials, require heavy equipment, and/or that generate sustained noise levels are deemed appropriate for this Zone, and may be permitted according to the standards of this chapter. The I Zone is intended to implement and be consistent with the Industrial land use designation of the General Plan.

PROJECT DESCRIPTION

The GPA/Rezone proposes to use the 0.5 Industrial FAR as a guide to determining site coverage. Using this methodology, a rezone of the 33-acre property to Residential 3 (R-3-6) equates to 16.5-acres of the 33-acre property creating a maximum density of 30.0 dwelling units per-acre and providing for a maximum of 495 residential dwelling units. This density would be consistent with the City of

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San Marcos General Plan Land Use of Residential 3 (R-3-6). The City of San Marcos defines this designation as "to provide for higher-density multifamily attached homes such as apartments, rowhouses, townhomes, motorcourts, and condominiums at a density of twenty (20) to thirty (30) dwelling units per acre (du/ac). The R-3-6 Zone is intended to implement and be consistent with the Medium High Density Residential (MHDR) land use designation of the General Plan." The Medium High Density Residential zoning (MHDR) classification provides for a density of 20.1-30.0 dwelling units per acre. This target density would net a maximum of 495 dwelling units.

This process requires a General Plan Amendment from Industrial (I) to Medium High Density Residential (MHDR) and a Rezone of parcels 219-22-01, 02, 03, and 04 Industrial (I) General Plan Land Use designation to a Residential 3 (R-3-6) land use designation to provide for a Medium High Density Residential multi-family zone for a maximum of 495 dwelling units and with a maximum density of 30 dwelling units per-acre.

PROJECT TRIP GENERATION

Project vehicle trips were estimated using SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002*.

Table A tabulates the total Project traffic generation. As shown, the Project is calculated to generate 2,970 Average Daily Trips (ADT) with 238 AM peak hour trips (48 in/ 190 out) and 267 PM peak hour trips (187 in/ 80 out).

TABLE A
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate[a]	Volume	% of ADT	In:Out Split	Volume In	Volume Out	% of ADT	In:Out Split	Volume In	Volume Out
Apartment (multi-family> 20 du/acre)	495 DU	6 /DU	2,970	8%	20:80	48	190	9%	70:30	187	80

Footnotes:

a. Rate is based on SANDAG's (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002

General Note:

- DU = Dwelling Unit

VMT BASED TRANSPORTATION ANALYSIS

In compliance with Senate Bill 743 (SB 743) and the City of San Marcos *Transportation Impact Analysis Guidelines* (dated November 2020), the proposed project will evaluate transportation impacts under the California Environmental Quality Act (CEQA) using a Vehicle Miles Traveled (VMT) metric, pursuant to direction from the Governor's Office of Planning and Research (OPR) in December 2018 (*Technical Advisory on Evaluating Transportation Impacts in CEQA*). The VMT metric is required by the state as of July 1, 2020.

The project is also required to evaluate the effects of a development project on mobility, access, circulation, and related safety elements under a Local Transportation Analysis (LTA) per the same guidelines.

VMT Screening

Based on the City of San Marcos *Transportation Impact Analysis Guidelines*, the requirement to prepare a detailed transportation 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 Residential and Employment Projects (less than 110 daily vehicle trips)
2. Affordable Housing – 100% deed restricted affordable housing
3. Local Serving Retail and Public Facilities – 50,000 sf or less gross floor area
4. Adjacency to High Quality Transit – ½ mile walkshed
5. Map-Based Screening – Areas that generate VMT below City thresholds

For land use projects with a mixed-use component, each use in the project (e.g., residential, office, and retail) should be analyzed separately, taking internalization of the trips into account.

Screening criteria 1-4 are not applicable based on the Project's location, land uses, and size. Criteria 5 – Map-Based Screening would be applicable, however, the use of the SANDAG online VMT mapping tool is limited to projects generating fewer than 2,400 daily vehicle trips and since the Project will exceed 2,400 trips, a SANDAG travel demand model is required. The Project's VMT/resident will be determined using the SANDAG travel demand model, assuming the Project can be accurately represented in the model.

Local Transportation Analysis Screening

Based on the guidelines, a Local Transportation Analysis (LTA) is required for all projects generating more than 1,000 daily vehicle trips or more than 100 peak hour vehicle trips, if consistent with the current General Plan. If not consistent with the General Plan, then an LTA is required at 500 ADT or 50 peak hour trips.

The Project includes a General Plan Amendment (GPA), but an LTA would be required regardless based on the Project's trip generation.

Study Area

The following intersections and street segments are recommended to be included in the analysis:

Intersections

1. Pacific Street / La Mirada Drive
2. Las Posas Road / La Mirada Drive
3. Las Posas Road / Linda Vista Drive
4. Pacific Street / Linda Vista Drive

Project Driveways

5. Project Driveway / La Mirada Drive

Roadway Segments

Las Posas Road

1. Grand Avenue to La Mirada Drive
2. La Mirada Drive to Linda Vista Drive
3. Linda Vista Drive to San Marcos Blvd

Linda Vista Drive

4. Pacific Street to Las Posas Road
5. Las Posas Road to Via Vera Cruz

STUDY SCENARIOS

The following study scenarios are proposed based on the guidelines.

- Existing Conditions
- Interim Year 2025 Conditions
- Interim Year 2025 Plus Project Conditions
- Horizon Year 2050 Conditions
- Horizon Year 2050 Plus Project Conditions

EXISTING TRAFFIC DATA

LLG proposes to collect new AM/PM peak hour traffic counts at all study area intersections as well as 24-hour ADT counts on all study area street segments.

LLG has historical (Year 2017, pre-COVID) traffic counts at the intersection of Las Posas Road / Linda Vista Drive, as well as all five (5) proposed study area street segments.

The current count data will be validated based on comparison between current and pre-COVID count data.

OTHER PROPOSED ANALYSES

In addition to LOS, the following analyses will be provided per the guidelines:

- Site Access and On-Site Circulation
- Driveway Sight Distance
- Parking
- Queueing

PEDESTRIAN, BICYCLE, AND TRANSIT

A review of the existing pedestrian, bicycle, and transit conditions will be conducted. The project's effect on existing and proposed pedestrian and bicycle facilities and transit system will

be reviewed. Pedestrian and bicycle data will be provided at each study intersection. A section on what the project will construct to improve those modes will be provided.

Linscott, Law & Greenspan, Engineers

Walter Musial, P.E.
Principal
California Registration:

Roman Lopez, PTP
Transportation Planner III

From: Jason Greminger
To: Roman Lopez
Cc: Greg Waite
Subject: FW: Upham
Date: Thursday, March 18, 2021 10:56:32 AM

Roman,

Got some info for you on the traffic scope below.

Thanks

Jason Greminger

Project Manager, CCI
Cell: (619) 944-1198
Office: (760) 471-2365
www.cciconnect.com

From: Quezada, Jonathan <JQuezada@san-marcos.net>
Sent: Thursday, March 18, 2021 10:21 AM
To: Jason Greminger <jason.greminger@cciconnect.com>
Cc: Kellar, Stephanie <SKellar@san-marcos.net>; Farace, Joseph <JFarace@san-marcos.net>
Subject: RE: Upham

Good morning Jason,

Please see our traffic department comments on the traffic scoping for the Upham Development:

The main comment is on the study area. LLG recommends studying only those 4 intersections that abut the property (Las Posas/Linda Vista, Las Posas /La Mirada, Pacific /Linda Vista & Pacific /La Mirada). City of San Marcos Traffic Engineering requests that LLG add the following intersections (and connecting segments) to the traffic study scope, especially that most experience difficulties of failing right now and any additional traffic would cause more disruption:

- Las Posas Rd/Grand Av
- Grand Av/VVC
- Las Posas Rd/SR-78 WB ramps
- Las Posas Rd/SMB
- Pacific St/SMB
- Linda Vista Dr/RSF

Let me know if you need additional clarifications.

Thanks,

JONATHAN QUEZADA, MPA, E.I.T.| Assistant Engineer - Land Development
City of San Marcos | 1 Civic Center Drive, San Marcos CA 92069
T: (760) 744-1050 x3216 | | C: (760) 310-6203
jquezada@san-marcos.net | www.san-marcos.net

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At the City of San Marcos, the health and safety of our community is our top priority. For real-time updates about the City's response to COVID-19, visit www.san-marcos.net/covid19.

Please be advised that City Hall is closed on Fridays until further notice.

CITY STAFF IS PRESENTLY TELE-COMMUTING, RESPONDING TO VOICEMAIL AND EMAILS DURING REGULAR BUSINESS HOURS. VISIT OUR WEBSITE FOR VIRTUAL SERVICES: https://www.san-marcos.net/departments

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From: Farace, Joseph <JFarace@san-marcos.net>
Sent: Thursday, March 18, 2021 10:11 AM
To: Quezada, Jonathan <JQuezada@san-marcos.net>
Cc: Kellar, Stephanie <SKellar@san-marcos.net>
Subject: FW: Upham

Hi Jonathan – please see Jason's inquiry below. I was hoping you might be able to help with his questions. I did see the information come in from Nic Sunday night. Not sure if this was forward to the Upham traffic consultant. Thanks

Joseph Farace | Planning Manager
City of San Marcos | 1 Civic Center Drive, San Marcos CA 92069
T: (760) 744-1050 x3248
jfarace@san-marcos.net | www.san-marcos.net

At the current time, public counters at City Hall and Public Works are open from 10:00 am to 2:00 pm. The City remains open for virtual business via email and phone from 7:30 am to 5:30 pm on Monday through Thursday and closed every Friday. Please refer to the City's website (www.san-marcos.net) for contact information by Department. For real-time updates about the City's response to COVID-19, visit www.san-marcos.net/covid19.

City offices are closed every Friday, click here to view the scheduled closures.

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At the City of San Marcos, the health and safety of our community is our top priority. For real-time updates about the City's response to COVID-19, visit www.san-marcos.net/covid19.

From: Jason Greminger <jason.greminger@cciconnect.com>
Sent: Thursday, March 18, 2021 9:54 AM
To: Farace, Joseph <JFarace@san-marcos.net>
Subject: Upham

Hi Joe,

I've got the CAP complete and we're ready to submit. Please let me know when I can meet you at the counter to drop off the package.

On a similar note, we're trying to get our traffic counts set up next week and we're stuck trying to get the ROW permit issued from the traffic engineer's. They're asking what permit this is for. We also haven't heard back from them on any additional segments or intersections they'd like studied. Do you have an idea of who the engineer will be for this GPA/RZ? I'd like to give them a call to see if I can answer their questions.

Thanks

Jason Greminger

Project Manager, CCI
Cell: (619) 944-1198
Office: (760) 471-2365
www.cciconnect.com

APPENDIX C

CITY OF SAN MARCOS ROADWAY CLASSIFICATION TABLE

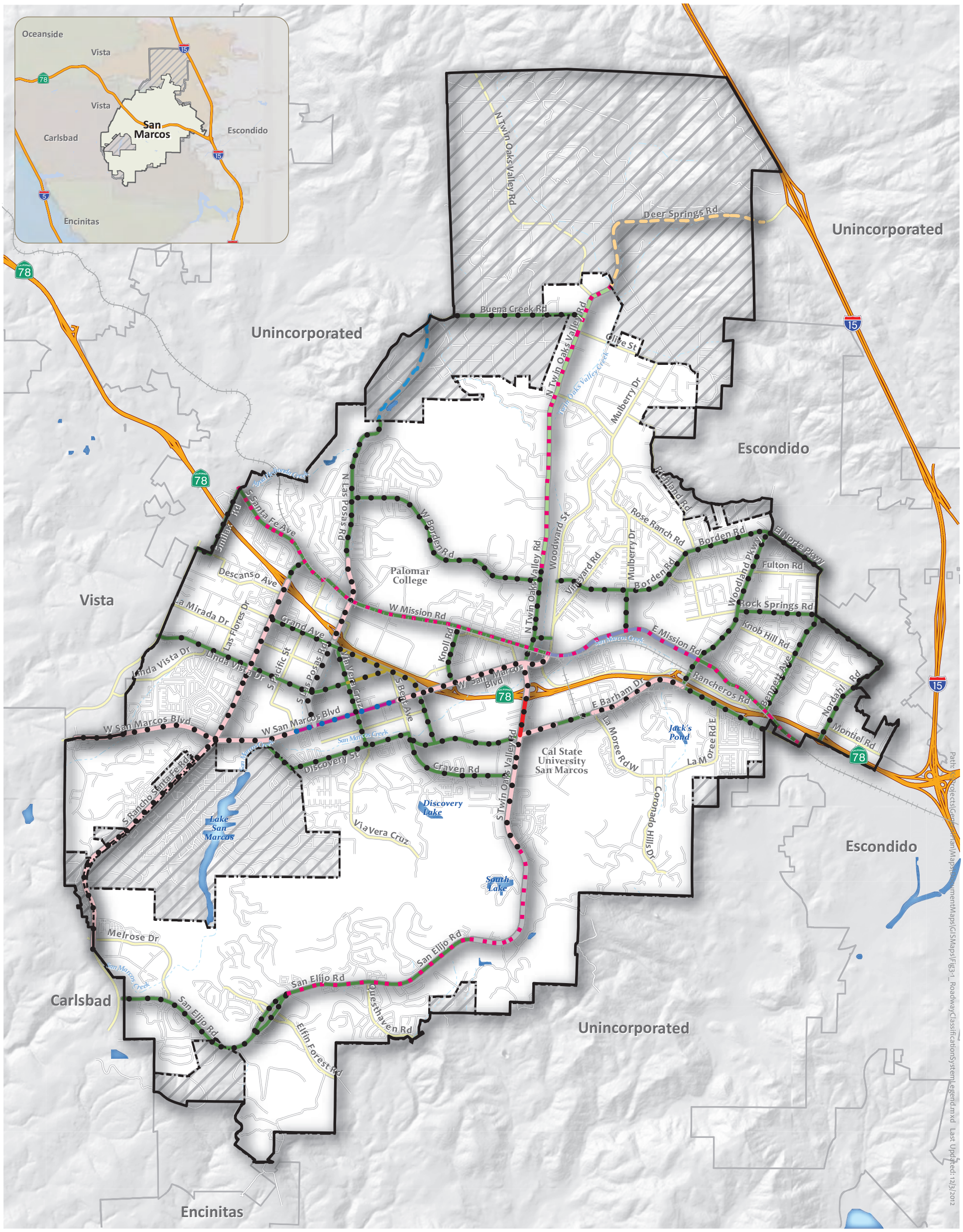
Table 3.16-2
Daily Roadway Segment Capacity

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

0 0.25 0.5 1 Miles

SOURCES OF DATA:
City of San Marcos 12/12

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

APPENDIX D

EXISTING ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	554	3	171	149	907	0	0	1156	316
Future Volume (veh/h)	0	0	0	554	3	171	149	907	0	0	1156	316
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		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				375	277	176	154	935	0	0	1192	326
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				410	246	156	182	3324	0	0	1988	544
Arrive On Green				0.23	0.23	0.23	0.20	1.00	0.00	0.00	0.50	0.50
Sat Flow, veh/h				1781	1069	679	1781	5274	0	0	4130	1083
Grp Volume(v), veh/h				375	0	453	154	935	0	0	1024	494
Grp Sat Flow(s),veh/h/ln				1781	0	1748	1781	1702	0	0	1702	1641
Q Serve(g_s), s				20.5	0.0	23.0	8.3	0.0	0.0	0.0	21.4	21.4
Cycle Q Clear(g_c), s				20.5	0.0	23.0	8.3	0.0	0.0	0.0	21.4	21.4
Prop In Lane				1.00		0.39	1.00		0.00	0.00		0.66
Lane Grp Cap(c), veh/h				410	0	402	182	3324	0	0	1708	823
V/C Ratio(X)				0.92	0.00	1.13	0.85	0.28	0.00	0.00	0.60	0.60
Avail Cap(c_a), veh/h				410	0	402	214	3324	0	0	1708	823
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.89	0.89	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.6	0.0	38.5	39.0	0.0	0.0	0.0	17.8	17.8
Incr Delay (d2), s/veh				24.4	0.0	84.0	20.8	0.2	0.0	0.0	1.6	3.2
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				11.6	0.0	19.0	4.2	0.1	0.0	0.0	7.9	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				62.0	0.0	122.5	59.8	0.2	0.0	0.0	19.3	21.0
LnGrp LOS				E	A	F	E	A	A	A	B	C
Approach Vol, veh/h					828			1089			1518	
Approach Delay, s/veh					95.1			8.6			19.9	
Approach LOS					F			A			B	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	71.9		14.9	57.0		28.1						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	65.1		* 12	48.4		23.0						
Max Q Clear Time (g_c+I1), s	2.0		10.3	23.4		25.0						
Green Ext Time (p_c), s	4.4		0.1	7.2		0.0						

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

Notes

User approved volume balancing among the lanes for 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)	158	178	22	87	169	582	23	320	80	353	661	681
Future Volume (veh/h)	158	178	22	87	169	582	23	320	80	353	661	681
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		1.00	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	170	191	24	94	182	626	25	344	86	380	711	732
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	308	474	59	149	269	993	62	1212	291	733	1677	871
Arrive On Green	0.09	0.15	0.15	0.03	0.05	0.05	0.04	0.29	0.29	0.07	0.16	0.16
Sat Flow, veh/h	3456	3170	392	1781	1870	2790	1781	4109	987	3456	3554	1545
Grp Volume(v), veh/h	170	106	109	94	182	626	25	283	147	380	711	732
Grp Sat Flow(s),veh/h/ln	1728	1777	1786	1781	1870	1395	1781	1702	1692	1728	1777	1545
Q Serve(g_s), s	4.7	5.4	5.5	5.2	9.6	4.2	1.4	6.4	6.7	10.6	18.1	39.4
Cycle Q Clear(g_c), s	4.7	5.4	5.5	5.2	9.6	4.2	1.4	6.4	6.7	10.6	18.1	39.4
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.58	1.00		1.00
Lane Grp Cap(c), veh/h	308	266	267	149	269	993	62	1004	499	733	1677	871
V/C Ratio(X)	0.55	0.40	0.41	0.63	0.68	0.63	0.40	0.28	0.30	0.52	0.42	0.84
Avail Cap(c_a), veh/h	328	382	384	169	402	1191	169	1004	499	733	1677	871
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	0.99	0.99	0.99	0.65	0.65	0.65
Uniform Delay (d), s/veh	43.6	38.5	38.5	47.1	45.3	11.3	47.2	27.1	27.2	41.6	29.9	29.2
Incr Delay (d2), s/veh	1.7	1.0	1.0	5.9	2.9	0.8	4.1	0.7	1.5	0.4	0.5	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.4	2.5	2.6	5.0	3.4	0.7	2.6	2.8	4.8	8.6	17.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.4	39.4	39.5	53.0	48.2	12.1	51.3	27.8	28.7	42.0	30.4	35.7
LnGrp LOS	D	D	D	D	D	B	D	C	C	D	C	D
Approach Vol, veh/h		385			902			455			1823	
Approach Delay, s/veh		42.1			23.6			29.4			35.0	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.7	36.0	14.8	21.5	10.0	53.7	15.4	20.9
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	13.5	29.5	9.5	21.5	9.5	33.5	9.5	21.5
Max Q Clear Time (g_c+I1), s	12.6	8.7	7.2	7.5	3.4	41.4	6.7	11.6
Green Ext Time (p_c), s	0.1	2.4	0.0	0.9	0.0	0.0	0.1	2.8

Intersection Summary	
HCM 6th Ctrl Delay	32.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	353	133	140	26	180	3	112	54	9	84	271	549
Future Volume (veh/h)	353	133	140	26	180	3	112	54	9	84	271	549
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	372	140	147	27	189	3	88	100	9	88	285	540
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	455	1124	672	103	1256	20	195	205	174	533	173	327
Arrive On Green	0.13	0.32	0.32	0.06	0.24	0.24	0.11	0.11	0.11	0.30	0.30	0.30
Sat Flow, veh/h	3456	3554	1575	1781	5178	82	1781	1870	1585	1781	578	1095
Grp Volume(v), veh/h	372	140	147	27	124	68	88	100	9	88	0	825
Grp Sat Flow(s),veh/h/ln	1728	1777	1575	1781	1702	1856	1781	1870	1585	1781	0	1673
Q Serve(g_s), s	10.5	2.8	5.9	1.4	2.9	2.9	4.6	5.0	0.5	3.6	0.0	29.9
Cycle Q Clear(g_c), s	10.5	2.8	5.9	1.4	2.9	2.9	4.6	5.0	0.5	3.6	0.0	29.9
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		0.65
Lane Grp Cap(c), veh/h	455	1124	672	103	826	450	195	205	174	533	0	500
V/C Ratio(X)	0.82	0.12	0.22	0.26	0.15	0.15	0.45	0.49	0.05	0.17	0.00	1.65
Avail Cap(c_a), veh/h	636	1124	672	196	826	450	196	206	174	533	0	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.2	24.3	18.2	45.0	29.8	29.8	41.7	41.9	39.9	25.8	0.0	35.1
Incr Delay (d2), s/veh	4.2	0.2	0.5	0.5	0.4	0.7	0.6	0.7	0.0	0.1	0.0	300.9
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	4.7	1.2	2.7	0.7	1.2	1.4	2.1	2.3	0.2	1.5	0.0	53.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	24.5	18.7	45.5	30.1	30.5	42.3	42.6	39.9	25.9	0.0	336.0
LnGrp LOS	D	C	B	D	C	C	D	D	D	C	A	F
Approach Vol, veh/h		659			219			197			913	
Approach Delay, s/veh		35.6			32.1			42.3			306.1	
Approach LOS		D			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.5	38.4		35.0	17.9	31.1		16.1				
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1				
Max Green Setting (Gmax), s	* 11	26.4		29.9	* 18	19.0		11.0				
Max Q Clear Time (g_c+I1), s	3.4	7.9		31.9	12.5	4.9		7.0				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.7	0.6		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		160.1
HCM 6th LOS		F

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	37	22	45	44	19	18	69	30	6	142	14
Future Vol, veh/h	8	37	22	45	44	19	18	69	30	6	142	14
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	9	43	25	52	51	22	21	79	34	7	163	16
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.4	9.2	8.6	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	21%	0%	18%	0%	51%	0%	4%	0%
Vol Thru, %	79%	0%	82%	0%	49%	0%	96%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	30	45	22	89	19	148	14
LT Vol	18	0	8	0	45	0	6	0
Through Vol	69	0	37	0	44	0	142	0
RT Vol	0	30	0	22	0	19	0	14
Lane Flow Rate	100	34	52	25	102	22	170	16
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.149	0.044	0.08	0.034	0.161	0.029	0.247	0.02
Departure Headway (Hd)	5.358	4.55	5.577	4.782	5.679	4.72	5.222	4.498
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	668	784	640	745	630	755	686	793
Service Time	3.104	2.295	3.33	2.535	3.429	2.47	2.965	2.24
HCM Lane V/C Ratio	0.15	0.043	0.081	0.034	0.162	0.029	0.248	0.02
HCM Control Delay	9	7.5	8.8	7.7	9.5	7.6	9.7	7.3
HCM Lane LOS	A	A	A	A	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0.3	0.1	0.6	0.1	1	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	14	10	16	14	34	17	375	30	94	664	77
Future Volume (veh/h)	39	14	10	16	14	34	17	375	30	94	664	77
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	15	11	17	15	36	18	395	32	99	699	81
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	266	225	60	56	135	47	905	401	158	1017	118
Arrive On Green	0.06	0.14	0.14	0.03	0.12	0.12	0.03	0.25	0.25	0.09	0.32	0.32
Sat Flow, veh/h	1781	1870	1582	1781	486	1166	1781	3554	1576	1781	3208	371
Grp Volume(v), veh/h	41	15	11	17	0	51	18	395	32	99	387	393
Grp Sat Flow(s),veh/h/ln	1781	1870	1582	1781	0	1651	1781	1777	1576	1781	1777	1803
Q Serve(g_s), s	1.1	0.4	0.3	0.5	0.0	1.4	0.5	4.8	0.8	2.7	9.7	9.7
Cycle Q Clear(g_c), s	1.1	0.4	0.3	0.5	0.0	1.4	0.5	4.8	0.8	2.7	9.7	9.7
Prop In Lane	1.00		1.00	1.00		0.71	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	108	266	225	60	0	191	47	905	401	158	563	571
V/C Ratio(X)	0.38	0.06	0.05	0.28	0.00	0.27	0.38	0.44	0.08	0.63	0.69	0.69
Avail Cap(c_a), veh/h	297	1174	993	297	0	1037	210	1708	757	367	1011	1026
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	18.9	18.9	24.0	0.0	20.6	24.4	15.9	14.5	22.4	15.2	15.2
Incr Delay (d2), s/veh	2.2	0.1	0.1	2.6	0.0	0.7	5.0	0.3	0.1	4.0	1.5	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.1	0.2	0.0	0.5	0.3	1.6	0.3	1.2	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.2	19.0	19.0	26.6	0.0	21.3	29.4	16.3	14.5	26.4	16.7	16.7
LnGrp LOS	C	B	B	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		67			68			445			879	
Approach Delay, s/veh		22.8			22.6			16.7			17.8	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	19.0	7.7	13.3	7.8	22.2	9.1	11.9
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	10.5	24.5	8.5	32.0	6.0	29.0	8.5	32.0
Max Q Clear Time (g_c+I1), s	4.7	6.8	2.5	2.4	2.5	11.7	3.1	3.4
Green Ext Time (p_c), s	0.1	2.2	0.0	0.1	0.0	4.1	0.0	0.2

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	87	82	198	212	77	87	712	176	74	1086	265
Future Volume (veh/h)	110	87	82	198	212	77	87	712	176	74	1086	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	90	85	204	219	79	90	734	181	76	1120	273
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	132	230	195	239	322	113	104	1924	857	97	1522	368
Arrive On Green	0.07	0.13	0.13	0.07	0.12	0.12	0.06	0.54	0.54	0.05	0.54	0.54
Sat Flow, veh/h	1781	1816	1537	3456	2580	904	1781	3554	1582	1781	2832	685
Grp Volume(v), veh/h	113	88	87	204	149	149	90	734	181	76	699	694
Grp Sat Flow(s),veh/h/ln	1781	1777	1576	1728	1777	1708	1781	1777	1582	1781	1777	1740
Q Serve(g_s), s	7.5	5.5	6.1	7.0	9.6	10.1	6.0	14.3	7.1	5.1	36.0	36.8
Cycle Q Clear(g_c), s	7.5	5.5	6.1	7.0	9.6	10.1	6.0	14.3	7.1	5.1	36.0	36.8
Prop In Lane	1.00		0.98	1.00		0.53	1.00		1.00	1.00		0.39
Lane Grp Cap(c), veh/h	132	225	200	239	222	213	104	1924	857	97	955	935
V/C Ratio(X)	0.86	0.39	0.44	0.85	0.67	0.70	0.87	0.38	0.21	0.78	0.73	0.74
Avail Cap(c_a), veh/h	132	492	436	239	489	470	104	1924	857	163	955	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	48.1	48.4	55.2	50.1	50.3	56.0	15.9	14.2	56.0	21.2	21.3
Incr Delay (d2), s/veh	39.0	1.1	1.5	24.6	3.5	4.1	48.9	0.6	0.6	12.8	4.9	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	2.5	2.5	3.9	4.5	4.5	4.1	5.9	2.7	2.6	15.7	15.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.9	49.2	49.9	79.9	53.6	54.5	104.9	16.5	14.8	68.8	26.1	26.6
LnGrp LOS	F	D	D	E	D	D	F	B	B	E	C	C
Approach Vol, veh/h		288			502			1005			1469	
Approach Delay, s/veh		67.0			64.5			24.1			28.6	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	71.0	14.8	21.7	13.0	70.5	15.0	21.5
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	11.0	* 43	8.3	33.2	7.0	* 47	8.9	33.0
Max Q Clear Time (g_c+I1), s	7.1	16.3	9.0	8.1	8.0	38.8	9.5	12.1
Green Ext Time (p_c), s	0.0	6.3	0.0	1.0	0.0	5.2	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Intersection Delay, s/veh	14.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	71	205	18	23	350	20	22	26	9	10	58	108
Future Vol, veh/h	71	205	18	23	350	20	22	26	9	10	58	108
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	76	220	19	25	376	22	24	28	10	11	62	116
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	12.6	18.9	10.9	10.8
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	46%	0%	100%	0%	0%	100%	0%	0%	15%	0%
Vol Thru, %	54%	0%	0%	100%	0%	0%	100%	0%	85%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	48	9	71	205	18	23	350	20	68	108
LT Vol	22	0	71	0	0	23	0	0	10	0
Through Vol	26	0	0	205	0	0	350	0	58	0
RT Vol	0	9	0	0	18	0	0	20	0	108
Lane Flow Rate	52	10	76	220	19	25	376	22	73	116
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.108	0.018	0.148	0.397	0.031	0.046	0.653	0.033	0.143	0.202
Departure Headway (Hd)	7.514	6.58	6.997	6.491	5.783	6.749	6.244	5.537	7.026	6.251
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	474	540	511	551	615	529	576	643	508	570
Service Time	5.306	4.37	4.767	4.26	3.552	4.511	4.006	3.298	4.803	4.027
HCM Lane V/C Ratio	0.11	0.019	0.149	0.399	0.031	0.047	0.653	0.034	0.144	0.204
HCM Control Delay	11.2	9.5	11	13.5	8.7	9.8	20.1	8.5	11	10.6
HCM Lane LOS	B	A	B	B	A	A	C	A	B	B
HCM 95th-tile Q	0.4	0.1	0.5	1.9	0.1	0.1	4.7	0.1	0.5	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	137	37	12	175	47	60	267	25	58	332	321
Future Volume (veh/h)	106	137	37	12	175	47	60	267	25	58	332	321
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	147	40	13	188	51	65	287	27	62	357	345
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	142	539	240	49	277	73	89	1712	160	88	926	814
Arrive On Green	0.08	0.15	0.15	0.03	0.10	0.10	0.05	0.52	0.52	0.05	0.52	0.52
Sat Flow, veh/h	1781	3554	1582	1781	2780	735	1781	3281	306	1781	1777	1562
Grp Volume(v), veh/h	114	147	40	13	118	121	65	154	160	62	357	345
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1738	1781	1777	1810	1781	1777	1562
Q Serve(g_s), s	6.3	3.7	2.2	0.7	6.4	6.7	3.6	4.6	4.6	3.4	12.0	13.6
Cycle Q Clear(g_c), s	6.3	3.7	2.2	0.7	6.4	6.7	3.6	4.6	4.6	3.4	12.0	13.6
Prop In Lane	1.00		1.00	1.00		0.42	1.00		0.17	1.00		1.00
Lane Grp Cap(c), veh/h	142	539	240	49	177	173	89	927	944	88	926	814
V/C Ratio(X)	0.81	0.27	0.17	0.27	0.67	0.70	0.73	0.17	0.17	0.71	0.39	0.42
Avail Cap(c_a), veh/h	143	959	427	160	498	487	107	927	944	107	926	814
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	0.96	0.96	0.96
Uniform Delay (d), s/veh	45.3	37.5	36.9	47.7	43.4	43.6	46.8	12.5	12.5	46.8	14.4	14.7
Incr Delay (d2), s/veh	27.5	0.3	0.3	2.9	4.3	5.0	18.1	0.4	0.4	14.6	1.2	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	1.6	0.9	0.4	3.0	3.1	2.0	1.7	1.8	1.8	4.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.8	37.8	37.2	50.6	47.8	48.6	64.9	12.9	12.9	61.4	15.5	16.3
LnGrp LOS	E	D	D	D	D	D	E	B	B	E	B	B
Approach Vol, veh/h		301			252			379			764	
Approach Delay, s/veh		51.0			48.3			21.8			19.6	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	58.7	8.7	21.2	11.5	58.6	13.9	16.0
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	33.0	9.0	27.0	6.0	33.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	5.4	6.6	2.7	5.7	5.6	15.6	8.3	8.7
Green Ext Time (p_c), s	0.0	1.6	0.0	0.9	0.0	3.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	29.9
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	1218	0	0	1737	35	0	0	0	35	1	13
Future Volume (veh/h)	22	1218	0	0	1737	35	0	0	0	35	1	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	1269	0	0	1809	36	0	0	0	36	1	14
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	54	2996	0	1	2717	54	0	106	90	133	3	89
Arrive On Green	0.03	0.84	0.00	0.00	0.76	0.76	0.00	0.00	0.00	0.06	0.06	0.06
Sat Flow, veh/h	1781	3647	0	1781	3562	71	0	1870	1585	1378	52	1570
Grp Volume(v), veh/h	23	1269	0	0	900	945	0	0	0	37	0	14
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1856	0	1870	1585	1430	0	1570
Q Serve(g_s), s	1.6	11.3	0.0	0.0	31.6	32.0	0.0	0.0	0.0	3.2	0.0	1.1
Cycle Q Clear(g_c), s	1.6	11.3	0.0	0.0	31.6	32.0	0.0	0.0	0.0	3.2	0.0	1.1
Prop In Lane	1.00		0.00	1.00		0.04	0.00		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	54	2996	0	1	1355	1415	0	106	90	136	0	89
V/C Ratio(X)	0.43	0.42	0.00	0.00	0.66	0.67	0.00	0.00	0.00	0.27	0.00	0.16
Avail Cap(c_a), veh/h	100	2996	0	69	1355	1415	0	361	306	330	0	303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.64	0.64	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.9	2.5	0.0	0.0	7.4	7.5	0.0	0.0	0.0	59.3	0.0	58.3
Incr Delay (d2), s/veh	5.2	0.4	0.0	0.0	1.7	1.6	0.0	0.0	0.0	1.1	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	2.3	0.0	0.0	9.8	10.3	0.0	0.0	0.0	1.2	0.0	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.1	2.9	0.0	0.0	9.1	9.1	0.0	0.0	0.0	60.4	0.0	59.1
LnGrp LOS	E	A	A	A	A	A	A	A	A	E	A	E
Approach Vol, veh/h		1292			1845			0			51	
Approach Delay, s/veh		4.1			9.1			0.0			60.1	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	116.1		13.9	10.4	105.7		13.9				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	5.0	80.4		25.1	7.3	78.1		25.1				
Max Q Clear Time (g_c+I1), s	0.0	13.3		5.2	3.6	34.0		0.0				
Green Ext Time (p_c), s	0.0	12.0		0.1	0.0	20.2		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		7.9	
HCM 6th LOS		A	

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	268	1030	33	53	1435	90	23	22	19	54	33	334
Future Volume (veh/h)	268	1030	33	53	1435	90	23	22	19	54	33	334
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	273	1051	34	54	1464	92	23	22	19	55	34	341
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	295	2232	72	69	1807	804	230	366	306	302	366	572
Arrive On Green	0.17	0.64	0.64	0.04	0.51	0.51	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1781	3513	114	1781	3554	1581	1006	1870	1562	1366	1870	1580
Grp Volume(v), veh/h	273	532	553	54	1464	92	23	22	19	55	34	341
Grp Sat Flow(s),veh/h/ln	1781	1777	1850	1781	1777	1581	1006	1870	1562	1366	1870	1580
Q Serve(g_s), s	22.6	23.4	23.4	4.5	51.7	4.6	2.9	1.4	1.5	5.1	2.2	26.4
Cycle Q Clear(g_c), s	22.6	23.4	23.4	4.5	51.7	4.6	5.1	1.4	1.5	6.6	2.2	26.4
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	1129	1175	69	1807	804	230	366	306	302	366	572
V/C Ratio(X)	0.92	0.47	0.47	0.78	0.81	0.11	0.10	0.06	0.06	0.18	0.09	0.60
Avail Cap(c_a), veh/h	327	1129	1175	121	1807	804	268	436	365	358	443	637
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.6	14.2	14.2	71.4	30.8	19.2	51.5	49.1	49.1	51.7	49.4	39.0
Incr Delay (d2), s/veh	27.5	1.3	1.2	16.8	4.1	0.3	0.2	0.1	0.1	0.3	0.1	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	9.2	9.6	2.4	22.1	1.7	0.7	0.7	0.6	1.8	1.0	10.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.2	15.5	15.5	88.3	34.9	19.5	51.7	49.1	49.2	52.0	49.5	40.2
LnGrp LOS	F	B	B	F	C	B	D	D	D	D	D	D
Approach Vol, veh/h		1358			1610			64			430	
Approach Delay, s/veh		30.3			35.8			50.1			42.5	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.3	101.8		35.9	31.4	82.8		35.9				
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	10.2	85.3		* 36	27.5	68.0		35.0				
Max Q Clear Time (g_c+I1), s	6.5	25.4		28.4	24.6	53.7		7.1				
Green Ext Time (p_c), s	0.0	8.0		0.9	0.2	8.6		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		34.7
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

* 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	0	0	170	2	163	390	1870	0	0	896	366
Future Volume (veh/h)	0	0	0	170	2	163	390	1870	0	0	896	366
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		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				172	5	168	402	1928	0	0	924	377
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				231	6	200	428	3892	0	0	1694	690
Arrive On Green				0.13	0.13	0.13	0.48	1.00	0.00	0.00	0.48	0.48
Sat Flow, veh/h				1781	46	1546	1781	5274	0	0	3704	1440
Grp Volume(v), veh/h				172	0	173	402	1928	0	0	890	411
Grp Sat Flow(s),veh/h/ln				1781	0	1592	1781	1702	0	0	1702	1571
Q Serve(g_s), s				10.2	0.0	11.7	23.5	0.0	0.0	0.0	20.3	20.3
Cycle Q Clear(g_c), s				10.2	0.0	11.7	23.5	0.0	0.0	0.0	20.3	20.3
Prop In Lane				1.00		0.97	1.00		0.00	0.00		0.92
Lane Grp Cap(c), veh/h				231	0	206	428	3892	0	0	1631	753
V/C Ratio(X)				0.75	0.00	0.84	0.94	0.50	0.00	0.00	0.55	0.55
Avail Cap(c_a), veh/h				338	0	302	588	3892	0	0	1631	753
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.39	0.39	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				46.1	0.0	46.7	27.8	0.0	0.0	0.0	20.2	20.2
Incr Delay (d2), s/veh				2.1	0.0	8.6	9.5	0.2	0.0	0.0	1.3	2.8
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				4.7	0.0	5.1	7.5	0.1	0.0	0.0	7.7	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.3	0.0	55.4	37.3	0.2	0.0	0.0	21.5	23.0
LnGrp LOS				D	A	E	D	A	A	A	C	C
Approach Vol, veh/h					345			2330			1301	
Approach Delay, s/veh					51.8			6.6			22.0	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	90.6		31.1	59.5		19.4						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	77.2		* 36	36.2		20.9						
Max Q Clear Time (g_c+I1), s	2.0		25.5	22.3		13.7						
Green Ext Time (p_c), s	13.6		0.9	4.9		0.6						

Intersection Summary	
HCM 6th Ctrl Delay	15.6
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for 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)	361	451	29	48	238	903	27	994	157	323	490	254
Future Volume (veh/h)	361	451	29	48	238	903	27	994	157	323	490	254
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	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	384	480	31	51	253	855	29	1057	167	344	521	270
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	697	45	115	310	1026	67	1288	203	699	1620	888
Arrive On Green	0.10	0.21	0.21	0.02	0.05	0.05	0.04	0.29	0.29	0.07	0.15	0.15
Sat Flow, veh/h	3456	3387	218	1781	1870	2790	1781	4423	698	3456	3554	1585
Grp Volume(v), veh/h	384	251	260	51	253	855	29	813	411	344	521	270
Grp Sat Flow(s),veh/h/ln	1728	1777	1829	1781	1870	1395	1781	1702	1717	1728	1777	1585
Q Serve(g_s), s	11.5	14.4	14.5	3.1	14.7	7.0	1.8	24.5	24.5	10.6	14.4	13.6
Cycle Q Clear(g_c), s	11.5	14.4	14.5	3.1	14.7	7.0	1.8	24.5	24.5	10.6	14.4	13.6
Prop In Lane	1.00		0.12	1.00		1.00	1.00		0.41	1.00		1.00
Lane Grp Cap(c), veh/h	361	365	376	115	310	1026	67	991	500	699	1620	888
V/C Ratio(X)	1.06	0.69	0.69	0.44	0.82	0.83	0.44	0.82	0.82	0.49	0.32	0.30
Avail Cap(c_a), veh/h	361	365	376	186	332	1059	219	1099	554	699	1620	888
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.57	0.57	0.57	0.48	0.48	0.48	0.76	0.76	0.76
Uniform Delay (d), s/veh	49.3	40.4	40.5	51.9	50.3	14.0	51.8	36.3	36.3	45.9	31.5	21.3
Incr Delay (d2), s/veh	65.0	5.3	5.3	1.5	8.4	3.3	2.1	3.8	7.3	0.4	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	6.8	7.0	1.5	8.1	6.3	0.8	10.2	10.8	4.8	6.9	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	114.2	45.7	45.8	53.4	58.7	17.4	53.9	40.1	43.6	46.3	31.9	21.9
LnGrp LOS	F	D	D	D	E	B	D	D	D	D	C	C
Approach Vol, veh/h		895			1159			1253			1135	
Approach Delay, s/veh		75.1			28.0			41.6			33.9	
Approach LOS		E			C			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	28.7	38.5	13.6	29.1	10.6	56.7	18.0	24.7
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	17.5	35.5	11.5	19.5	13.5	39.5	11.5	19.5
Max Q Clear Time (g_c+I1), s	12.6	26.5	5.1	16.5	3.8	16.4	13.5	16.7
Green Ext Time (p_c), s	0.5	4.8	0.0	0.9	0.0	4.1	0.0	1.5

Intersection Summary	
HCM 6th Ctrl Delay	42.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	436	358	169	85	449	10	244	147	57	282	270	428
Future Volume (veh/h)	436	358	169	85	449	10	244	147	57	282	270	428
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	440	362	171	86	454	10	197	217	58	285	273	399
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	505	866	568	165	978	21	209	219	186	622	240	350
Arrive On Green	0.15	0.24	0.24	0.09	0.19	0.19	0.12	0.12	0.12	0.35	0.35	0.35
Sat Flow, veh/h	3456	3554	1569	1781	5141	113	1781	1870	1585	1781	686	1003
Grp Volume(v), veh/h	440	362	171	86	300	164	197	217	58	285	0	672
Grp Sat Flow(s),veh/h/ln	1728	1777	1569	1781	1702	1850	1781	1870	1585	1781	0	1690
Q Serve(g_s), s	13.7	9.4	8.6	5.1	8.6	8.7	12.1	12.7	3.7	13.6	0.0	38.4
Cycle Q Clear(g_c), s	13.7	9.4	8.6	5.1	8.6	8.7	12.1	12.7	3.7	13.6	0.0	38.4
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	505	866	568	165	648	352	209	219	186	622	0	590
V/C Ratio(X)	0.87	0.42	0.30	0.52	0.46	0.47	0.94	0.99	0.31	0.46	0.00	1.14
Avail Cap(c_a), veh/h	556	866	568	180	648	352	209	219	186	622	0	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.0	35.0	25.2	47.6	39.5	39.6	48.2	48.5	44.5	27.7	0.0	35.8
Incr Delay (d2), s/veh	10.1	1.1	1.0	0.9	2.4	4.4	45.8	57.5	0.4	0.2	0.0	81.8
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	6.6	4.2	4.0	2.3	3.8	4.4	8.0	9.4	1.5	5.8	0.0	28.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.1	36.1	26.2	48.5	41.9	43.9	94.0	106.0	44.8	27.9	0.0	117.6
LnGrp LOS	E	D	C	D	D	D	F	F	D	C	A	F
Approach Vol, veh/h		973			550			472			957	
Approach Delay, s/veh		43.4			43.6			93.5			90.9	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	14.9	33.6		43.5	20.8	27.7		18.0				
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1				
Max Green Setting (Gmax), s	* 11	25.9		38.4	* 18	19.3		12.9				
Max Q Clear Time (g_c+I1), s	7.1	11.4		40.4	15.7	10.7		14.7				
Green Ext Time (p_c), s	0.0	1.7		0.0	0.4	1.3		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		66.8
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for turning movement.

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

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	28	126	23	53	86	18	19	182	73	13	70	13
Future Vol, veh/h	28	126	23	53	86	18	19	182	73	13	70	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	31	140	26	59	96	20	21	202	81	14	78	14
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	10.8	10.8	11	9.8
HCM LOS	B	B	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	18%	0%	38%	0%	16%	0%
Vol Thru, %	91%	0%	82%	0%	62%	0%	84%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	201	73	154	23	139	18	83	13
LT Vol	19	0	28	0	53	0	13	0
Through Vol	182	0	126	0	86	0	70	0
RT Vol	0	73	0	23	0	18	0	13
Lane Flow Rate	223	81	171	26	154	20	92	14
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.362	0.115	0.287	0.037	0.265	0.029	0.158	0.022
Departure Headway (Hd)	5.842	5.087	6.044	5.245	6.173	5.272	6.15	5.362
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	616	705	595	683	582	679	584	667
Service Time	3.57	2.815	3.775	2.975	3.905	3.003	3.884	3.096
HCM Lane V/C Ratio	0.362	0.115	0.287	0.038	0.265	0.029	0.158	0.021
HCM Control Delay	11.9	8.5	11.2	8.2	11.1	8.2	10	8.2
HCM Lane LOS	B	A	B	A	B	A	A	A
HCM 95th-tile Q	1.6	0.4	1.2	0.1	1.1	0.1	0.6	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	45	35	128	50	214	31	845	77	196	425	88
Future Volume (veh/h)	125	45	35	128	50	214	31	845	77	196	425	88
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	137	49	38	141	55	235	34	929	85	215	467	97
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	168	390	330	172	65	278	67	1044	463	249	1162	240
Arrive On Green	0.09	0.21	0.21	0.10	0.21	0.21	0.04	0.29	0.29	0.14	0.40	0.40
Sat Flow, veh/h	1781	1870	1583	1781	309	1321	1781	3554	1577	1781	2933	605
Grp Volume(v), veh/h	137	49	38	141	0	290	34	929	85	215	282	282
Grp Sat Flow(s),veh/h/ln	1781	1870	1583	1781	0	1630	1781	1777	1577	1781	1777	1761
Q Serve(g_s), s	7.1	2.0	1.8	7.3	0.0	16.0	1.8	23.4	3.8	11.1	10.7	10.8
Cycle Q Clear(g_c), s	7.1	2.0	1.8	7.3	0.0	16.0	1.8	23.4	3.8	11.1	10.7	10.8
Prop In Lane	1.00		1.00	1.00		0.81	1.00		1.00	1.00		0.34
Lane Grp Cap(c), veh/h	168	390	330	172	0	343	67	1044	463	249	704	698
V/C Ratio(X)	0.81	0.13	0.12	0.82	0.00	0.85	0.51	0.89	0.18	0.86	0.40	0.40
Avail Cap(c_a), veh/h	205	638	540	186	0	539	120	1111	493	274	709	703
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.6	30.2	30.1	41.5	0.0	35.5	44.3	31.6	24.7	39.4	20.3	20.4
Incr Delay (d2), s/veh	18.3	0.1	0.2	22.9	0.0	7.2	5.8	8.8	0.2	22.3	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.9	0.7	4.2	0.0	6.8	0.9	10.6	1.4	6.1	4.1	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	59.9	30.3	30.3	64.4	0.0	42.7	50.1	40.4	24.9	61.8	20.7	20.7
LnGrp LOS	E	C	C	E	A	D	D	D	C	E	C	C
Approach Vol, veh/h		224			431			1048			779	
Approach Delay, s/veh		48.4			49.8			39.5			32.0	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.6	33.6	15.1	25.5	10.0	43.1	14.9	25.7
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.4	29.3	9.8	32.0	6.3	37.4	10.8	31.0
Max Q Clear Time (g_c+I1), s	13.1	25.4	9.3	4.0	3.8	12.8	9.1	18.0
Green Ext Time (p_c), s	0.1	2.1	0.0	0.3	0.0	3.1	0.1	1.4

Intersection Summary	
HCM 6th Ctrl Delay	39.7
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	354	471	68	213	137	74	101	1213	336	86	866	143
Future Volume (veh/h)	354	471	68	213	137	74	101	1213	336	86	866	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	369	491	71	222	143	77	105	1264	350	90	902	149
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	395	852	123	283	310	156	129	1364	599	101	1123	185
Arrive On Green	0.22	0.27	0.27	0.08	0.14	0.14	0.07	0.38	0.38	0.06	0.37	0.37
Sat Flow, veh/h	1781	3113	448	3456	2258	1139	1781	3554	1560	1781	3046	503
Grp Volume(v), veh/h	369	279	283	222	110	110	105	1264	350	90	526	525
Grp Sat Flow(s),veh/h/ln	1781	1777	1784	1728	1777	1620	1781	1777	1560	1781	1777	1772
Q Serve(g_s), s	25.0	16.6	16.8	7.7	7.0	7.7	7.1	41.8	21.9	6.2	32.6	32.7
Cycle Q Clear(g_c), s	25.0	16.6	16.8	7.7	7.0	7.7	7.1	41.8	21.9	6.2	32.6	32.7
Prop In Lane	1.00		0.25	1.00		0.70	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	395	486	488	283	244	222	129	1364	599	101	655	653
V/C Ratio(X)	0.93	0.57	0.58	0.78	0.45	0.49	0.82	0.93	0.58	0.89	0.80	0.80
Avail Cap(c_a), veh/h	419	671	674	425	477	435	130	1394	612	101	655	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.9	38.5	38.5	55.3	48.8	49.1	56.2	36.2	30.1	57.6	34.8	34.8
Incr Delay (d2), s/veh	27.4	1.1	1.1	5.5	1.3	1.7	31.1	10.7	1.4	55.0	7.2	7.2
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	14.0	7.4	7.5	3.6	3.2	3.2	4.3	19.9	8.4	4.3	15.2	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.3	39.5	39.6	60.8	50.1	50.7	87.3	46.9	31.4	112.6	42.0	42.0
LnGrp LOS	E	D	D	E	D	D	F	D	C	F	D	D
Approach Vol, veh/h		931			442			1719			1141	
Approach Delay, s/veh		53.4			55.6			46.2			47.6	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	53.2	16.6	40.1	14.9	51.3	33.3	23.4
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	7.0	* 48	15.1	46.4	9.0	* 45	28.9	33.0
Max Q Clear Time (g_c+I1), s	8.2	43.8	9.7	18.8	9.1	34.7	27.0	9.7
Green Ext Time (p_c), s	0.0	3.4	0.3	3.7	0.0	4.8	0.3	1.2

Intersection Summary	
HCM 6th Ctrl Delay	49.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Intersection Delay, s/veh	66.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	191	612	44	27	271	18	40	59	33	15	39	83
Future Vol, veh/h	191	612	44	27	271	18	40	59	33	15	39	83
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	201	644	46	28	285	19	42	62	35	16	41	87
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	101.3	20.4	13.7	12.7
HCM LOS	F	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	40%	0%	100%	0%	0%	100%	0%	0%	28%	0%
Vol Thru, %	60%	0%	0%	100%	0%	0%	100%	0%	72%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	33	191	612	44	27	271	18	54	83
LT Vol	40	0	191	0	0	27	0	0	15	0
Through Vol	59	0	0	612	0	0	271	0	39	0
RT Vol	0	33	0	0	44	0	0	18	0	83
Lane Flow Rate	104	35	201	644	46	28	285	19	57	87
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.247	0.074	0.407	1.212	0.078	0.064	0.6	0.036	0.134	0.186
Departure Headway (Hd)	8.932	8.018	7.281	6.773	6.062	8.488	7.977	7.263	8.878	8.028
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	404	449	493	535	587	425	456	496	406	450
Service Time	6.632	5.718	5.054	4.546	3.835	6.188	5.677	4.963	6.578	5.728
HCM Lane V/C Ratio	0.257	0.078	0.408	1.204	0.078	0.066	0.625	0.038	0.14	0.193
HCM Control Delay	14.5	11.4	15	134.8	9.4	11.8	21.9	10.2	12.9	12.6
HCM Lane LOS	B	B	B	F	A	B	C	B	B	B
HCM 95th-tile Q	1	0.2	2	23.9	0.3	0.2	3.8	0.1	0.5	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	392	73	22	142	82	58	601	25	52	469	159
Future Volume (veh/h)	255	392	73	22	142	82	58	601	25	52	469	159
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	274	422	78	24	153	75	62	646	27	56	504	171
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	243	695	309	76	239	111	83	1702	71	80	1269	428
Arrive On Green	0.14	0.20	0.20	0.04	0.10	0.10	0.05	0.49	0.49	0.04	0.49	0.49
Sat Flow, veh/h	1781	3554	1580	1781	2346	1093	1781	3474	145	1781	2599	877
Grp Volume(v), veh/h	274	422	78	24	114	114	62	330	343	56	344	331
Grp Sat Flow(s),veh/h/ln	1781	1777	1580	1781	1777	1662	1781	1777	1842	1781	1777	1698
Q Serve(g_s), s	15.0	11.9	4.6	1.4	6.8	7.3	3.8	12.8	12.8	3.4	13.5	13.6
Cycle Q Clear(g_c), s	15.0	11.9	4.6	1.4	6.8	7.3	3.8	12.8	12.8	3.4	13.5	13.6
Prop In Lane	1.00		1.00	1.00		0.66	1.00		0.08	1.00		0.52
Lane Grp Cap(c), veh/h	243	695	309	76	181	169	83	871	902	80	868	829
V/C Ratio(X)	1.13	0.61	0.25	0.32	0.63	0.67	0.75	0.38	0.38	0.70	0.40	0.40
Avail Cap(c_a), veh/h	243	1066	474	146	436	408	97	871	902	97	868	829
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	0.93	0.93	0.93
Uniform Delay (d), s/veh	47.5	40.4	37.4	51.1	47.4	47.7	51.8	17.6	17.6	51.8	17.9	17.9
Incr Delay (d2), s/veh	96.6	0.9	0.4	2.4	3.6	4.6	23.5	1.3	1.2	15.1	1.3	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.1	5.3	1.8	0.7	3.2	3.2	2.2	5.2	5.4	1.8	5.4	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	144.1	41.3	37.9	53.5	51.0	52.3	75.3	18.8	18.8	66.9	19.1	19.2
LnGrp LOS	F	D	D	D	D	D	E	B	B	E	B	B
Approach Vol, veh/h		774			252			735			731	
Approach Delay, s/veh		77.3			51.8			23.6			22.8	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	60.4	10.7	27.5	11.6	60.2	21.0	17.2
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	37.0	9.0	33.0	6.0	37.0	15.0	27.0
Max Q Clear Time (g_c+I1), s	5.4	14.8	3.4	13.9	5.8	15.6	17.0	9.3
Green Ext Time (p_c), s	0.0	3.7	0.0	2.9	0.0	3.8	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	42.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	1684	4	0	1629	48	0	0	0	55	5	21
Future Volume (veh/h)	54	1684	4	0	1629	48	0	0	0	55	5	21
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		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	1701	4	0	1645	48	0	0	0	56	5	21
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	3043	7	1	2608	76	0	118	100	137	7	99
Arrive On Green	0.05	0.84	0.84	0.00	0.74	0.74	0.00	0.00	0.00	0.06	0.06	0.06
Sat Flow, veh/h	1781	3637	9	1781	3523	102	0	1870	1585	1328	119	1570
Grp Volume(v), veh/h	55	831	874	0	827	866	0	0	0	61	0	21
Grp Sat Flow(s),veh/h/ln	1781	1777	1869	1781	1777	1849	0	1870	1585	1446	0	1570
Q Serve(g_s), s	3.9	18.6	18.7	0.0	29.4	29.7	0.0	0.0	0.0	5.4	0.0	1.7
Cycle Q Clear(g_c), s	3.9	18.6	18.7	0.0	29.4	29.7	0.0	0.0	0.0	5.4	0.0	1.7
Prop In Lane	1.00		0.00	1.00		0.06	0.00		1.00	0.92		1.00
Lane Grp Cap(c), veh/h	83	1487	1564	1	1315	1369	0	118	100	145	0	99
V/C Ratio(X)	0.66	0.56	0.56	0.00	0.63	0.63	0.00	0.00	0.00	0.42	0.00	0.21
Avail Cap(c_a), veh/h	116	1487	1564	69	1315	1369	0	360	305	331	0	302
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	0.00	0.52	0.52	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.0	3.3	3.3	0.0	8.2	8.2	0.0	0.0	0.0	59.6	0.0	57.8
Incr Delay (d2), s/veh	8.8	1.5	1.4	0.0	1.2	1.2	0.0	0.0	0.0	2.0	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	4.3	4.5	0.0	9.4	9.9	0.0	0.0	0.0	2.0	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.8	4.8	4.7	0.0	9.4	9.4	0.0	0.0	0.0	61.5	0.0	58.9
LnGrp LOS	E	A	A	A	A	A	A	A	A	E	A	E
Approach Vol, veh/h		1760			1693			0			82	
Approach Delay, s/veh		6.8			9.4			0.0			60.8	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	0.0	115.3		14.7	12.5	102.7		14.7				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	5.0	80.5		25.0	8.5	77.0		25.0				
Max Q Clear Time (g_c+I1), s	0.0	20.7		7.4	5.9	31.7		0.0				
Green Ext Time (p_c), s	0.0	18.8		0.3	0.0	17.3		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		9.3	
HCM 6th LOS		A	

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	444	1397	35	90	1228	132	29	30	19	101	33	480
Future Volume (veh/h)	444	1397	35	90	1228	132	29	30	19	101	33	480
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		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	462	1455	36	94	1279	138	30	31	20	105	34	500
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	477	2415	60	115	1701	755	241	443	375	351	443	794
Arrive On Green	0.27	0.68	0.68	0.06	0.48	0.48	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3542	88	1781	3554	1578	869	1870	1585	1354	1870	1561
Grp Volume(v), veh/h	462	729	762	94	1279	138	30	31	20	105	34	500
Grp Sat Flow(s),veh/h/ln	1781	1777	1852	1781	1777	1578	869	1870	1585	1354	1870	1561
Q Serve(g_s), s	38.5	33.2	33.3	7.8	44.0	7.5	4.2	1.9	1.5	9.8	2.1	35.0
Cycle Q Clear(g_c), s	38.5	33.2	33.3	7.8	44.0	7.5	6.3	1.9	1.5	11.7	2.1	35.0
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	477	1212	1263	115	1701	755	241	443	375	351	443	794
V/C Ratio(X)	0.97	0.60	0.60	0.82	0.75	0.18	0.12	0.07	0.05	0.30	0.08	0.63
Avail Cap(c_a), veh/h	477	1212	1263	184	1701	755	241	443	375	351	443	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.3	12.9	12.9	69.3	31.8	22.3	47.0	44.4	44.3	49.0	44.5	27.1
Incr Delay (d2), s/veh	28.4	1.7	1.7	13.8	3.1	0.5	0.2	0.1	0.1	0.5	0.1	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.5	12.5	13.1	4.0	18.9	2.9	0.9	0.9	0.6	3.3	1.0	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.6	14.6	14.6	83.1	35.0	22.9	47.2	44.5	44.3	49.5	44.6	28.7
LnGrp LOS	F	B	B	F	C	C	D	D	D	D	D	C
Approach Vol, veh/h		1953			1511			81			639	
Approach Delay, s/veh		30.7			36.9			45.4			32.9	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.2	109.3		42.0	46.7	78.8		42.0				
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	15.5	80.0		* 36	40.2	55.3		35.0				
Max Q Clear Time (g_c+I1), s	9.8	35.3		37.0	40.5	46.0		8.3				
Green Ext Time (p_c), s	0.1	13.5		0.0	0.0	5.7		0.3				

Intersection Summary	
HCM 6th Ctrl Delay	33.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

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

APPENDIX E

EXISTING QUEUEING ANALYSIS WORKSHEETS

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	388	362	154	935	1518
v/c Ratio	1.01	0.90	0.76	0.28	0.62
Control Delay	87.0	60.3	68.6	6.8	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	87.0	60.3	68.6	6.8	18.9
Queue Length 50th (ft)	~263	210	103	72	236
Queue Length 95th (ft)	#464	#391	#190	93	286
Internal Link Dist (ft)		267		584	420
Turn Bay Length (ft)			300		
Base Capacity (vph)	386	401	212	3310	2441
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.01	0.90	0.73	0.28	0.62

Intersection Summary

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

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	170	215	94	182	626	25	430	380	711	732
v/c Ratio	0.53	0.33	0.57	0.64	0.60	0.19	0.24	0.82	0.40	0.66
Control Delay	49.5	35.3	45.5	51.1	17.1	46.5	20.4	46.9	14.1	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	35.3	45.5	51.1	17.1	46.5	20.4	46.9	14.1	6.9
Queue Length 50th (ft)	54	62	53	120	94	15	58	127	116	91
Queue Length 95th (ft)	88	91	m57	m102	m73	41	93	m#168	m160	m114
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	326	779	168	400	1047	168	1805	463	1768	1118
Starvation Cap Reductn	0	0	0	0	27	0	0	0	0	9
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.28	0.56	0.46	0.61	0.15	0.24	0.82	0.40	0.66

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	372	140	147	27	192	86	89	9	88	863
v/c Ratio	0.69	0.11	0.18	0.14	0.17	0.47	0.47	0.03	0.17	1.50
Control Delay	67.8	18.4	4.0	42.2	32.8	50.8	50.4	0.1	27.0	261.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.8	18.4	4.0	42.2	32.8	50.8	50.4	0.1	27.0	261.6
Queue Length 50th (ft)	130	20	0	16	36	54	56	0	41	~726
Queue Length 95th (ft)	m150	m30	m9	42	59	107	109	0	80	#964
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	631	1267	827	194	1105	184	191	352	529	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.11	0.18	0.14	0.17	0.47	0.47	0.03	0.17	1.50

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	41	15	11	17	51	18	395	32	99	780
v/c Ratio	0.13	0.03	0.02	0.05	0.13	0.07	0.21	0.03	0.30	0.33
Control Delay	31.7	19.5	0.1	32.4	12.9	34.5	18.8	0.1	30.4	13.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	31.7	19.5	0.1	32.4	12.9	34.5	18.8	0.1	30.4	13.2
Queue Length 50th (ft)	10	4	0	4	4	4	46	0	23	46
Queue Length 95th (ft)	59	21	0	32	33	34	157	0	113	302
Internal Link Dist (ft)		1369			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	364	1311	1150	364	1171	257	2239	1037	449	2320
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.01	0.01	0.05	0.04	0.07	0.18	0.03	0.22	0.34

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	113	175	204	298	90	734	181	76	1393
v/c Ratio	0.86	0.32	0.86	0.57	0.56	0.40	0.20	0.52	0.83
Control Delay	103.9	23.1	86.9	43.9	66.6	21.2	4.0	65.5	32.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.9	23.1	86.9	43.9	66.6	21.2	4.0	65.5	32.7
Queue Length 50th (ft)	88	33	81	101	67	177	0	57	461
Queue Length 95th (ft)	#197	56	#150	122	#171	306	48	109	#746
Internal Link Dist (ft)		600		1370		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	131	962	237	964	160	1824	883	165	1673
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.18	0.86	0.31	0.56	0.40	0.20	0.46	0.83

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	114	147	40	13	239	65	314	62	702
v/c Ratio	0.81	0.17	0.08	0.08	0.47	0.46	0.19	0.45	0.42
Control Delay	84.5	29.3	0.3	43.1	35.4	55.6	17.3	55.2	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.5	29.3	0.3	43.1	35.4	55.6	17.3	55.2	13.0
Queue Length 50th (ft)	73	38	0	8	65	40	57	38	91
Queue Length 95th (ft)	#168	63	0	27	84	#104	108	#97	176
Internal Link Dist (ft)		1365			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	141	955	549	159	983	141	1667	139	1681
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	0.15	0.07	0.08	0.24	0.46	0.19	0.45	0.42

Intersection Summary

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

Lane Group	EBL	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	23	1269	1845	37	14
v/c Ratio	0.24	0.44	0.69	0.24	0.06
Control Delay	64.9	5.8	15.2	52.2	0.4
Queue Delay	0.0	0.0	0.3	0.0	0.0
Total Delay	64.9	5.8	15.4	52.2	0.4
Queue Length 50th (ft)	19	114	415	30	0
Queue Length 95th (ft)	49	277	770	59	0
Internal Link Dist (ft)		728	868	780	
Turn Bay Length (ft)	240				
Base Capacity (vph)	99	2892	2657	263	368
Starvation Cap Reductn	0	0	248	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.23	0.44	0.77	0.14	0.04

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	273	1085	54	1464	92	23	22	19	55	34	341
v/c Ratio	0.86	0.43	0.51	0.72	0.10	0.12	0.09	0.06	0.29	0.13	0.70
Control Delay	84.4	13.0	85.1	28.9	1.8	52.6	51.4	0.4	57.8	52.5	45.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.4	13.0	85.1	28.9	1.8	52.6	51.4	0.4	57.8	52.5	45.7
Queue Length 50th (ft)	257	195	52	489	0	22	21	0	53	32	271
Queue Length 95th (ft)	#411	397	101	806	17	44	42	0	85	57	299
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	328	2546	120	2044	948	319	434	456	327	440	499
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.43	0.45	0.72	0.10	0.07	0.05	0.04	0.17	0.08	0.68

Intersection Summary

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

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	157	188	402	1928	1301
v/c Ratio	0.65	0.79	0.84	0.51	0.60
Control Delay	56.8	61.2	50.3	4.1	24.9
Queue Delay	0.0	0.0	0.0	0.1	0.0
Total Delay	56.8	61.2	50.3	4.1	24.9
Queue Length 50th (ft)	111	117	274	85	237
Queue Length 95th (ft)	176	192	m303	m202	339
Internal Link Dist (ft)		140		584	143
Turn Bay Length (ft)			300		
Base Capacity (vph)	319	310	584	3808	2163
Starvation Cap Reductn	0	0	0	448	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.61	0.69	0.57	0.60

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	384	511	51	253	961	29	1224	344	521	270
v/c Ratio	1.01	0.67	0.33	0.83	0.91	0.23	0.78	0.58	0.32	0.24
Control Delay	97.2	45.5	41.9	58.3	32.5	52.4	37.3	35.2	10.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	97.2	45.5	41.9	58.3	32.6	52.4	37.3	35.2	10.6	0.5
Queue Length 50th (ft)	~155	177	24	174	156	20	277	125	67	0
Queue Length 95th (ft)	#251	#261	m37	m214	m#189	49	331	166	54	0
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	382	760	185	330	1051	217	1621	598	1650	1106
Starvation Cap Reductn	0	0	0	0	2	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.67	0.28	0.77	0.92	0.13	0.76	0.58	0.32	0.24

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	440	362	171	86	464	194	200	58	285	705
v/c Ratio	0.83	0.46	0.26	0.49	0.66	0.98	0.98	0.17	0.41	0.99
Control Delay	66.9	37.3	8.2	56.7	49.6	109.9	107.7	1.1	27.2	62.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
Total Delay	66.9	37.3	8.2	56.7	49.6	109.9	107.7	1.1	27.2	63.9
Queue Length 50th (ft)	172	94	33	58	115	146	150	0	143	446
Queue Length 95th (ft)	#234	m136	m70	110	147	#301	#306	0	233	#752
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	552	880	658	178	891	197	204	345	695	713
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	6
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.41	0.26	0.48	0.52	0.98	0.98	0.17	0.41	1.00

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	137	49	38	141	290	34	929	85	215	564
v/c Ratio	0.69	0.17	0.09	0.59	0.71	0.29	0.83	0.13	0.78	0.35
Control Delay	60.3	33.5	0.4	53.0	22.7	51.1	38.6	0.4	60.4	18.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	33.5	0.4	53.0	22.7	51.1	38.6	0.4	60.4	18.9
Queue Length 50th (ft)	76	25	0	79	51	19	253	0	119	110
Queue Length 95th (ft)	#199	55	0	#220	131	57	#482	0	#298	208
Internal Link Dist (ft)		1369			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	208	650	687	241	676	121	1132	641	278	1607
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.08	0.06	0.59	0.43	0.28	0.82	0.13	0.77	0.35

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	369	562	222	220	105	1264	350	90	1051
v/c Ratio	0.87	0.65	0.63	0.49	0.80	0.90	0.46	0.88	0.82
Control Delay	67.4	43.7	61.5	37.8	95.6	44.7	12.2	119.4	41.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	67.4	43.7	61.5	37.8	95.6	44.7	12.2	119.4	41.8
Queue Length 50th (ft)	269	204	84	59	80	457	59	69	367
Queue Length 95th (ft)	#554	267	145	97	#216	#791	179	#204	#629
Internal Link Dist (ft)		600		234		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	422	1333	427	953	131	1408	754	102	1275
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.42	0.52	0.23	0.80	0.90	0.46	0.88	0.82

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	274	422	78	24	241	62	673	56	675
v/c Ratio	0.69	0.35	0.12	0.17	0.51	0.47	0.50	0.44	0.52
Control Delay	50.8	29.0	0.4	50.0	30.9	61.5	28.8	60.8	27.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	29.0	0.4	50.0	30.9	61.5	28.8	60.8	27.4
Queue Length 50th (ft)	174	106	0	16	54	42	197	38	187
Queue Length 95th (ft)	#392	170	0	43	79	#109	262	#95	251
Internal Link Dist (ft)		1365			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	398	1252	655	144	882	131	1337	126	1307
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.34	0.12	0.17	0.27	0.47	0.50	0.44	0.52

Intersection Summary

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

Lane Group	EBL	EBT	WBT	SBT	SBR
Lane Group Flow (vph)	55	1705	1693	61	21
v/c Ratio	0.49	0.59	0.67	0.37	0.08
Control Delay	73.8	7.8	15.9	56.0	0.6
Queue Delay	0.0	0.0	0.2	0.0	0.0
Total Delay	73.8	7.8	16.1	56.0	0.6
Queue Length 50th (ft)	45	218	404	50	0
Queue Length 95th (ft)	91	456	664	87	0
Internal Link Dist (ft)		728	868	780	
Turn Bay Length (ft)	240				
Base Capacity (vph)	117	2874	2533	266	367
Starvation Cap Reductn	0	0	221	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.59	0.73	0.23	0.06

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	463	1491	94	1279	138	30	31	20	105	34	500
v/c Ratio	0.91	0.66	0.63	0.83	0.18	0.15	0.11	0.06	0.51	0.12	0.72
Control Delay	74.6	21.3	84.5	44.1	5.2	52.2	51.1	0.4	64.8	50.9	35.7
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	21.8	84.5	44.1	5.2	52.2	51.1	0.4	64.8	50.9	35.7
Queue Length 50th (ft)	417	406	90	571	0	27	28	0	100	31	351
Queue Length 95th (ft)	#679	702	152	#808	47	53	53	0	145	57	413
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	507	2251	182	1545	752	319	434	461	324	440	696
Starvation Cap Reductn	0	325	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.77	0.52	0.83	0.18	0.09	0.07	0.04	0.32	0.08	0.72

Intersection Summary

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

APPENDIX F

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 G

NEAR-TERM ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	560	5	180	150	980	0	0	1220	320
Future Volume (veh/h)	0	0	0	560	5	180	150	980	0	0	1220	320
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		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				384	275	186	155	1010	0	0	1258	330
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				410	239	162	183	3324	0	0	2006	526
Arrive On Green				0.23	0.23	0.23	0.21	1.00	0.00	0.00	0.50	0.50
Sat Flow, veh/h				1781	1040	704	1781	5274	0	0	4171	1049
Grp Volume(v), veh/h				384	0	461	155	1010	0	0	1070	518
Grp Sat Flow(s),veh/h/ln				1781	0	1744	1781	1702	0	0	1702	1648
Q Serve(g_s), s				21.2	0.0	23.0	8.4	0.0	0.0	0.0	22.9	22.9
Cycle Q Clear(g_c), s				21.2	0.0	23.0	8.4	0.0	0.0	0.0	22.9	22.9
Prop In Lane				1.00		0.40	1.00		0.00	0.00		0.64
Lane Grp Cap(c), veh/h				410	0	401	183	3324	0	0	1706	826
V/C Ratio(X)				0.94	0.00	1.15	0.85	0.30	0.00	0.00	0.63	0.63
Avail Cap(c_a), veh/h				410	0	401	214	3324	0	0	1706	826
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.85	0.85	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.8	0.0	38.5	39.0	0.0	0.0	0.0	18.1	18.2
Incr Delay (d2), s/veh				28.8	0.0	92.4	20.2	0.2	0.0	0.0	1.8	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
%ile BackOfQ(50%),veh/ln				12.3	0.0	19.9	4.2	0.1	0.0	0.0	8.4	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				66.6	0.0	130.9	59.2	0.2	0.0	0.0	19.9	21.7
LnGrp LOS				E	A	F	E	A	A	A	B	C
Approach Vol, veh/h					845			1165			1588	
Approach Delay, s/veh					101.7			8.0			20.5	
Approach LOS					F			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	71.9		15.0	56.9		28.1						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	65.1		* 12	48.4		23.0						
Max Q Clear Time (g_c+I1), s	2.0		10.4	24.9		25.0						
Green Ext Time (p_c), s	4.8		0.1	7.6		0.0						

Intersection Summary	
HCM 6th Ctrl Delay	35.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for 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)	160	200	20	90	180	650	25	330	90	390	690	690
Future Volume (veh/h)	160	200	20	90	180	650	25	330	90	390	690	690
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		1.00	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	172	215	22	97	194	699	27	355	97	419	742	742
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	308	511	52	149	284	992	66	1188	311	704	1641	855
Arrive On Green	0.09	0.16	0.16	0.03	0.05	0.05	0.04	0.29	0.29	0.07	0.15	0.15
Sat Flow, veh/h	3456	3248	328	1781	1870	2790	1781	4028	1055	3456	3554	1545
Grp Volume(v), veh/h	172	116	121	97	194	699	27	298	154	419	742	742
Grp Sat Flow(s),veh/h/ln	1728	1777	1800	1781	1870	1395	1781	1702	1679	1728	1777	1545
Q Serve(g_s), s	4.8	5.9	6.0	5.4	10.2	4.7	1.5	6.8	7.1	11.8	19.0	40.4
Cycle Q Clear(g_c), s	4.8	5.9	6.0	5.4	10.2	4.7	1.5	6.8	7.1	11.8	19.0	40.4
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	308	280	283	149	284	992	66	1004	495	704	1641	855
V/C Ratio(X)	0.56	0.42	0.43	0.65	0.68	0.70	0.41	0.30	0.31	0.60	0.45	0.87
Avail Cap(c_a), veh/h	328	382	387	169	402	1168	169	1004	495	704	1641	855
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	0.98	0.98	0.98	0.62	0.62	0.62
Uniform Delay (d), s/veh	43.6	38.0	38.1	47.2	45.1	11.8	47.1	27.2	27.4	42.6	30.9	30.1
Incr Delay (d2), s/veh	1.8	1.0	1.0	6.8	2.8	1.5	4.0	0.7	1.6	0.8	0.6	7.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.6	2.7	2.7	5.3	4.1	0.7	2.7	2.9	5.4	9.1	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	39.0	39.1	54.0	47.9	13.4	51.1	28.0	29.0	43.5	31.4	37.8
LnGrp LOS	D	D	D	D	D	B	D	C	C	D	C	D
Approach Vol, veh/h		409			990			479			1903	
Approach Delay, s/veh		41.7			24.1			29.6			36.5	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.9	36.0	14.9	22.2	10.2	52.7	15.4	21.7
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	13.5	29.5	9.5	21.5	9.5	33.5	9.5	21.5
Max Q Clear Time (g_c+I1), s	13.8	9.1	7.4	8.0	3.5	42.4	6.8	12.2
Green Ext Time (p_c), s	0.0	2.5	0.0	1.0	0.0	0.0	0.1	3.0

Intersection Summary	
HCM 6th Ctrl Delay	33.0
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	380	150	150	30	200	5	120	60	15	90	290	590
Future Volume (veh/h)	380	150	150	30	200	5	120	60	15	90	290	590
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	400	158	158	32	211	5	94	107	16	95	305	583
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	483	1100	661	115	1204	28	195	205	174	533	172	328
Arrive On Green	0.14	0.31	0.31	0.06	0.23	0.23	0.11	0.11	0.11	0.30	0.30	0.30
Sat Flow, veh/h	3456	3554	1575	1781	5132	121	1781	1870	1585	1781	575	1098
Grp Volume(v), veh/h	400	158	158	32	140	76	94	107	16	95	0	888
Grp Sat Flow(s),veh/h/ln	1728	1777	1575	1781	1702	1849	1781	1870	1585	1781	0	1673
Q Serve(g_s), s	11.3	3.2	6.5	1.7	3.3	3.3	5.0	5.4	0.9	3.9	0.0	29.9
Cycle Q Clear(g_c), s	11.3	3.2	6.5	1.7	3.3	3.3	5.0	5.4	0.9	3.9	0.0	29.9
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	483	1100	661	115	799	434	195	205	174	533	0	500
V/C Ratio(X)	0.83	0.14	0.24	0.28	0.17	0.18	0.48	0.52	0.09	0.18	0.00	1.78
Avail Cap(c_a), veh/h	636	1100	661	196	799	434	196	206	174	533	0	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.9	24.9	18.7	44.5	30.5	30.6	41.8	42.0	40.0	26.0	0.0	35.1
Incr Delay (d2), s/veh	4.6	0.2	0.5	0.5	0.5	0.9	0.7	1.1	0.1	0.1	0.0	357.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	1.4	3.0	0.8	1.4	1.6	2.2	2.5	0.4	1.7	0.0	61.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	25.1	19.3	45.0	31.0	31.4	42.5	43.1	40.1	26.0	0.0	392.1
LnGrp LOS	D	C	B	D	C	C	D	D	D	C	A	F
Approach Vol, veh/h		716			248			217			983	
Approach Delay, s/veh		35.7			33.0			42.7			356.7	
Approach LOS		D			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	37.7		35.0	18.7	30.3		16.1
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1
Max Green Setting (Gmax), s	* 11	26.4		29.9	* 18	19.0		11.0
Max Q Clear Time (g_c+I1), s	13.3	8.5		31.9	13.3	5.3		7.4
Green Ext Time (p_c), s	0.0	0.8		0.0	0.7	0.7		0.2

Intersection Summary		
HCM 6th Ctrl Delay	181.9	
HCM 6th LOS	F	

Notes

User approved pedestrian interval to be less than phase max green.
User approved volume balancing among the lanes for turning movement.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	40	25	50	45	20	20	80	30	10	160	15
Future Vol, veh/h	10	40	25	50	45	20	20	80	30	10	160	15
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	46	29	57	52	23	23	92	34	11	184	17
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.7	9.5	9	10
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	20%	0%	20%	0%	53%	0%	6%	0%
Vol Thru, %	80%	0%	80%	0%	47%	0%	94%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	30	50	25	95	20	170	15
LT Vol	20	0	10	0	50	0	10	0
Through Vol	80	0	40	0	45	0	160	0
RT Vol	0	30	0	25	0	20	0	15
Lane Flow Rate	115	34	57	29	109	23	195	17
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.174	0.044	0.091	0.039	0.176	0.031	0.288	0.022
Departure Headway (Hd)	5.442	4.636	5.717	4.91	5.816	4.846	5.304	4.57
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	656	768	623	724	614	734	674	779
Service Time	3.198	2.393	3.485	2.677	3.578	2.607	3.056	2.322
HCM Lane V/C Ratio	0.175	0.044	0.091	0.04	0.178	0.031	0.289	0.022
HCM Control Delay	9.4	7.6	9.1	7.9	9.8	7.8	10.2	7.4
HCM Lane LOS	A	A	A	A	A	A	B	A
HCM 95th-tile Q	0.6	0.1	0.3	0.1	0.6	0.1	1.2	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	15	10	20	15	40	20	430	30	100	700	80
Future Volume (veh/h)	40	15	10	20	15	40	20	430	30	100	700	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	42	16	11	21	16	42	21	453	32	105	737	84
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	261	221	72	54	142	54	947	420	159	1047	119
Arrive On Green	0.06	0.14	0.14	0.04	0.12	0.12	0.03	0.27	0.27	0.09	0.33	0.33
Sat Flow, veh/h	1781	1870	1582	1781	454	1192	1781	3554	1576	1781	3214	366
Grp Volume(v), veh/h	42	16	11	21	0	58	21	453	32	105	407	414
Grp Sat Flow(s),veh/h/ln	1781	1870	1582	1781	0	1646	1781	1777	1576	1781	1777	1804
Q Serve(g_s), s	1.2	0.4	0.3	0.6	0.0	1.7	0.6	5.7	0.8	3.0	10.6	10.6
Cycle Q Clear(g_c), s	1.2	0.4	0.3	0.6	0.0	1.7	0.6	5.7	0.8	3.0	10.6	10.6
Prop In Lane	1.00		1.00	1.00		0.72	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	109	261	221	72	0	196	54	947	420	159	579	588
V/C Ratio(X)	0.39	0.06	0.05	0.29	0.00	0.30	0.39	0.48	0.08	0.66	0.70	0.70
Avail Cap(c_a), veh/h	287	1134	959	287	0	998	203	1650	732	354	977	991
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	19.7	19.7	24.6	0.0	21.2	25.1	16.3	14.5	23.2	15.6	15.6
Incr Delay (d2), s/veh	2.2	0.1	0.1	2.2	0.0	0.8	4.6	0.4	0.1	4.6	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.1	0.3	0.0	0.6	0.3	1.9	0.3	1.3	3.6	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	19.8	19.8	26.8	0.0	22.1	29.7	16.6	14.6	27.9	17.1	17.1
LnGrp LOS	C	B	B	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		69			79			506			926	
Approach Delay, s/veh		23.6			23.3			17.1			18.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.2	20.1	8.1	13.4	8.1	23.2	9.2	12.3
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	10.5	24.5	8.5	32.0	6.0	29.0	8.5	32.0
Max Q Clear Time (g_c+I1), s	5.0	7.7	2.6	2.4	2.6	12.6	3.2	3.7
Green Ext Time (p_c), s	0.1	2.5	0.0	0.1	0.0	4.3	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	18.4
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	90	85	210	230	80	90	715	190	80	1090	270
Future Volume (veh/h)	110	90	85	210	230	80	90	715	190	80	1090	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	93	88	216	237	82	93	737	196	82	1124	278
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	132	241	204	239	342	115	104	1888	841	104	1500	368
Arrive On Green	0.07	0.13	0.13	0.07	0.13	0.13	0.06	0.53	0.53	0.06	0.53	0.53
Sat Flow, veh/h	1781	1813	1540	3456	2610	879	1781	3554	1582	1781	2823	692
Grp Volume(v), veh/h	113	91	90	216	159	160	93	737	196	82	704	698
Grp Sat Flow(s),veh/h/ln	1781	1777	1577	1728	1777	1712	1781	1777	1582	1781	1777	1738
Q Serve(g_s), s	7.5	5.6	6.3	7.4	10.3	10.7	6.2	14.7	8.0	5.5	36.9	37.7
Cycle Q Clear(g_c), s	7.5	5.6	6.3	7.4	10.3	10.7	6.2	14.7	8.0	5.5	36.9	37.7
Prop In Lane	1.00		0.98	1.00		0.51	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	132	236	209	239	233	224	104	1888	841	104	944	924
V/C Ratio(X)	0.86	0.39	0.43	0.90	0.68	0.71	0.90	0.39	0.23	0.79	0.75	0.76
Avail Cap(c_a), veh/h	132	492	436	239	489	471	104	1888	841	163	944	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	47.6	47.9	55.5	49.8	50.0	56.1	16.6	15.0	55.8	21.8	22.0
Incr Delay (d2), s/veh	39.0	1.0	1.4	33.7	3.5	4.1	56.3	0.6	0.6	12.5	5.3	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	2.6	2.6	4.4	4.8	4.8	4.4	6.1	3.0	2.8	16.3	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.9	48.6	49.3	89.2	53.3	54.1	112.4	17.2	15.7	68.2	27.1	27.7
LnGrp LOS	F	D	D	F	D	D	F	B	B	E	C	C
Approach Vol, veh/h		294			535			1026			1484	
Approach Delay, s/veh		66.2			68.0			25.6			29.7	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	69.8	14.8	22.4	13.0	69.8	15.0	22.2
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	7.0	* 43	8.3	33.2	7.0	* 47	8.9	33.0
Max Q Clear Time (g_c+I1), s	7.5	16.7	9.4	8.3	8.2	39.7	9.5	12.7
Green Ext Time (p_c), s	0.0	6.3	0.0	1.0	0.0	4.7	0.0	1.8

Intersection Summary	
HCM 6th Ctrl Delay	37.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Intersection Delay, s/veh	17.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	220	20	25	380	20	25	30	10	10	60	130
Future Vol, veh/h	80	220	20	25	380	20	25	30	10	10	60	130
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	86	237	22	27	409	22	27	32	11	11	65	140
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	13.9	23.9	11.6	11.6
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	45%	0%	100%	0%	0%	100%	0%	0%	14%	0%
Vol Thru, %	55%	0%	0%	100%	0%	0%	100%	0%	86%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	55	10	80	220	20	25	380	20	70	130
LT Vol	25	0	80	0	0	25	0	0	10	0
Through Vol	30	0	0	220	0	0	380	0	60	0
RT Vol	0	10	0	0	20	0	0	20	0	130
Lane Flow Rate	59	11	86	237	22	27	409	22	75	140
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.131	0.021	0.176	0.452	0.037	0.052	0.737	0.035	0.155	0.257
Departure Headway (Hd)	7.969	7.033	7.382	6.874	6.164	7.109	6.602	5.892	7.401	6.625
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	451	510	489	528	584	507	552	611	486	544
Service Time	5.694	4.758	5.082	4.574	3.864	4.809	4.302	3.592	5.12	4.344
HCM Lane V/C Ratio	0.131	0.022	0.176	0.449	0.038	0.053	0.741	0.036	0.154	0.257
HCM Control Delay	11.9	9.9	11.7	15.1	9.1	10.2	25.6	8.8	11.5	11.6
HCM Lane LOS	B	A	B	C	A	B	D	A	B	B
HCM 95th-tile Q	0.4	0.1	0.6	2.3	0.1	0.2	6.2	0.1	0.5	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	140	40	10	180	50	70	320	30	60	390	340
Future Volume (veh/h)	110	140	40	10	180	50	70	320	30	60	390	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	118	151	43	11	194	54	75	344	32	65	419	366
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	143	565	251	42	283	77	96	1699	157	89	918	797
Arrive On Green	0.08	0.16	0.16	0.02	0.10	0.10	0.05	0.52	0.52	0.05	0.51	0.51
Sat Flow, veh/h	1781	3554	1582	1781	2763	749	1781	3284	304	1781	1788	1552
Grp Volume(v), veh/h	118	151	43	11	123	125	75	185	191	65	416	369
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1735	1781	1777	1811	1781	1777	1564
Q Serve(g_s), s	6.5	3.7	2.4	0.6	6.7	7.0	4.2	5.6	5.7	3.6	14.9	15.0
Cycle Q Clear(g_c), s	6.5	3.7	2.4	0.6	6.7	7.0	4.2	5.6	5.7	3.6	14.9	15.0
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.17	1.00		0.99
Lane Grp Cap(c), veh/h	143	565	251	42	182	178	96	919	937	89	912	803
V/C Ratio(X)	0.83	0.27	0.17	0.26	0.67	0.70	0.78	0.20	0.20	0.73	0.46	0.46
Avail Cap(c_a), veh/h	143	959	427	160	498	486	107	919	937	107	912	803
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	0.95	0.95	0.95
Uniform Delay (d), s/veh	45.3	36.9	36.4	48.0	43.3	43.4	46.7	13.0	13.0	46.8	15.5	15.5
Incr Delay (d2), s/veh	31.6	0.3	0.3	3.2	4.3	5.0	27.8	0.5	0.5	17.3	1.6	1.8
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	4.1	1.6	0.9	0.3	3.1	3.2	2.5	2.2	2.2	2.0	5.8	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.9	37.2	36.7	51.2	47.6	48.4	74.5	13.5	13.5	64.1	17.0	17.3
LnGrp LOS	E	D	D	D	D	D	E	B	B	E	B	B
Approach Vol, veh/h		312			259			451			850	
Approach Delay, s/veh		52.1			48.1			23.6			20.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	58.2	8.4	21.9	11.9	57.9	14.0	16.3
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	33.0	9.0	27.0	6.0	33.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	5.6	7.7	2.6	5.7	6.2	17.0	8.5	9.0
Green Ext Time (p_c), s	0.0	2.0	0.0	1.0	0.0	4.2	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	30.5
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1390	30	20	1980	40	10	10	20	40	5	15
Future Volume (veh/h)	25	1390	30	20	1980	40	10	10	20	40	5	15
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		1.00
Parking Bus, Adj	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	26	1448	31	21	2062	42	10	10	21	42	5	16
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	58	2263	48	36	2222	45	42	29	306	53	3	305
Arrive On Green	0.03	0.64	0.64	0.02	0.62	0.62	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3555	76	1781	3560	72	0	149	1585	1	18	1580
Grp Volume(v), veh/h	26	723	756	21	1025	1079	20	0	21	47	0	16
Grp Sat Flow(s),veh/h/ln	1781	1777	1855	1781	1777	1855	150	0	1585	19	0	1580
Q Serve(g_s), s	1.9	32.4	32.5	1.5	66.6	67.9	0.0	0.0	1.4	0.0	0.0	1.1
Cycle Q Clear(g_c), s	1.9	32.4	32.5	1.5	66.6	67.9	25.1	0.0	1.4	25.1	0.0	1.1
Prop In Lane	1.00		0.04	1.00		0.04	0.50		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	58	1131	1180	36	1109	1158	70	0	306	56	0	305
V/C Ratio(X)	0.45	0.64	0.64	0.58	0.92	0.93	0.28	0.00	0.07	0.84	0.00	0.05
Avail Cap(c_a), veh/h	100	1131	1180	69	1109	1158	70	0	306	56	0	305
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	0.35	0.35	0.35	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.7	14.5	14.5	63.1	21.7	21.9	44.8	0.0	42.9	63.2	0.0	42.8
Incr Delay (d2), s/veh	5.2	2.8	2.7	5.0	5.9	6.2	2.2	0.0	0.1	65.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	12.5	13.1	0.7	26.1	27.8	0.6	0.0	0.6	2.6	0.0	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	17.3	17.2	68.1	27.6	28.1	47.0	0.0	43.0	128.7	0.0	42.8
LnGrp LOS	E	B	B	E	C	C	D	A	D	F	A	D
Approach Vol, veh/h		1505			2125			41			63	
Approach Delay, s/veh		18.1			28.3			44.9			106.9	
Approach LOS		B			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.2	89.2		31.6	10.8	87.6		31.6
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	5.0	80.4		25.1	7.3	78.1		25.1
Max Q Clear Time (g_c+I1), s	3.5	34.5		27.1	3.9	69.9		27.1
Green Ext Time (p_c), s	0.0	13.3		0.0	0.0	7.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	25.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	340	1160	40	70	1610	110	30	30	20	70	40	437
Future Volume (veh/h)	340	1160	40	70	1610	110	30	30	20	70	40	437
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	347	1184	41	71	1643	112	31	31	20	71	41	446
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	327	2441	84	89	2002	891	247	443	370	351	443	665
Arrive On Green	0.18	0.70	0.70	0.05	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3504	121	1781	3554	1582	908	1870	1563	1354	1870	1581
Grp Volume(v), veh/h	347	600	625	71	1643	112	31	31	20	71	41	446
Grp Sat Flow(s),veh/h/ln	1781	1777	1848	1781	1777	1582	908	1870	1563	1354	1870	1581
Q Serve(g_s), s	27.5	23.2	23.2	5.9	56.3	5.0	4.1	1.9	1.5	6.4	2.6	34.2
Cycle Q Clear(g_c), s	27.5	23.2	23.2	5.9	56.3	5.0	6.7	1.9	1.5	8.4	2.6	34.2
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	327	1238	1287	89	2002	891	247	443	370	351	443	665
V/C Ratio(X)	1.06	0.48	0.49	0.79	0.82	0.13	0.13	0.07	0.05	0.20	0.09	0.67
Avail Cap(c_a), veh/h	327	1238	1287	121	2002	891	247	443	370	351	443	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	10.4	10.4	70.5	26.6	15.4	47.3	44.4	44.3	47.7	44.7	35.1
Incr Delay (d2), s/veh	62.6	1.1	1.1	22.1	3.9	0.3	0.2	0.1	0.1	0.3	0.1	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.9	8.6	9.0	3.2	23.5	1.8	0.9	0.9	0.6	2.2	1.2	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.9	11.5	11.5	92.5	30.5	15.7	47.5	44.5	44.3	48.0	44.8	37.8
LnGrp LOS	F	B	B	F	C	B	D	D	D	D	D	D
Approach Vol, veh/h		1572			1826			82			558	
Approach Delay, s/veh		36.3			32.0			45.6			39.6	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.0	111.5		42.0	34.0	91.5		42.0
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	10.3	85.3		* 36	27.5	68.0		35.0
Max Q Clear Time (g_c+I1), s	7.9	25.2		36.2	29.5	58.3		8.7
Green Ext Time (p_c), s	0.0	9.8		0.0	0.0	7.1		0.3

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

Notes

User approved pedestrian interval to be less than phase max green.

* 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	0	0	170	5	170	400	2000	0	0	980	380
Future Volume (veh/h)	0	0	0	170	5	170	400	2000	0	0	980	380
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		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				175	5	175	412	2062	0	0	1010	392
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				239	6	207	438	3870	0	0	1686	654
Arrive On Green				0.13	0.13	0.13	0.49	1.00	0.00	0.00	0.47	0.47
Sat Flow, veh/h				1781	44	1548	1781	5274	0	0	3760	1394
Grp Volume(v), veh/h				175	0	180	412	2062	0	0	957	445
Grp Sat Flow(s),veh/h/ln				1781	0	1592	1781	1702	0	0	1702	1581
Q Serve(g_s), s				10.4	0.0	12.1	24.1	0.0	0.0	0.0	22.8	22.8
Cycle Q Clear(g_c), s				10.4	0.0	12.1	24.1	0.0	0.0	0.0	22.8	22.8
Prop In Lane				1.00		0.97	1.00		0.00	0.00		0.88
Lane Grp Cap(c), veh/h				239	0	213	438	3870	0	0	1598	742
V/C Ratio(X)				0.73	0.00	0.84	0.94	0.53	0.00	0.00	0.60	0.60
Avail Cap(c_a), veh/h				338	0	302	588	3870	0	0	1598	742
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.27	0.27	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.8	0.0	46.5	27.2	0.0	0.0	0.0	21.5	21.5
Incr Delay (d2), s/veh				2.3	0.0	10.2	7.4	0.1	0.0	0.0	1.7	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
%ile BackOfQ(50%),veh/ln				4.7	0.0	5.4	7.3	0.1	0.0	0.0	8.8	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				48.0	0.0	56.7	34.7	0.1	0.0	0.0	23.2	25.1
LnGrp LOS				D	A	E	C	A	A	A	C	C
Approach Vol, veh/h					355			2474			1402	
Approach Delay, s/veh					52.4			5.9			23.8	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	90.2		31.7	58.5		19.8						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	77.2		* 36	36.2		20.9						
Max Q Clear Time (g_c+I1), s	2.0		26.1	24.8		14.1						
Green Ext Time (p_c), s	15.7		0.9	4.8		0.6						

Intersection Summary	
HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for 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)	370	500	30	50	250	990	30	1040	170	350	530	260
Future Volume (veh/h)	370	500	30	50	250	990	30	1040	170	350	530	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	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	394	532	32	53	266	947	32	1106	181	372	564	277
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	711	43	117	318	1007	71	1312	214	659	1597	878
Arrive On Green	0.10	0.21	0.21	0.02	0.06	0.06	0.04	0.30	0.30	0.06	0.15	0.15
Sat Flow, veh/h	3456	3404	204	1781	1870	2790	1781	4398	719	3456	3554	1585
Grp Volume(v), veh/h	394	277	287	53	266	947	32	856	431	372	564	277
Grp Sat Flow(s),veh/h/ln	1728	1777	1831	1781	1870	1395	1781	1702	1713	1728	1777	1585
Q Serve(g_s), s	11.5	16.1	16.2	3.2	15.5	10.4	1.9	25.9	26.0	11.5	15.7	14.1
Cycle Q Clear(g_c), s	11.5	16.1	16.2	3.2	15.5	10.4	1.9	25.9	26.0	11.5	15.7	14.1
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	361	371	383	117	318	1007	71	1015	511	659	1597	878
V/C Ratio(X)	1.09	0.75	0.75	0.45	0.84	0.94	0.45	0.84	0.84	0.56	0.35	0.32
Avail Cap(c_a), veh/h	361	371	383	186	332	1027	219	1099	553	659	1597	878
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.47	0.47	0.47	0.34	0.34	0.34	0.70	0.70	0.70
Uniform Delay (d), s/veh	49.3	40.8	40.8	51.9	50.4	17.0	51.6	36.2	36.2	47.1	32.5	21.8
Incr Delay (d2), s/veh	73.9	8.0	8.0	1.3	8.4	8.8	1.5	3.1	6.0	0.8	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	7.8	8.1	1.5	8.5	8.3	0.9	10.6	11.1	5.3	7.5	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.1	48.8	48.8	53.2	58.8	25.8	53.2	39.3	42.2	47.9	32.9	22.4
LnGrp LOS	F	D	D	D	E	C	D	D	D	D	C	C
Approach Vol, veh/h		958			1266			1319			1213	
Approach Delay, s/veh		79.4			33.9			40.6			35.1	
Approach LOS		E			C			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.5	39.3	13.7	29.5	10.9	55.9	18.0	25.2
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	17.5	35.5	11.5	19.5	13.5	39.5	11.5	19.5
Max Q Clear Time (g_c+I1), s	13.5	28.0	5.2	18.2	3.9	17.7	13.5	17.5
Green Ext Time (p_c), s	0.5	4.4	0.0	0.5	0.0	4.4	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	45.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	400	190	100	510	15	270	160	60	310	290	460
Future Volume (veh/h)	470	400	190	100	510	15	270	160	60	310	290	460
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	475	404	192	101	515	15	218	240	61	313	293	432
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	534	856	564	170	927	27	209	219	186	622	238	351
Arrive On Green	0.15	0.24	0.24	0.10	0.18	0.18	0.12	0.12	0.12	0.35	0.35	0.35
Sat Flow, veh/h	3456	3554	1569	1781	5100	148	1781	1870	1585	1781	683	1007
Grp Volume(v), veh/h	475	404	192	101	343	187	218	240	61	313	0	725
Grp Sat Flow(s),veh/h/ln	1728	1777	1569	1781	1702	1843	1781	1870	1585	1781	0	1689
Q Serve(g_s), s	14.8	10.7	9.8	6.0	10.1	10.2	12.9	12.9	3.9	15.3	0.0	38.4
Cycle Q Clear(g_c), s	14.8	10.7	9.8	6.0	10.1	10.2	12.9	12.9	3.9	15.3	0.0	38.4
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	534	856	564	170	619	335	209	219	186	622	0	590
V/C Ratio(X)	0.89	0.47	0.34	0.59	0.55	0.56	1.04	1.09	0.33	0.50	0.00	1.23
Avail Cap(c_a), veh/h	556	856	564	180	619	335	209	219	186	622	0	590
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.6	35.8	25.8	47.7	41.0	41.0	48.5	48.5	44.6	28.3	0.0	35.8
Incr Delay (d2), s/veh	11.1	1.2	1.1	3.0	3.6	6.6	74.2	88.2	0.4	0.3	0.0	117.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	4.8	4.6	2.8	4.5	5.2	10.0	11.4	1.5	6.5	0.0	34.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.6	37.0	26.9	50.7	44.5	47.5	122.7	136.7	45.0	28.5	0.0	153.4
LnGrp LOS	E	D	C	D	D	D	F	F	D	C	A	F
Approach Vol, veh/h		1071			631			519			1038	
Approach Delay, s/veh		43.9			46.4			120.1			115.8	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.2	33.3		43.5	21.7	26.8		18.0
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1
Max Green Setting (Gmax), s	* 11	25.9		38.4	* 18	19.3		12.9
Max Q Clear Time (g_c+I1), s	10.0	12.7		40.4	16.8	12.2		14.9
Green Ext Time (p_c), s	0.0	1.8		0.0	0.2	1.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	79.4
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

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

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	130	30	60	90	20	20	200	80	15	80	15
Future Vol, veh/h	30	130	30	60	90	20	20	200	80	15	80	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	144	33	67	100	22	22	222	89	17	89	17
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.2	11.4	11.7	10.2
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	19%	0%	40%	0%	16%	0%
Vol Thru, %	91%	0%	81%	0%	60%	0%	84%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	220	80	160	30	150	20	95	15
LT Vol	20	0	30	0	60	0	15	0
Through Vol	200	0	130	0	90	0	80	0
RT Vol	0	80	0	30	0	20	0	15
Lane Flow Rate	244	89	178	33	167	22	106	17
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.406	0.129	0.308	0.05	0.295	0.034	0.185	0.026
Departure Headway (Hd)	5.982	5.228	6.232	5.428	6.367	5.455	6.325	5.534
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	601	685	576	659	565	656	567	645
Service Time	3.719	2.965	3.971	3.166	4.107	3.194	4.071	3.28
HCM Lane V/C Ratio	0.406	0.13	0.309	0.05	0.296	0.034	0.187	0.026
HCM Control Delay	12.8	8.7	11.7	8.5	11.8	8.4	10.5	8.4
HCM Lane LOS	B	A	B	A	B	A	B	A
HCM 95th-tile Q	2	0.4	1.3	0.2	1.2	0.1	0.7	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	50	40	130	50	220	35	930	80	200	480	90
Future Volume (veh/h)	130	50	40	130	50	220	35	930	80	200	480	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	143	55	44	143	55	242	38	1022	88	220	527	99
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	174	399	337	173	64	282	70	1061	471	252	1197	224
Arrive On Green	0.10	0.21	0.21	0.10	0.21	0.21	0.04	0.30	0.30	0.14	0.40	0.40
Sat Flow, veh/h	1781	1870	1583	1781	302	1327	1781	3554	1577	1781	2988	559
Grp Volume(v), veh/h	143	55	44	143	0	297	38	1022	88	220	313	313
Grp Sat Flow(s),veh/h/ln	1781	1870	1583	1781	0	1629	1781	1777	1577	1781	1777	1770
Q Serve(g_s), s	7.7	2.3	2.2	7.7	0.0	17.2	2.1	27.8	4.1	11.9	12.6	12.7
Cycle Q Clear(g_c), s	7.7	2.3	2.2	7.7	0.0	17.2	2.1	27.8	4.1	11.9	12.6	12.7
Prop In Lane	1.00		1.00	1.00		0.81	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	174	399	337	173	0	347	70	1061	471	252	712	709
V/C Ratio(X)	0.82	0.14	0.13	0.83	0.00	0.86	0.54	0.96	0.19	0.87	0.44	0.44
Avail Cap(c_a), veh/h	196	610	516	178	0	515	114	1061	471	261	712	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.4	31.3	31.2	43.5	0.0	37.2	46.3	33.9	25.6	41.3	21.4	21.4
Incr Delay (d2), s/veh	21.8	0.2	0.2	25.7	0.0	9.2	6.3	19.3	0.2	25.6	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	1.1	0.8	4.6	0.0	7.5	1.0	14.0	1.5	6.8	4.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	31.5	31.4	69.2	0.0	46.3	52.6	53.2	25.7	66.9	21.8	21.9
LnGrp LOS	E	C	C	E	A	D	D	D	C	E	C	C
Approach Vol, veh/h		242			440			1148			846	
Approach Delay, s/veh		51.4			53.8			51.0			33.5	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.4	35.3	15.5	26.9	10.4	45.3	15.6	26.9
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.4	29.3	9.8	32.0	6.3	37.4	10.8	31.0
Max Q Clear Time (g_c+I1), s	13.9	29.8	9.7	4.3	4.1	14.7	9.7	19.2
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	3.5	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	510	70	230	150	80	105	1220	360	90	870	150
Future Volume (veh/h)	370	510	70	230	150	80	105	1220	360	90	870	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	385	531	73	240	156	83	109	1271	375	94	906	156
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	408	876	120	299	319	159	128	1348	592	99	1099	189
Arrive On Green	0.23	0.28	0.28	0.09	0.14	0.14	0.07	0.38	0.38	0.06	0.36	0.36
Sat Flow, veh/h	1781	3135	429	3456	2265	1134	1781	3554	1560	1781	3025	521
Grp Volume(v), veh/h	385	300	304	240	120	119	109	1271	375	94	532	530
Grp Sat Flow(s),veh/h/ln	1781	1777	1788	1728	1777	1622	1781	1777	1560	1781	1777	1769
Q Serve(g_s), s	26.7	18.4	18.5	8.6	7.8	8.5	7.6	43.4	24.7	6.6	34.2	34.2
Cycle Q Clear(g_c), s	26.7	18.4	18.5	8.6	7.8	8.5	7.6	43.4	24.7	6.6	34.2	34.2
Prop In Lane	1.00		0.24	1.00		0.70	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	408	497	500	299	250	228	128	1348	592	99	646	643
V/C Ratio(X)	0.94	0.60	0.61	0.80	0.48	0.52	0.85	0.94	0.63	0.95	0.82	0.82
Avail Cap(c_a), veh/h	410	656	660	415	466	426	128	1363	598	99	646	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.7	39.2	39.3	56.3	49.8	50.1	57.7	37.7	31.9	59.2	36.4	36.4
Incr Delay (d2), s/veh	30.6	1.2	1.2	7.6	1.4	1.8	39.8	13.1	2.2	73.3	8.6	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.3	8.2	8.3	4.1	3.6	3.6	4.8	21.0	9.6	5.0	16.2	16.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.3	40.4	40.5	63.9	51.2	51.9	97.5	50.8	34.0	132.5	44.9	45.0
LnGrp LOS	E	D	D	E	D	D	F	D	C	F	D	D
Approach Vol, veh/h		989			479			1755			1156	
Approach Delay, s/veh		55.2			57.8			50.1			52.1	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	53.7	17.4	41.6	15.0	51.7	34.9	24.2
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	7.0	* 48	15.1	46.4	9.0	* 45	28.9	33.0
Max Q Clear Time (g_c+I1), s	9.6	45.4	10.6	20.5	9.6	36.2	28.7	10.5
Green Ext Time (p_c), s	0.0	2.2	0.3	3.9	0.0	4.3	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	52.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Intersection Delay, s/veh	91.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	220	660	50	30	290	20	40	60	35	20	40	100
Future Vol, veh/h	220	660	50	30	290	20	40	60	35	20	40	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	232	695	53	32	305	21	42	63	37	21	42	105
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	140.5	23.7	14.4	13.6
HCM LOS	F	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	40%	0%	100%	0%	0%	100%	0%	0%	33%	0%
Vol Thru, %	60%	0%	0%	100%	0%	0%	100%	0%	67%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	35	220	660	50	30	290	20	60	100
LT Vol	40	0	220	0	0	30	0	0	20	0
Through Vol	60	0	0	660	0	0	290	0	40	0
RT Vol	0	35	0	0	50	0	0	20	0	100
Lane Flow Rate	105	37	232	695	53	32	305	21	63	105
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.257	0.081	0.483	1.351	0.092	0.073	0.659	0.041	0.152	0.229
Departure Headway (Hd)	9.37	8.455	7.509	7.001	6.288	8.856	8.344	7.628	9.265	8.385
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	385	426	477	521	565	407	437	472	390	431
Service Time	7.07	6.155	5.305	4.795	4.082	6.556	6.044	5.328	6.965	6.085
HCM Lane V/C Ratio	0.273	0.087	0.486	1.334	0.094	0.079	0.698	0.044	0.162	0.244
HCM Control Delay	15.3	11.9	17.2	191.5	9.7	12.3	25.8	10.7	13.6	13.6
HCM Lane LOS	C	B	C	F	A	B	D	B	B	B
HCM 95th-tile Q	1	0.3	2.6	30.6	0.3	0.2	4.6	0.1	0.5	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	270	410	90	35	150	90	70	710	30	55	560	170
Future Volume (veh/h)	270	410	90	35	150	90	70	710	30	55	560	170
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	290	441	97	38	161	84	75	763	32	59	602	183
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	243	666	296	100	246	122	96	1679	70	81	1272	386
Arrive On Green	0.14	0.19	0.19	0.06	0.11	0.11	0.05	0.48	0.48	0.05	0.48	0.48
Sat Flow, veh/h	1781	3554	1580	1781	2294	1137	1781	3473	146	1781	2676	812
Grp Volume(v), veh/h	290	441	97	38	123	122	75	390	405	59	399	386
Grp Sat Flow(s),veh/h/ln	1781	1777	1580	1781	1777	1654	1781	1777	1842	1781	1777	1711
Q Serve(g_s), s	15.0	12.7	5.8	2.3	7.3	7.8	4.6	16.0	16.0	3.6	16.7	16.8
Cycle Q Clear(g_c), s	15.0	12.7	5.8	2.3	7.3	7.8	4.6	16.0	16.0	3.6	16.7	16.8
Prop In Lane	1.00		1.00	1.00		0.69	1.00		0.08	1.00		0.47
Lane Grp Cap(c), veh/h	243	666	296	100	191	178	96	859	890	81	845	813
V/C Ratio(X)	1.19	0.66	0.33	0.38	0.64	0.69	0.78	0.45	0.45	0.73	0.47	0.47
Avail Cap(c_a), veh/h	243	1066	474	146	436	406	97	859	890	97	845	813
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	0.92	0.92	0.92
Uniform Delay (d), s/veh	47.5	41.5	38.7	50.1	47.1	47.3	51.4	18.8	18.8	51.8	19.5	19.5
Incr Delay (d2), s/veh	120.3	1.1	0.6	2.4	3.6	4.7	32.7	1.7	1.7	18.2	1.7	1.8
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	14.7	5.6	2.3	1.1	3.4	3.4	2.9	6.5	6.8	2.0	6.8	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	167.8	42.6	39.3	52.4	50.7	52.0	84.2	20.5	20.5	70.0	21.3	21.4
LnGrp LOS	F	D	D	D	D	D	F	C	C	E	C	C
Approach Vol, veh/h		828			283			870			844	
Approach Delay, s/veh		86.1			51.5			26.0			24.7	
Approach LOS		F			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	59.7	12.2	26.6	12.4	58.8	21.0	17.8
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	37.0	9.0	33.0	6.0	37.0	15.0	27.0
Max Q Clear Time (g_c+I1), s	5.6	18.0	4.3	14.7	6.6	18.8	17.0	9.8
Green Ext Time (p_c), s	0.0	4.3	0.0	3.1	0.0	4.3	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	1920	55	40	1910	50	20	10	40	60	10	25
Future Volume (veh/h)	60	1920	55	40	1910	50	20	10	40	60	10	25
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		1.00
Parking Bus, Adj	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	61	1939	56	40	1929	51	20	10	40	61	10	25
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	2215	64	52	2155	57	46	14	305	51	5	304
Arrive On Green	0.05	0.63	0.63	0.03	0.61	0.61	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3525	101	1781	3535	93	0	75	1585	0	25	1580
Grp Volume(v), veh/h	61	972	1023	40	965	1015	30	0	40	71	0	25
Grp Sat Flow(s),veh/h/ln	1781	1777	1850	1781	1777	1851	75	0	1585	25	0	1580
Q Serve(g_s), s	4.4	58.3	59.8	2.9	60.2	61.7	0.0	0.0	2.7	0.0	0.0	1.7
Cycle Q Clear(g_c), s	4.4	58.3	59.8	2.9	60.2	61.7	25.0	0.0	2.7	25.0	0.0	1.7
Prop In Lane	1.00		0.05	1.00		0.05	0.67		1.00	0.86		1.00
Lane Grp Cap(c), veh/h	85	1116	1162	52	1084	1129	61	0	305	56	0	304
V/C Ratio(X)	0.71	0.87	0.88	0.76	0.89	0.90	0.50	0.00	0.13	1.26	0.00	0.08
Avail Cap(c_a), veh/h	116	1116	1162	69	1084	1129	61	0	305	56	0	304
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	0.10	0.10	0.10	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.0	19.8	20.1	62.6	21.7	21.9	53.3	0.0	43.5	62.9	0.0	43.1
Incr Delay (d2), s/veh	12.2	9.3	9.7	3.7	1.3	1.4	6.1	0.0	0.2	206.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	24.1	25.7	1.3	22.6	24.2	1.1	0.0	1.1	5.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.2	29.2	29.8	66.4	23.0	23.3	59.4	0.0	43.7	269.5	0.0	43.2
LnGrp LOS	E	C	C	E	C	C	E	A	D	F	A	D
Approach Vol, veh/h		2056			2020			70			96	
Approach Delay, s/veh		30.8			24.0			50.4			210.6	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.3	88.2		31.5	12.7	85.8		31.5
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	5.0	80.5		25.0	8.5	77.0		25.0
Max Q Clear Time (g_c+I1), s	4.9	61.8		27.0	6.4	63.7		27.0
Green Ext Time (p_c), s	0.0	13.5		0.0	0.0	10.3		0.0

Intersection Summary		
HCM 6th Ctrl Delay		31.9
HCM 6th LOS		C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	1550	40	110	1440	170	40	40	20	130	40	600
Future Volume (veh/h)	480	1550	40	110	1440	170	40	40	20	130	40	600
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		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	500	1615	42	115	1500	177	42	42	21	135	42	625
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	477	2369	61	137	1701	755	216	443	375	341	443	794
Arrive On Green	0.27	0.67	0.67	0.08	0.48	0.48	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3537	92	1781	3554	1578	769	1870	1585	1339	1870	1561
Grp Volume(v), veh/h	500	809	848	115	1500	177	42	42	21	135	42	625
Grp Sat Flow(s),veh/h/ln	1781	1777	1851	1781	1777	1578	769	1870	1585	1339	1870	1561
Q Serve(g_s), s	40.2	41.4	41.8	9.6	57.1	9.9	6.8	2.6	1.5	13.1	2.6	35.5
Cycle Q Clear(g_c), s	40.2	41.4	41.8	9.6	57.1	9.9	9.4	2.6	1.5	15.8	2.6	35.5
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	477	1190	1240	137	1701	755	216	443	375	341	443	794
V/C Ratio(X)	1.05	0.68	0.68	0.84	0.88	0.23	0.19	0.09	0.06	0.40	0.09	0.79
Avail Cap(c_a), veh/h	477	1190	1240	184	1701	755	216	443	375	341	443	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	15.0	15.1	68.3	35.3	23.0	48.4	44.7	44.3	50.9	44.7	30.7
Incr Delay (d2), s/veh	44.2	1.8	1.8	21.7	7.0	0.7	0.4	0.1	0.1	0.7	0.1	5.3
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	23.4	15.8	16.5	5.1	25.2	3.8	1.3	1.2	0.6	4.4	1.2	18.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.1	16.8	16.9	90.0	42.3	23.7	48.8	44.8	44.3	51.6	44.8	36.0
LnGrp LOS	F	B	B	F	D	C	D	D	D	D	D	D
Approach Vol, veh/h		2157			1792			105			802	
Approach Delay, s/veh		35.9			43.5			46.3			39.1	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	107.5		42.0	46.7	78.8		42.0
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	15.5	80.0		* 36	40.2	55.3		35.0
Max Q Clear Time (g_c+I1), s	11.6	43.8		37.5	42.2	59.1		11.4
Green Ext Time (p_c), s	0.1	15.3		0.0	0.0	0.0		0.4

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

APPENDIX H

NEAR-TERM QUEUEING ANALYSIS WORKSHEETS

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	392	376	155	1010	1588
v/c Ratio	1.02	0.93	0.77	0.31	0.65
Control Delay	89.4	65.3	67.4	7.6	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	89.4	65.3	67.4	7.6	19.5
Queue Length 50th (ft)	~270	221	103	85	254
Queue Length 95th (ft)	#470	#410	m#178	110	306
Internal Link Dist (ft)		267		584	420
Turn Bay Length (ft)			300		
Base Capacity (vph)	386	403	212	3310	2442
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.02	0.93	0.73	0.31	0.65

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	172	237	97	194	699	27	452	419	742	742
v/c Ratio	0.53	0.36	0.59	0.67	0.67	0.20	0.25	0.90	0.45	0.69
Control Delay	49.7	35.8	45.3	50.4	18.3	46.7	20.4	54.0	15.6	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	35.8	45.3	50.4	18.4	46.7	20.4	54.0	15.6	7.8
Queue Length 50th (ft)	54	69	54	127	108	17	61	141	122	87
Queue Length 95th (ft)	89	100	m57	m107	m82	43	97	m#193	m166	m113
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	326	784	168	400	1047	168	1785	463	1654	1074
Starvation Cap Reductn	0	0	0	0	24	0	0	0	0	9
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.30	0.58	0.48	0.68	0.16	0.25	0.90	0.45	0.70

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	400	158	158	32	216	93	96	16	95	926
v/c Ratio	0.72	0.14	0.20	0.16	0.20	0.51	0.50	0.05	0.18	1.61
Control Delay	66.7	19.9	4.1	42.7	33.2	52.3	51.8	0.3	27.1	309.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.7	19.9	4.1	42.7	33.2	52.3	51.8	0.3	27.1	309.1
Queue Length 50th (ft)	135	24	0	19	41	60	62	0	45	~811
Queue Length 95th (ft)	m152	m32	m11	48	65	113	116	0	85	#1052
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	631	1156	789	194	1077	184	191	352	529	574
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.63	0.14	0.20	0.16	0.20	0.51	0.50	0.05	0.18	1.61

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	42	16	11	21	58	21	453	32	105	821
v/c Ratio	0.14	0.03	0.02	0.06	0.15	0.08	0.24	0.04	0.33	0.36
Control Delay	33.4	19.4	0.1	33.9	13.0	36.2	20.2	0.1	32.5	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.4	19.4	0.1	33.9	13.0	36.2	20.2	0.1	32.5	14.6
Queue Length 50th (ft)	14	4	0	7	5	7	78	0	35	100
Queue Length 95th (ft)	59	22	0	36	36	37	180	0	119	322
Internal Link Dist (ft)		1369			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	358	1243	1099	358	1109	253	2139	999	443	2230
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.01	0.01	0.06	0.05	0.08	0.21	0.03	0.24	0.37

Intersection Summary

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	113	181	216	319	93	737	196	82	1402
v/c Ratio	0.86	0.32	0.91	0.59	0.56	0.41	0.22	0.55	0.85
Control Delay	103.9	22.7	95.1	44.9	66.0	21.7	4.0	66.5	34.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.9	22.7	95.1	44.9	66.0	21.7	4.0	66.5	34.4
Queue Length 50th (ft)	88	34	87	110	69	182	0	62	476
Queue Length 95th (ft)	#197	57	#161	132	#178	307	50	116	#754
Internal Link Dist (ft)		600		1370		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	131	964	237	963	165	1798	880	167	1644
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.19	0.91	0.33	0.56	0.41	0.22	0.49	0.85

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	118	151	43	11	248	75	376	65	785
v/c Ratio	0.84	0.17	0.08	0.07	0.48	0.50	0.23	0.46	0.47
Control Delay	88.9	29.3	0.3	42.9	35.6	56.3	17.9	55.6	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.9	29.3	0.3	42.9	35.6	56.3	17.9	55.6	15.2
Queue Length 50th (ft)	76	39	0	7	68	46	71	40	121
Queue Length 95th (ft)	#176	64	0	24	87	#121	130	#104	219
Internal Link Dist (ft)		1365			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	141	956	549	159	983	151	1656	141	1656
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.16	0.08	0.07	0.25	0.50	0.23	0.46	0.47

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	26	1479	21	2105	20	21	47	16
v/c Ratio	0.27	0.55	0.27	0.79	0.11	0.08	0.30	0.06
Control Delay	65.8	11.1	69.3	18.6	48.1	0.6	53.9	0.5
Queue Delay	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	65.8	11.1	69.3	19.1	48.1	0.6	53.9	0.5
Queue Length 50th (ft)	21	281	17	581	16	0	39	0
Queue Length 95th (ft)	53	483	47	#1100	38	0	70	0
Internal Link Dist (ft)		728		868	295		780	
Turn Bay Length (ft)	240		250					
Base Capacity (vph)	99	2678	78	2651	304	373	263	368
Starvation Cap Reductn	0	0	0	200	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.55	0.27	0.86	0.07	0.06	0.18	0.04

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	347	1225	71	1643	112	31	31	20	71	41	446
v/c Ratio	0.83	0.52	0.62	0.93	0.13	0.17	0.12	0.06	0.37	0.16	0.74
Control Delay	71.9	15.5	91.5	46.4	3.5	53.6	52.2	0.4	60.2	53.0	43.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	71.9	15.5	91.5	46.4	3.5	53.6	52.2	0.4	60.2	53.0	43.2
Queue Length 50th (ft)	311	256	68	743	0	29	29	0	68	38	343
Queue Length 95th (ft)	#578	472	#132	#1036	31	54	53	0	104	66	422
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	417	2353	123	1759	833	317	434	456	324	440	602
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.52	0.58	0.93	0.13	0.10	0.07	0.04	0.22	0.09	0.74

Intersection Summary

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

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	157	198	412	2062	1402
v/c Ratio	0.62	0.81	0.85	0.55	0.67
Control Delay	54.0	64.2	47.7	4.6	27.2
Queue Delay	0.0	0.0	0.0	0.1	0.0
Total Delay	54.0	64.2	47.7	4.7	27.2
Queue Length 50th (ft)	109	129	278	127	273
Queue Length 95th (ft)	176	208	m284	m206	378
Internal Link Dist (ft)		140		584	143
Turn Bay Length (ft)			300		
Base Capacity (vph)	319	305	584	3770	2107
Starvation Cap Reductn	0	0	0	434	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.49	0.65	0.71	0.62	0.67

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	394	564	53	266	1053	32	1287	372	564	277
v/c Ratio	1.10	0.75	0.34	0.85	0.99	0.25	0.81	0.62	0.34	0.25
Control Delay	123.4	48.5	40.6	57.3	43.6	52.7	38.6	34.2	9.8	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Total Delay	123.4	48.5	40.6	57.3	44.4	52.7	38.6	34.2	9.8	0.5
Queue Length 50th (ft)	~162	199	26	185	~194	22	295	136	52	0
Queue Length 95th (ft)	#260	#306	m33	m216	m#216	53	353	171	53	0
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	358	750	185	330	1065	217	1620	601	1654	1101
Starvation Cap Reductn	0	0	0	0	4	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.75	0.29	0.81	0.99	0.15	0.79	0.62	0.34	0.25

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	475	404	192	101	530	213	222	61	313	758
v/c Ratio	0.88	0.56	0.29	0.57	0.71	1.08	1.09	0.18	0.47	1.10
Control Delay	70.2	39.6	8.2	60.5	49.7	133.9	134.7	1.1	29.2	94.0
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	2.0
Total Delay	70.2	39.6	8.2	60.5	49.8	133.9	134.7	1.1	29.2	95.9
Queue Length 50th (ft)	186	106	39	69	131	~177	~185	0	164	~570
Queue Length 95th (ft)	m#262	m155	m73	126	166	#335	#346	0	260	#842
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	552	833	651	178	890	197	204	345	672	692
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	16	0	0	0	0	12
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.48	0.29	0.57	0.61	1.08	1.09	0.18	0.47	1.11

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	143	55	44	143	297	38	1022	88	220	626
v/c Ratio	0.71	0.19	0.10	0.60	0.72	0.32	0.91	0.14	0.80	0.39
Control Delay	62.5	33.8	0.5	53.7	22.8	52.2	44.9	0.5	62.0	19.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.5	33.8	0.5	53.7	22.8	52.2	44.9	0.5	62.0	19.5
Queue Length 50th (ft)	80	28	0	81	52	21	289	0	122	126
Queue Length 95th (ft)	#211	60	0	#223	133	61	#557	0	#307	236
Internal Link Dist (ft)		1369			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	206	645	683	240	676	120	1122	637	275	1615
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.09	0.06	0.60	0.44	0.32	0.91	0.14	0.80	0.39

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	385	604	240	239	109	1271	375	94	1062
v/c Ratio	0.92	0.69	0.66	0.51	0.84	0.91	0.49	0.93	0.84
Control Delay	75.0	45.1	62.7	39.1	102.3	46.7	12.8	131.3	43.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.0	45.1	62.7	39.1	102.3	46.7	12.8	131.3	43.4
Queue Length 50th (ft)	286	225	91	67	84	467	65	73	376
Queue Length 95th (ft)	#588	290	156	107	#225	#797	194	#215	#641
Internal Link Dist (ft)		600		234		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	418	1321	424	945	130	1395	758	101	1262
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.46	0.57	0.25	0.84	0.91	0.49	0.93	0.84

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	290	441	97	38	258	75	795	59	785
v/c Ratio	0.75	0.40	0.16	0.26	0.53	0.51	0.59	0.46	0.65
Control Delay	55.4	32.6	1.1	52.4	30.7	61.6	30.0	61.2	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.4	32.6	1.1	52.4	30.7	61.6	30.0	61.2	31.5
Queue Length 50th (ft)	192	143	0	26	57	51	236	40	229
Queue Length 95th (ft)	#419	177	6	60	83	#135	319	#103	305
Internal Link Dist (ft)		1365			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	386	1201	634	144	888	147	1351	128	1217
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.37	0.15	0.26	0.29	0.51	0.59	0.46	0.65

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	61	1995	40	1980	30	40	71	25
v/c Ratio	0.50	0.77	0.40	0.77	0.20	0.16	0.49	0.10
Control Delay	72.4	17.1	71.3	18.4	53.0	1.4	64.1	0.9
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay	72.4	17.1	71.3	18.7	53.0	1.4	64.1	0.9
Queue Length 50th (ft)	50	573	33	583	24	0	58	0
Queue Length 95th (ft)	#100	869	#91	#1000	50	1	99	0
Internal Link Dist (ft)		728		868	295		780	
Turn Bay Length (ft)	240		250					
Base Capacity (vph)	127	2602	99	2562	270	372	263	367
Starvation Cap Reductn	0	0	0	175	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.77	0.40	0.83	0.11	0.11	0.27	0.07

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	500	1657	115	1500	177	42	42	21	135	42	625
v/c Ratio	0.87	0.76	0.72	1.09	0.25	0.20	0.14	0.06	0.62	0.14	0.81
Control Delay	64.3	25.4	90.4	96.7	5.0	52.8	51.1	0.3	69.1	50.6	38.5
Queue Delay	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.3	26.3	90.4	96.7	5.0	52.8	51.1	0.3	69.1	50.6	38.5
Queue Length 50th (ft)	432	550	110	~894	0	37	37	0	129	37	433
Queue Length 95th (ft)	#760	847	180	#1044	51	69	67	0	183	67	584
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	575	2193	182	1372	707	317	434	461	321	440	772
Starvation Cap Reductn	0	255	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.86	0.63	1.09	0.25	0.13	0.10	0.05	0.42	0.10	0.81

Intersection Summary

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

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

APPENDIX I

NEAR-TERM + PROJECT ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	566	5	180	185	997	0	0	1224	320
Future Volume (veh/h)	0	0	0	566	5	180	185	997	0	0	1224	320
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		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				388	280	186	191	1028	0	0	1262	330
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				410	241	160	214	3324	0	0	1939	507
Arrive On Green				0.23	0.23	0.23	0.24	1.00	0.00	0.00	0.48	0.48
Sat Flow, veh/h				1781	1048	696	1781	5274	0	0	4174	1047
Grp Volume(v), veh/h				388	0	466	191	1028	0	0	1072	520
Grp Sat Flow(s),veh/h/ln				1781	0	1745	1781	1702	0	0	1702	1649
Q Serve(g_s), s				21.4	0.0	23.0	10.4	0.0	0.0	0.0	23.7	23.8
Cycle Q Clear(g_c), s				21.4	0.0	23.0	10.4	0.0	0.0	0.0	23.7	23.8
Prop In Lane				1.00		0.40	1.00		0.00	0.00		0.63
Lane Grp Cap(c), veh/h				410	0	401	214	3324	0	0	1648	798
V/C Ratio(X)				0.95	0.00	1.16	0.89	0.31	0.00	0.00	0.65	0.65
Avail Cap(c_a), veh/h				410	0	401	214	3324	0	0	1648	798
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.84	0.84	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				37.9	0.0	38.5	37.4	0.0	0.0	0.0	19.4	19.4
Incr Delay (d2), s/veh				30.9	0.0	96.7	30.3	0.2	0.0	0.0	2.0	4.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				12.7	0.0	20.4	5.6	0.1	0.0	0.0	8.9	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				68.8	0.0	135.2	67.7	0.2	0.0	0.0	21.4	23.6
LnGrp LOS				E	A	F	E	A	A	A	C	C
Approach Vol, veh/h					854			1219			1592	
Approach Delay, s/veh					105.0			10.8			22.1	
Approach LOS					F			B			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	71.9		16.7	55.2		28.1						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	65.1		* 12	48.4		23.0						
Max Q Clear Time (g_c+I1), s	2.0		12.4	25.8		25.0						
Green Ext Time (p_c), s	4.9		0.0	7.5		0.0						

Intersection Summary	
HCM 6th Ctrl Delay	37.7
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for 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)	160	200	20	99	180	650	25	382	116	390	700	690
Future Volume (veh/h)	160	200	20	99	180	650	25	382	116	390	700	690
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		1.00	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	172	215	22	106	194	699	27	411	125	419	753	742
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	308	507	51	152	284	992	66	1157	338	704	1641	855
Arrive On Green	0.09	0.16	0.16	0.03	0.05	0.05	0.04	0.29	0.29	0.07	0.15	0.15
Sat Flow, veh/h	3456	3248	328	1781	1870	2790	1781	3920	1146	3456	3554	1545
Grp Volume(v), veh/h	172	116	121	106	194	699	27	355	181	419	753	742
Grp Sat Flow(s),veh/h/ln	1728	1777	1800	1781	1870	1395	1781	1702	1663	1728	1777	1545
Q Serve(g_s), s	4.8	5.9	6.1	5.9	10.2	4.7	1.5	8.2	8.6	11.8	19.3	40.4
Cycle Q Clear(g_c), s	4.8	5.9	6.1	5.9	10.2	4.7	1.5	8.2	8.6	11.8	19.3	40.4
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.69	1.00		1.00
Lane Grp Cap(c), veh/h	308	277	281	152	284	992	66	1004	490	704	1641	855
V/C Ratio(X)	0.56	0.42	0.43	0.70	0.68	0.70	0.41	0.35	0.37	0.60	0.46	0.87
Avail Cap(c_a), veh/h	328	382	387	169	402	1168	169	1004	490	704	1641	855
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.97	0.97	0.91	0.91	0.91	0.60	0.60	0.60
Uniform Delay (d), s/veh	43.6	38.1	38.2	47.3	45.1	11.8	47.1	27.7	27.9	42.6	31.0	30.1
Incr Delay (d2), s/veh	1.8	1.0	1.0	10.2	2.8	1.5	3.7	0.9	1.9	0.8	0.6	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.6	2.7	3.1	5.3	4.1	0.7	3.3	3.5	5.4	9.2	18.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.5	39.1	39.2	57.5	47.9	13.4	50.8	28.6	29.8	43.4	31.5	37.5
LnGrp LOS	D	D	D	E	D	B	D	C	C	D	C	D
Approach Vol, veh/h		409			999			563			1914	
Approach Delay, s/veh		41.8			24.8			30.1			36.5	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	36.0	15.0	22.1	10.2	52.7	15.4	21.7
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	13.5	29.5	9.5	21.5	9.5	33.5	9.5	21.5
Max Q Clear Time (g_c+I1), s	13.8	10.6	7.9	8.1	3.5	42.4	6.8	12.2
Green Ext Time (p_c), s	0.0	3.0	0.0	1.0	0.0	0.0	0.1	3.0

Intersection Summary	
HCM 6th Ctrl Delay	33.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	406	150	150	30	200	5	120	60	15	90	290	599
Future Volume (veh/h)	406	150	150	30	200	5	120	60	15	90	290	599
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	427	158	158	32	211	5	94	107	16	95	305	593
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	508	1100	661	115	1166	27	195	205	174	533	170	330
Arrive On Green	0.15	0.31	0.31	0.06	0.23	0.23	0.11	0.11	0.11	0.30	0.30	0.30
Sat Flow, veh/h	3456	3554	1575	1781	5132	121	1781	1870	1585	1781	568	1104
Grp Volume(v), veh/h	427	158	158	32	140	76	94	107	16	95	0	898
Grp Sat Flow(s),veh/h/ln	1728	1777	1575	1781	1702	1849	1781	1870	1585	1781	0	1672
Q Serve(g_s), s	12.0	3.2	6.5	1.7	3.3	3.3	5.0	5.4	0.9	3.9	0.0	29.9
Cycle Q Clear(g_c), s	12.0	3.2	6.5	1.7	3.3	3.3	5.0	5.4	0.9	3.9	0.0	29.9
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	508	1100	661	115	774	420	195	205	174	533	0	500
V/C Ratio(X)	0.84	0.14	0.24	0.28	0.18	0.18	0.48	0.52	0.09	0.18	0.00	1.80
Avail Cap(c_a), veh/h	636	1100	661	196	774	420	196	206	174	533	0	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.5	24.9	18.7	44.5	31.1	31.1	41.8	42.0	40.0	26.0	0.0	35.1
Incr Delay (d2), s/veh	5.1	0.2	0.5	0.5	0.5	1.0	0.7	1.1	0.1	0.1	0.0	366.4
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	5.4	1.4	3.0	0.8	1.4	1.6	2.2	2.5	0.4	1.7	0.0	62.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.6	25.1	19.3	45.0	31.6	32.1	42.5	43.1	40.1	26.0	0.0	401.5
LnGrp LOS	D	C	B	D	C	C	D	D	D	C	A	F
Approach Vol, veh/h		743			248			217			993	
Approach Delay, s/veh		36.2			33.5			42.7			365.6	
Approach LOS		D			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	37.7		35.0	19.4	29.5		16.1
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1
Max Green Setting (Gmax), s	* 11	26.4		29.9	* 18	19.0		11.0
Max Q Clear Time (g_c+I1), s	13.7	8.5		31.9	14.0	5.3		7.4
Green Ext Time (p_c), s	0.0	0.8		0.0	0.7	0.7		0.2

Intersection Summary		
HCM 6th Ctrl Delay	185.1	
HCM 6th LOS	F	

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	40	25	80	45	20	20	80	37	10	160	15
Future Vol, veh/h	10	40	25	80	45	20	20	80	37	10	160	15
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	46	29	92	52	23	23	92	43	11	184	17
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.8	10.1	9	10.3
HCM LOS	A	B	A	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	20%	0%	20%	0%	64%	0%	6%	0%
Vol Thru, %	80%	0%	80%	0%	36%	0%	94%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	37	50	25	125	20	170	15
LT Vol	20	0	10	0	80	0	10	0
Through Vol	80	0	40	0	45	0	160	0
RT Vol	0	37	0	25	0	20	0	15
Lane Flow Rate	115	43	57	29	144	23	195	17
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.178	0.056	0.093	0.04	0.236	0.031	0.295	0.022
Departure Headway (Hd)	5.561	4.755	5.798	4.99	5.903	4.875	5.426	4.692
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	641	747	613	710	605	728	659	757
Service Time	3.332	2.526	3.581	2.773	3.678	2.649	3.193	2.458
HCM Lane V/C Ratio	0.179	0.058	0.093	0.041	0.238	0.032	0.296	0.022
HCM Control Delay	9.5	7.8	9.2	8	10.5	7.8	10.5	7.6
HCM Lane LOS	A	A	A	A	B	A	B	A
HCM 95th-tile Q	0.6	0.2	0.3	0.1	0.9	0.1	1.2	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	15	62	20	15	40	33	442	30	100	703	96
Future Volume (veh/h)	106	15	62	20	15	40	33	442	30	100	703	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	16	65	21	16	42	35	465	32	105	740	101
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	177	343	290	70	56	147	79	997	442	148	1003	137
Arrive On Green	0.10	0.18	0.18	0.04	0.12	0.12	0.04	0.28	0.28	0.08	0.32	0.32
Sat Flow, veh/h	1781	1870	1582	1781	454	1192	1781	3554	1577	1781	3141	428
Grp Volume(v), veh/h	112	16	65	21	0	58	35	465	32	105	419	422
Grp Sat Flow(s),veh/h/ln	1781	1870	1582	1781	0	1646	1781	1777	1577	1781	1777	1792
Q Serve(g_s), s	3.6	0.4	2.1	0.7	0.0	1.9	1.1	6.4	0.9	3.4	12.4	12.4
Cycle Q Clear(g_c), s	3.6	0.4	2.1	0.7	0.0	1.9	1.1	6.4	0.9	3.4	12.4	12.4
Prop In Lane	1.00		1.00	1.00		0.72	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	177	343	290	70	0	203	79	997	442	148	567	572
V/C Ratio(X)	0.63	0.05	0.22	0.30	0.00	0.29	0.44	0.47	0.07	0.71	0.74	0.74
Avail Cap(c_a), veh/h	256	1010	855	256	0	889	180	1470	652	316	870	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.6	19.9	20.6	27.7	0.0	23.6	27.6	17.6	15.7	26.5	18.0	18.0
Incr Delay (d2), s/veh	3.7	0.1	0.4	2.3	0.0	0.8	3.9	0.3	0.1	6.1	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.2	0.7	0.3	0.0	0.7	0.5	2.3	0.3	1.5	4.5	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.3	20.0	21.0	30.0	0.0	24.4	31.5	18.0	15.7	32.5	19.8	19.8
LnGrp LOS	C	B	C	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		193			79			532			946	
Approach Delay, s/veh		25.7			25.9			18.7			21.3	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	22.6	8.3	16.9	9.1	24.9	11.9	13.3
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	10.5	24.5	8.5	32.0	6.0	29.0	8.5	32.0
Max Q Clear Time (g_c+I1), s	5.4	8.4	2.7	4.1	3.1	14.4	5.6	3.9
Green Ext Time (p_c), s	0.1	2.6	0.0	0.2	0.0	4.2	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	21.2
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	94	85	210	247	80	90	715	190	80	1090	270
Future Volume (veh/h)	110	94	85	210	247	80	90	715	190	80	1090	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	97	88	216	255	82	93	737	196	82	1124	278
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	132	254	208	239	362	114	104	1870	833	104	1486	364
Arrive On Green	0.07	0.14	0.14	0.07	0.14	0.14	0.06	0.53	0.53	0.06	0.53	0.53
Sat Flow, veh/h	1781	1847	1513	3456	2661	836	1781	3554	1582	1781	2823	692
Grp Volume(v), veh/h	113	93	92	216	168	169	93	737	196	82	704	698
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1728	1777	1720	1781	1777	1582	1781	1777	1738
Q Serve(g_s), s	7.5	5.7	6.4	7.4	10.8	11.3	6.2	14.9	8.0	5.5	37.3	38.1
Cycle Q Clear(g_c), s	7.5	5.7	6.4	7.4	10.8	11.3	6.2	14.9	8.0	5.5	37.3	38.1
Prop In Lane	1.00		0.96	1.00		0.49	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	132	245	218	239	242	234	104	1870	833	104	935	915
V/C Ratio(X)	0.86	0.38	0.42	0.90	0.70	0.72	0.90	0.39	0.24	0.79	0.75	0.76
Avail Cap(c_a), veh/h	132	492	438	239	489	473	104	1870	833	163	935	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	47.1	47.4	55.5	49.5	49.6	56.1	17.0	15.4	55.8	22.3	22.5
Incr Delay (d2), s/veh	39.0	1.0	1.3	33.7	3.6	4.1	56.3	0.6	0.7	12.5	5.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	2.6	2.6	4.4	5.1	5.1	4.4	6.2	3.0	2.8	16.5	16.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.9	48.0	48.7	89.2	53.0	53.8	112.4	17.6	16.0	68.2	27.9	28.5
LnGrp LOS	F	D	D	F	D	D	F	B	B	E	C	C
Approach Vol, veh/h		298			553			1026			1484	
Approach Delay, s/veh		65.6			67.4			25.9			30.4	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	69.2	14.8	23.0	13.0	69.2	15.0	22.8
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	7.0	* 43	8.3	33.2	7.0	* 47	8.9	33.0
Max Q Clear Time (g_c+I1), s	17.5	16.9	9.4	8.4	8.2	40.1	9.5	13.3
Green Ext Time (p_c), s	0.0	6.3	0.0	1.0	0.0	4.5	0.0	1.9

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

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Intersection Delay, s/veh	18.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	84	220	20	27	382	21	25	32	10	18	67	145
Future Vol, veh/h	84	220	20	27	382	21	25	32	10	18	67	145
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	90	237	22	29	411	23	27	34	11	19	72	156
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	14.4	26.8	11.9	12.1
HCM LOS	B	D	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	44%	0%	100%	0%	0%	100%	0%	0%	21%	0%
Vol Thru, %	56%	0%	0%	100%	0%	0%	100%	0%	79%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	10	84	220	20	27	382	21	85	145
LT Vol	25	0	84	0	0	27	0	0	18	0
Through Vol	32	0	0	220	0	0	382	0	67	0
RT Vol	0	10	0	0	20	0	0	21	0	145
Lane Flow Rate	61	11	90	237	22	29	411	23	91	156
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.139	0.022	0.189	0.462	0.038	0.059	0.773	0.038	0.191	0.291
Departure Headway (Hd)	8.145	7.216	7.546	7.037	6.325	7.285	6.777	6.066	7.523	6.713
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	440	495	475	511	565	495	538	594	477	535
Service Time	5.9	4.971	5.293	4.784	4.072	4.985	4.477	3.766	5.271	4.46
HCM Lane V/C Ratio	0.139	0.022	0.189	0.464	0.039	0.059	0.764	0.039	0.191	0.292
HCM Control Delay	12.2	10.1	12.1	15.7	9.3	10.4	28.9	9	12	12.2
HCM Lane LOS	B	B	B	C	A	B	D	A	B	B
HCM 95th-tile Q	0.5	0.1	0.7	2.4	0.1	0.2	7	0.1	0.7	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	145	52	10	182	53	73	330	30	72	430	343
Future Volume (veh/h)	122	145	52	10	182	53	73	330	30	72	430	343
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	156	56	11	196	57	78	355	32	77	462	369
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	143	571	254	42	285	81	100	1681	151	99	947	754
Arrive On Green	0.08	0.16	0.16	0.02	0.10	0.10	0.06	0.51	0.51	0.06	0.51	0.51
Sat Flow, veh/h	1781	3554	1582	1781	2734	774	1781	3294	295	1781	1858	1479
Grp Volume(v), veh/h	131	156	56	11	126	127	78	190	197	77	442	389
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1731	1781	1777	1812	1781	1777	1561
Q Serve(g_s), s	7.3	3.9	3.1	0.6	6.8	7.1	4.3	5.9	6.0	4.3	16.2	16.3
Cycle Q Clear(g_c), s	7.3	3.9	3.1	0.6	6.8	7.1	4.3	5.9	6.0	4.3	16.2	16.3
Prop In Lane	1.00		1.00	1.00		0.45	1.00		0.16	1.00		0.95
Lane Grp Cap(c), veh/h	143	571	254	42	185	181	100	907	925	99	906	795
V/C Ratio(X)	0.92	0.27	0.22	0.26	0.68	0.71	0.78	0.21	0.21	0.78	0.49	0.49
Avail Cap(c_a), veh/h	143	959	427	160	498	485	107	907	925	107	906	795
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	0.86	0.86	0.86
Uniform Delay (d), s/veh	45.7	36.8	36.5	48.0	43.2	43.3	46.6	13.4	13.4	46.6	16.0	16.0
Incr Delay (d2), s/veh	51.8	0.3	0.4	3.2	4.3	5.0	28.9	0.5	0.5	25.2	1.6	1.9
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	5.3	1.7	1.2	0.3	3.2	3.3	2.6	2.3	2.4	2.5	6.3	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.5	37.1	36.9	51.2	47.4	48.3	75.5	14.0	14.0	71.8	17.6	17.9
LnGrp LOS	F	D	D	D	D	D	E	B	B	E	B	B
Approach Vol, veh/h		343			264			465			908	
Approach Delay, s/veh		60.1			48.0			24.3			22.3	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	57.5	8.4	22.1	12.1	57.5	14.0	16.4
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	33.0	9.0	27.0	6.0	33.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	16.3	8.0	2.6	5.9	6.3	18.3	9.3	9.1
Green Ext Time (p_c), s	0.0	2.0	0.0	1.1	0.0	4.4	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	32.8
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	1394	30	20	1997	40	10	10	20	40	5	24
Future Volume (veh/h)	27	1394	30	20	1997	40	10	10	20	40	5	24
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		1.00
Parking Bus, Adj	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	28	1452	31	21	2080	42	10	10	21	42	5	25
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	2263	48	36	2217	45	42	29	306	53	3	305
Arrive On Green	0.03	0.64	0.64	0.02	0.62	0.62	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3556	76	1781	3561	72	0	149	1585	0	18	1580
Grp Volume(v), veh/h	28	725	758	21	1034	1088	20	0	21	47	0	25
Grp Sat Flow(s),veh/h/ln	1781	1777	1855	1781	1777	1855	149	0	1585	18	0	1580
Q Serve(g_s), s	2.0	32.6	32.7	1.5	68.2	69.6	0.0	0.0	1.4	0.0	0.0	1.7
Cycle Q Clear(g_c), s	2.0	32.6	32.7	1.5	68.2	69.6	25.1	0.0	1.4	25.1	0.0	1.7
Prop In Lane	1.00		0.04	1.00		0.04	0.50		1.00	0.89		1.00
Lane Grp Cap(c), veh/h	61	1131	1180	36	1106	1155	70	0	306	56	0	305
V/C Ratio(X)	0.46	0.64	0.64	0.58	0.93	0.94	0.28	0.00	0.07	0.84	0.00	0.08
Avail Cap(c_a), veh/h	100	1131	1180	69	1106	1155	70	0	306	56	0	305
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	0.32	0.32	0.32	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.6	14.5	14.5	63.1	22.1	22.4	44.8	0.0	42.9	63.2	0.0	43.0
Incr Delay (d2), s/veh	5.3	2.8	2.7	4.5	6.1	6.5	2.2	0.0	0.1	66.0	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	12.6	13.2	0.7	26.8	28.6	0.6	0.0	0.6	2.6	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.9	17.3	17.2	67.7	28.3	28.9	47.0	0.0	43.0	129.2	0.0	43.1
LnGrp LOS	E	B	B	E	C	C	D	A	D	F	A	D
Approach Vol, veh/h		1511			2143			41			72	
Approach Delay, s/veh		18.2			29.0			45.0			99.3	
Approach LOS		B			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.2	89.2		31.6	11.0	87.4		31.6
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	5.6	80.4		25.1	7.3	78.1		25.1
Max Q Clear Time (g_c+I1), s	3.5	34.7		27.1	4.0	71.6		27.1
Green Ext Time (p_c), s	0.0	13.4		0.0	0.0	5.7		0.0

Intersection Summary	
HCM 6th Ctrl Delay	26.2
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	344	1160	40	70	1610	119	30	30	20	105	40	437
Future Volume (veh/h)	344	1160	40	70	1610	119	30	30	20	105	40	437
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	351	1184	41	71	1643	121	31	31	20	107	41	446
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	327	2441	84	89	2002	891	247	443	370	351	443	665
Arrive On Green	0.18	0.70	0.70	0.05	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3504	121	1781	3554	1582	908	1870	1563	1354	1870	1581
Grp Volume(v), veh/h	351	600	625	71	1643	121	31	31	20	107	41	446
Grp Sat Flow(s),veh/h/ln	1781	1777	1848	1781	1777	1582	908	1870	1563	1354	1870	1581
Q Serve(g_s), s	27.5	23.2	23.2	5.9	56.3	5.4	4.1	1.9	1.5	10.0	2.6	34.2
Cycle Q Clear(g_c), s	27.5	23.2	23.2	5.9	56.3	5.4	6.7	1.9	1.5	11.9	2.6	34.2
Prop In Lane	1.00		0.07	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	327	1238	1287	89	2002	891	247	443	370	351	443	665
V/C Ratio(X)	1.07	0.48	0.49	0.79	0.82	0.14	0.13	0.07	0.05	0.30	0.09	0.67
Avail Cap(c_a), veh/h	327	1238	1287	121	2002	891	247	443	370	351	443	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	10.4	10.4	70.5	26.6	15.5	47.3	44.4	44.3	49.1	44.7	35.1
Incr Delay (d2), s/veh	66.5	1.1	1.1	22.1	3.9	0.3	0.2	0.1	0.1	0.5	0.1	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.2	8.6	9.0	3.2	23.5	2.0	0.9	0.9	0.6	3.4	1.2	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	127.8	11.5	11.5	92.5	30.5	15.8	47.5	44.5	44.3	49.5	44.8	37.8
LnGrp LOS	F	B	B	F	C	B	D	D	D	D	D	D
Approach Vol, veh/h		1576			1835			82			594	
Approach Delay, s/veh		37.4			32.0			45.6			40.4	
Approach LOS		D			C			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	14.0	111.5		42.0	34.0	91.5		42.0
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	10.3	85.3		* 36	27.5	68.0		35.0
Max Q Clear Time (g_c+I1), s	7.9	25.2		36.2	29.5	58.3		8.7
Green Ext Time (p_c), s	0.0	9.8		0.0	0.0	7.1		0.3

Intersection Summary	
HCM 6th Ctrl Delay	35.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	85	2	8	136	9	31
Future Vol, veh/h	85	2	8	136	9	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	345	-	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	92	2	9	148	10	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	94	0	259	93
Stage 1	-	-	-	-	93	-
Stage 2	-	-	-	-	166	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1500	-	730	964
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	863	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1500	-	726	964
Mov Cap-2 Maneuver	-	-	-	-	736	-
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	858	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.2
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	901	-	-	1500	-
HCM Lane V/C Ratio	0.048	-	-	0.006	-
HCM Control Delay (s)	9.2	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	99	2	8	135	9	33
Future Vol, veh/h	99	2	8	135	9	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	370	-	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	108	2	9	147	10	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	110	0	274	109
Stage 1	-	-	-	-	109	-
Stage 2	-	-	-	-	165	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1480	-	716	945
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	864	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1480	-	712	945
Mov Cap-2 Maneuver	-	-	-	-	728	-
Stage 1	-	-	-	-	916	-
Stage 2	-	-	-	-	859	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	888	-	-	1480	-
HCM Lane V/C Ratio	0.051	-	-	0.006	-
HCM Control Delay (s)	9.3	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	144	3	13	131	12	54
Future Vol, veh/h	144	3	13	131	12	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	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	157	3	14	142	13	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	160	0	329	159
Stage 1	-	-	-	-	159	-
Stage 2	-	-	-	-	170	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1419	-	665	886
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	860	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1419	-	658	886
Mov Cap-2 Maneuver	-	-	-	-	693	-
Stage 1	-	-	-	-	870	-
Stage 2	-	-	-	-	851	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	843	-	-	1419	-
HCM Lane V/C Ratio	0.085	-	-	0.01	-
HCM Control Delay (s)	9.7	-	-	7.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	297	594	3	22	1
Future Vol, veh/h	1	297	594	3	22	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	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	1	323	646	3	24	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	649	0	-	0	973	648
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	325	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	937	-	-	-	280	470
Stage 1	-	-	-	-	521	-
Stage 2	-	-	-	-	732	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	937	-	-	-	280	470
Mov Cap-2 Maneuver	-	-	-	-	399	-
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	732	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	937	-	-	-	402
HCM Lane V/C Ratio	0.001	-	-	-	0.062
HCM Control Delay (s)	8.8	-	-	-	14.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	319	595	3	0	2
Future Vol, veh/h	0	319	595	3	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	347	647	3	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	649
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	470
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	470
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	470
HCM Lane V/C Ratio	-	-	-	0.005
HCM Control Delay (s)	-	-	-	12.7
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	195	5	170	415	2007	0	0	997	380
Future Volume (veh/h)	0	0	0	195	5	170	415	2007	0	0	997	380
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		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				190	20	175	428	2069	0	0	1028	392
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				253	23	205	453	3830	0	0	1637	624
Arrive On Green				0.14	0.14	0.14	0.51	1.00	0.00	0.00	0.45	0.45
Sat Flow, veh/h				1781	165	1445	1781	5274	0	0	3780	1377
Grp Volume(v), veh/h				190	0	195	428	2069	0	0	969	451
Grp Sat Flow(s),veh/h/ln				1781	0	1610	1781	1702	0	0	1702	1584
Q Serve(g_s), s				11.3	0.0	13.0	25.0	0.0	0.0	0.0	23.9	23.9
Cycle Q Clear(g_c), s				11.3	0.0	13.0	25.0	0.0	0.0	0.0	23.9	23.9
Prop In Lane				1.00		0.90	1.00		0.00	0.00		0.87
Lane Grp Cap(c), veh/h				253	0	228	453	3830	0	0	1543	718
V/C Ratio(X)				0.75	0.00	0.85	0.95	0.54	0.00	0.00	0.63	0.63
Avail Cap(c_a), veh/h				338	0	306	588	3830	0	0	1543	718
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.25	0.25	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.3	0.0	46.1	26.3	0.0	0.0	0.0	23.0	23.0
Incr Delay (d2), s/veh				4.0	0.0	12.8	7.6	0.1	0.0	0.0	1.9	4.1
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.2	0.0	6.0	7.4	0.0	0.0	0.0	9.3	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				49.4	0.0	58.9	33.9	0.1	0.0	0.0	24.9	27.1
LnGrp LOS				D	A	E	C	A	A	A	C	C
Approach Vol, veh/h					385			2497			1420	
Approach Delay, s/veh					54.2			5.9			25.6	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	89.3		32.7	56.6		20.7						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	77.2		* 36	36.2		20.9						
Max Q Clear Time (g_c+I1), s	2.0		27.0	25.9		15.0						
Green Ext Time (p_c), s	15.8		0.9	4.6		0.6						

Intersection Summary	
HCM 6th Ctrl Delay	16.8
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for 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)	370	500	30	84	250	990	30	1062	181	350	572	260
Future Volume (veh/h)	370	500	30	84	250	990	30	1062	181	350	572	260
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	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	394	532	32	89	266	947	32	1130	193	372	609	277
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	675	40	136	318	996	71	1319	225	646	1597	878
Arrive On Green	0.10	0.20	0.20	0.03	0.06	0.06	0.04	0.30	0.30	0.06	0.15	0.15
Sat Flow, veh/h	3456	3404	204	1781	1870	2790	1781	4366	745	3456	3554	1585
Grp Volume(v), veh/h	394	277	287	89	266	947	32	881	442	372	609	277
Grp Sat Flow(s),veh/h/ln	1728	1777	1831	1781	1870	1395	1781	1702	1707	1728	1777	1585
Q Serve(g_s), s	11.5	16.3	16.4	5.4	15.5	10.9	1.9	26.8	26.8	11.5	17.0	14.1
Cycle Q Clear(g_c), s	11.5	16.3	16.4	5.4	15.5	10.9	1.9	26.8	26.8	11.5	17.0	14.1
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	361	352	363	136	318	996	71	1028	516	646	1597	878
V/C Ratio(X)	1.09	0.79	0.79	0.65	0.84	0.95	0.45	0.86	0.86	0.58	0.38	0.32
Avail Cap(c_a), veh/h	361	352	363	186	332	1016	219	1099	551	646	1597	878
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.47	0.47	0.47	0.30	0.30	0.30	0.67	0.67	0.67
Uniform Delay (d), s/veh	49.3	41.9	41.9	52.2	50.4	17.5	51.6	36.1	36.2	47.4	33.0	21.8
Incr Delay (d2), s/veh	73.9	11.3	11.2	2.5	8.4	10.1	1.4	3.0	5.8	0.8	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	8.2	8.5	2.6	8.5	8.5	0.9	11.0	11.4	5.3	8.1	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.1	53.2	53.1	54.7	58.8	27.6	53.0	39.2	41.9	48.2	33.5	22.4
LnGrp LOS	F	D	D	D	E	C	D	D	D	D	C	C
Approach Vol, veh/h		958			1302			1355			1258	
Approach Delay, s/veh		81.9			35.8			40.4			35.4	
Approach LOS		F			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	27.1	39.7	14.9	28.3	10.9	55.9	18.0	25.2
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	17.5	35.5	11.5	19.5	13.5	39.5	11.5	19.5
Max Q Clear Time (g_c+I1), s	13.5	28.8	7.4	18.4	3.9	19.0	13.5	17.5
Green Ext Time (p_c), s	0.5	4.1	0.1	0.4	0.0	4.7	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	46.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	481	400	190	100	510	15	270	160	60	310	290	494
Future Volume (veh/h)	481	400	190	100	510	15	270	160	60	310	290	494
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	486	404	192	101	515	15	218	240	61	313	293	466
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	543	856	564	170	914	27	209	219	186	622	227	361
Arrive On Green	0.16	0.24	0.24	0.10	0.18	0.18	0.12	0.12	0.12	0.35	0.35	0.35
Sat Flow, veh/h	3456	3554	1569	1781	5100	148	1781	1870	1585	1781	650	1034
Grp Volume(v), veh/h	486	404	192	101	343	187	218	240	61	313	0	759
Grp Sat Flow(s),veh/h/ln	1728	1777	1569	1781	1702	1843	1781	1870	1585	1781	0	1684
Q Serve(g_s), s	15.2	10.7	9.8	6.0	10.1	10.2	12.9	12.9	3.9	15.3	0.0	38.4
Cycle Q Clear(g_c), s	15.2	10.7	9.8	6.0	10.1	10.2	12.9	12.9	3.9	15.3	0.0	38.4
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	543	856	564	170	610	330	209	219	186	622	0	588
V/C Ratio(X)	0.89	0.47	0.34	0.59	0.56	0.57	1.04	1.09	0.33	0.50	0.00	1.29
Avail Cap(c_a), veh/h	556	856	564	180	610	330	209	219	186	622	0	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	45.5	35.8	25.8	47.7	41.2	41.2	48.5	48.5	44.6	28.3	0.0	35.8
Incr Delay (d2), s/veh	11.5	1.2	1.0	3.0	3.7	6.9	74.2	88.2	0.4	0.3	0.0	143.3
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	7.3	4.8	4.6	2.8	4.5	5.2	10.0	11.4	1.5	6.5	0.0	38.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	36.9	26.8	50.7	44.9	48.1	122.7	136.7	45.0	28.5	0.0	179.1
LnGrp LOS	E	D	C	D	D	D	F	F	D	C	A	F
Approach Vol, veh/h		1082			631			519			1072	
Approach Delay, s/veh		44.1			46.8			120.1			135.2	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.2	33.3		43.5	22.0	26.5		18.0
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1
Max Green Setting (Gmax), s	* 11	25.9		38.4	* 18	19.3		12.9
Max Q Clear Time (g_c+I1), s	10.0	12.7		40.4	17.2	12.2		14.9
Green Ext Time (p_c), s	0.0	1.8		0.0	0.1	1.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	86.1
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

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

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	130	30	73	90	20	20	200	109	15	80	15
Future Vol, veh/h	30	130	30	73	90	20	20	200	109	15	80	15
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	144	33	81	100	22	22	222	121	17	89	17
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.5	11.9	11.7	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	9%	0%	19%	0%	45%	0%	16%	0%
Vol Thru, %	91%	0%	81%	0%	55%	0%	84%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	220	109	160	30	163	20	95	15
LT Vol	20	0	30	0	73	0	15	0
Through Vol	200	0	130	0	90	0	80	0
RT Vol	0	109	0	30	0	20	0	15
Lane Flow Rate	244	121	178	33	181	22	106	17
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.411	0.178	0.313	0.051	0.326	0.034	0.189	0.026
Departure Headway (Hd)	6.049	5.295	6.341	5.536	6.477	5.54	6.442	5.65
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	594	677	565	645	554	645	556	632
Service Time	3.79	3.036	4.089	3.284	4.223	3.286	4.193	3.402
HCM Lane V/C Ratio	0.411	0.179	0.315	0.051	0.327	0.034	0.191	0.027
HCM Control Delay	13	9.2	12	8.6	12.3	8.5	10.7	8.6
HCM Lane LOS	B	A	B	A	B	A	B	A
HCM 95th-tile Q	2	0.6	1.3	0.2	1.4	0.1	0.7	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	158	50	62	130	50	220	86	935	80	200	492	154
Future Volume (veh/h)	158	50	62	130	50	220	86	935	80	200	492	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	174	55	68	143	55	242	95	1027	88	220	541	169
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	193	418	353	173	64	282	112	1043	463	251	991	308
Arrive On Green	0.11	0.22	0.22	0.10	0.21	0.21	0.06	0.29	0.29	0.14	0.37	0.37
Sat Flow, veh/h	1781	1870	1583	1781	302	1327	1781	3554	1577	1781	2668	830
Grp Volume(v), veh/h	174	55	68	143	0	297	95	1027	88	220	360	350
Grp Sat Flow(s),veh/h/ln	1781	1870	1583	1781	0	1629	1781	1777	1577	1781	1777	1721
Q Serve(g_s), s	9.6	2.3	3.5	7.9	0.0	17.5	5.3	28.7	4.2	12.1	15.9	16.0
Cycle Q Clear(g_c), s	9.6	2.3	3.5	7.9	0.0	17.5	5.3	28.7	4.2	12.1	15.9	16.0
Prop In Lane	1.00		1.00	1.00		0.81	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	193	418	353	173	0	346	112	1043	463	251	660	639
V/C Ratio(X)	0.90	0.13	0.19	0.83	0.00	0.86	0.85	0.98	0.19	0.88	0.55	0.55
Avail Cap(c_a), veh/h	193	599	507	175	0	506	112	1043	463	257	666	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.0	31.0	31.5	44.3	0.0	37.9	46.3	35.1	26.4	42.0	24.7	24.8
Incr Delay (d2), s/veh	39.0	0.1	0.3	26.6	0.0	9.7	41.5	24.1	0.2	26.6	0.9	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	1.1	1.3	4.7	0.0	7.7	3.5	15.1	1.6	6.9	6.4	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.0	31.2	31.7	70.9	0.0	47.7	87.8	59.2	26.6	68.6	25.7	25.7
LnGrp LOS	F	C	C	E	A	D	F	E	C	E	C	C
Approach Vol, veh/h		297			440			1210			930	
Approach Delay, s/veh		61.7			55.2			59.1			35.9	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	20.6	35.3	15.7	28.3	12.8	43.1	16.8	27.2
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.1	29.3	9.8	32.0	6.3	37.4	10.8	31.0
Max Q Clear Time (g_c+I1), s	11.9	30.7	9.9	5.5	7.3	18.0	11.6	19.5
Green Ext Time (p_c), s	0.0	0.0	0.0	0.4	0.0	3.9	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	51.2
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	527	70	230	157	80	105	1220	360	90	870	150
Future Volume (veh/h)	370	527	70	230	157	80	105	1220	360	90	870	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	385	549	73	240	164	83	109	1271	375	94	906	156
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	407	885	117	299	328	157	127	1345	590	99	1097	189
Arrive On Green	0.23	0.28	0.28	0.09	0.14	0.14	0.07	0.38	0.38	0.06	0.36	0.36
Sat Flow, veh/h	1781	3149	417	3456	2305	1102	1781	3554	1560	1781	3025	521
Grp Volume(v), veh/h	385	309	313	240	124	123	109	1271	375	94	532	530
Grp Sat Flow(s),veh/h/ln	1781	1777	1790	1728	1777	1630	1781	1777	1560	1781	1777	1769
Q Serve(g_s), s	26.8	19.1	19.2	8.6	8.1	8.8	7.6	43.6	24.8	6.6	34.3	34.4
Cycle Q Clear(g_c), s	26.8	19.1	19.2	8.6	8.1	8.8	7.6	43.6	24.8	6.6	34.3	34.4
Prop In Lane	1.00		0.23	1.00		0.68	1.00		1.00	1.00		0.29
Lane Grp Cap(c), veh/h	407	499	503	299	253	232	127	1345	590	99	644	641
V/C Ratio(X)	0.95	0.62	0.62	0.80	0.49	0.53	0.86	0.95	0.64	0.95	0.83	0.83
Avail Cap(c_a), veh/h	408	654	659	414	465	427	127	1359	597	99	644	641
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	47.8	39.4	39.5	56.5	49.9	50.2	57.9	37.9	32.1	59.4	36.6	36.6
Incr Delay (d2), s/veh	30.8	1.3	1.3	7.7	1.5	1.9	40.4	13.4	2.2	74.2	8.7	8.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.3	8.5	8.6	4.1	3.7	3.7	4.9	21.2	9.7	5.0	16.3	16.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.7	40.7	40.7	64.2	51.3	52.0	98.3	51.3	34.2	133.6	45.2	45.3
LnGrp LOS	E	D	D	E	D	D	F	D	C	F	D	D
Approach Vol, veh/h		1007			487			1755			1156	
Approach Delay, s/veh		55.2			57.8			50.6			52.4	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	53.7	17.4	41.9	15.0	51.7	34.9	24.4
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	7.0	* 48	15.1	46.4	9.0	* 45	28.9	33.0
Max Q Clear Time (g_c+I1), s	9.6	45.6	10.6	21.2	9.6	36.4	28.8	10.8
Green Ext Time (p_c), s	0.0	2.1	0.3	4.1	0.0	4.2	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	52.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Intersection Delay, s/veh	99.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	235	662	50	31	290	27	40	67	37	22	44	107
Future Vol, veh/h	235	662	50	31	290	27	40	67	37	22	44	107
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	247	697	53	33	305	28	42	71	39	23	46	113
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	155	25.1	15	14.1
HCM LOS	F	D	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	37%	0%	100%	0%	0%	100%	0%	0%	33%	0%
Vol Thru, %	63%	0%	0%	100%	0%	0%	100%	0%	67%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	37	235	662	50	31	290	27	66	107
LT Vol	40	0	235	0	0	31	0	0	22	0
Through Vol	67	0	0	662	0	0	290	0	44	0
RT Vol	0	37	0	0	50	0	0	27	0	107
Lane Flow Rate	113	39	247	697	53	33	305	28	69	113
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.281	0.088	0.533	1.404	0.096	0.077	0.681	0.058	0.171	0.251
Departure Headway (Hd)	9.577	8.674	7.761	7.251	6.537	9.086	8.573	7.855	9.469	8.588
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	377	416	465	502	549	397	424	459	381	421
Service Time	7.277	6.374	5.495	4.985	4.27	6.786	6.273	5.555	7.169	6.288
HCM Lane V/C Ratio	0.3	0.094	0.531	1.388	0.097	0.083	0.719	0.061	0.181	0.268
HCM Control Delay	16	12.2	19	214.3	10	12.5	27.7	11	14.1	14.1
HCM Lane LOS	C	B	C	F	A	B	D	B	B	B
HCM 95th-tile Q	1.1	0.3	3.1	32.9	0.3	0.2	4.9	0.2	0.6	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	412	95	35	155	102	82	749	30	60	577	182
Future Volume (veh/h)	275	412	95	35	155	102	82	749	30	60	577	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	296	443	102	38	167	97	88	805	32	65	620	196
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	243	689	306	100	251	138	97	1656	66	84	1236	390
Arrive On Green	0.14	0.19	0.19	0.06	0.11	0.11	0.05	0.48	0.48	0.05	0.47	0.47
Sat Flow, veh/h	1781	3554	1580	1781	2204	1213	1781	3482	138	1781	2641	834
Grp Volume(v), veh/h	296	443	102	38	133	131	88	411	426	65	417	399
Grp Sat Flow(s),veh/h/ln	1781	1777	1580	1781	1777	1641	1781	1777	1843	1781	1777	1698
Q Serve(g_s), s	15.0	12.6	6.1	2.3	7.9	8.5	5.4	17.3	17.4	4.0	17.9	18.0
Cycle Q Clear(g_c), s	15.0	12.6	6.1	2.3	7.9	8.5	5.4	17.3	17.4	4.0	17.9	18.0
Prop In Lane	1.00		1.00	1.00		0.74	1.00		0.08	1.00		0.49
Lane Grp Cap(c), veh/h	243	689	306	100	202	187	97	845	877	84	832	795
V/C Ratio(X)	1.22	0.64	0.33	0.38	0.66	0.70	0.91	0.49	0.49	0.78	0.50	0.50
Avail Cap(c_a), veh/h	243	1066	474	146	436	403	97	845	877	97	832	795
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	0.86	0.86	0.86
Uniform Delay (d), s/veh	47.5	40.8	38.2	50.1	46.7	47.0	51.7	19.7	19.7	51.8	20.3	20.3
Incr Delay (d2), s/veh	129.7	1.0	0.6	2.4	3.6	4.8	61.8	2.0	1.9	24.7	1.9	1.9
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	15.4	5.6	2.4	1.1	3.7	3.7	4.0	7.1	7.4	2.3	7.4	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	177.2	41.8	38.8	52.4	50.3	51.7	113.5	21.7	21.6	76.5	22.2	22.3
LnGrp LOS	F	D	D	D	D	D	F	C	C	E	C	C
Approach Vol, veh/h		841			302			925			881	
Approach Delay, s/veh		89.1			51.2			30.4			26.2	
Approach LOS		F			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	58.8	12.2	27.3	12.5	58.0	21.0	18.5
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	37.0	9.0	33.0	6.0	37.0	15.0	27.0
Max Q Clear Time (g_c+I1), s	10.0	19.4	4.3	14.6	7.4	20.0	17.0	10.5
Green Ext Time (p_c), s	0.0	4.5	0.0	3.1	0.0	4.4	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	48.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	1937	55	40	1917	50	20	10	40	60	10	29
Future Volume (veh/h)	68	1937	55	40	1917	50	20	10	40	60	10	29
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		1.00
Parking Bus, Adj	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	69	1957	56	40	1936	51	20	10	40	61	10	29
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	88	2216	63	52	2150	56	46	14	305	51	5	304
Arrive On Green	0.05	0.63	0.63	0.03	0.61	0.61	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3526	100	1781	3535	93	0	75	1585	0	25	1580
Grp Volume(v), veh/h	69	981	1032	40	968	1019	30	0	40	71	0	29
Grp Sat Flow(s),veh/h/ln	1781	1777	1850	1781	1777	1851	75	0	1585	25	0	1580
Q Serve(g_s), s	5.0	59.5	61.0	2.9	60.9	62.4	0.0	0.0	2.7	0.0	0.0	2.0
Cycle Q Clear(g_c), s	5.0	59.5	61.0	2.9	60.9	62.4	25.0	0.0	2.7	25.0	0.0	2.0
Prop In Lane	1.00		0.05	1.00		0.05	0.67		1.00	0.86		1.00
Lane Grp Cap(c), veh/h	88	1116	1162	52	1081	1126	61	0	305	56	0	304
V/C Ratio(X)	0.78	0.88	0.89	0.76	0.90	0.91	0.50	0.00	0.13	1.26	0.00	0.10
Avail Cap(c_a), veh/h	116	1116	1162	69	1081	1126	61	0	305	56	0	304
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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.1	20.0	20.3	62.6	21.9	22.2	53.3	0.0	43.5	62.9	0.0	43.2
Incr Delay (d2), s/veh	21.9	9.9	10.2	3.4	1.3	1.3	6.1	0.0	0.2	206.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	24.7	26.4	1.3	22.9	24.4	1.1	0.0	1.1	5.1	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.0	29.9	30.6	66.0	23.2	23.5	59.4	0.0	43.7	269.5	0.0	43.3
LnGrp LOS	F	C	C	E	C	C	E	A	D	F	A	D
Approach Vol, veh/h		2082			2027			70			100	
Approach Delay, s/veh		32.0			24.2			50.4			203.9	
Approach LOS		C			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.3	88.2		31.5	12.9	85.6		31.5
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	5.0	80.5		25.0	8.5	77.0		25.0
Max Q Clear Time (g_c+I1), s	4.9	63.0		27.0	7.0	64.4		27.0
Green Ext Time (p_c), s	0.0	13.0		0.0	0.0	9.9		0.0

Intersection Summary		
HCM 6th Ctrl Delay	32.6	
HCM 6th LOS	C	

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	497	1550	40	110	1440	204	40	40	20	145	40	607
Future Volume (veh/h)	497	1550	40	110	1440	204	40	40	20	145	40	607
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		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	518	1615	42	115	1500	212	42	42	21	151	42	632
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	477	2369	61	137	1701	755	215	443	375	341	443	794
Arrive On Green	0.27	0.67	0.67	0.08	0.48	0.48	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3537	92	1781	3554	1578	764	1870	1585	1339	1870	1561
Grp Volume(v), veh/h	518	809	848	115	1500	212	42	42	21	151	42	632
Grp Sat Flow(s),veh/h/ln	1781	1777	1851	1781	1777	1578	764	1870	1585	1339	1870	1561
Q Serve(g_s), s	40.2	41.4	41.8	9.6	57.1	12.1	6.8	2.6	1.5	14.9	2.6	35.5
Cycle Q Clear(g_c), s	40.2	41.4	41.8	9.6	57.1	12.1	9.4	2.6	1.5	17.5	2.6	35.5
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	477	1190	1240	137	1701	755	215	443	375	341	443	794
V/C Ratio(X)	1.09	0.68	0.68	0.84	0.88	0.28	0.20	0.09	0.06	0.44	0.09	0.80
Avail Cap(c_a), veh/h	477	1190	1240	184	1701	755	215	443	375	341	443	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.56	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	15.0	15.1	68.3	35.3	23.5	48.4	44.7	44.3	51.5	44.7	30.9
Incr Delay (d2), s/veh	56.5	1.8	1.7	21.7	7.0	0.9	0.4	0.1	0.1	0.9	0.1	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	25.1	15.8	16.5	5.1	25.2	4.6	1.3	1.2	0.6	5.0	1.2	19.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.4	16.8	16.8	90.0	42.3	24.5	48.8	44.8	44.3	52.4	44.8	36.6
LnGrp LOS	F	B	B	F	D	C	D	D	D	D	D	D
Approach Vol, veh/h		2175			1827			105			825	
Approach Delay, s/veh		39.3			43.2			46.3			39.9	
Approach LOS		D			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	18.0	107.5		42.0	46.7	78.8		42.0
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	15.5	80.0		* 36	40.2	55.3		35.0
Max Q Clear Time (g_c+I1), s	11.6	43.8		37.5	42.2	59.1		11.4
Green Ext Time (p_c), s	0.1	15.3		0.0	0.0	0.0		0.5

Intersection Summary	
HCM 6th Ctrl Delay	41.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* 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	245	9	30	179	4	13
Future Vol, veh/h	245	9	30	179	4	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	345	-	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	266	10	33	195	4	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	276	0	532	271
Stage 1	-	-	-	-	271	-
Stage 2	-	-	-	-	261	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1287	-	508	768
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	783	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1287	-	495	768
Mov Cap-2 Maneuver	-	-	-	-	495	-
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	763	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	680	-	-	1287	-
HCM Lane V/C Ratio	0.027	-	-	0.025	-
HCM Control Delay (s)	10.4	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	245	8	33	210	4	14
Future Vol, veh/h	245	8	33	210	4	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	370	-	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	266	9	36	228	4	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	275	0	571	271
Stage 1	-	-	-	-	271	-
Stage 2	-	-	-	-	300	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1288	-	482	768
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	752	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1288	-	469	768
Mov Cap-2 Maneuver	-	-	-	-	469	-
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	731	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	673	-	-	1288	-
HCM Lane V/C Ratio	0.029	-	-	0.028	-
HCM Control Delay (s)	10.5	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	252	12	52	233	5	23
Future Vol, veh/h	252	12	52	233	5	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	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	274	13	57	253	5	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	287	0	648	281
Stage 1	-	-	-	-	281	-
Stage 2	-	-	-	-	367	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1275	-	435	758
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	701	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1275	-	415	758
Mov Cap-2 Maneuver	-	-	-	-	415	-
Stage 1	-	-	-	-	767	-
Stage 2	-	-	-	-	669	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	661	-	-	1275	-
HCM Lane V/C Ratio	0.046	-	-	0.044	-
HCM Control Delay (s)	10.7	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	773	398	12	9	0
Future Vol, veh/h	3	773	398	12	9	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	50	-	-	-	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	3	840	433	13	10	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	446	0	-	0	1286	440
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	846	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1114	-	-	-	181	617
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	421	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1114	-	-	-	180	617
Mov Cap-2 Maneuver	-	-	-	-	309	-
Stage 1	-	-	-	-	647	-
Stage 2	-	-	-	-	421	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1114	-	-	-	309
HCM Lane V/C Ratio	0.003	-	-	-	0.032
HCM Control Delay (s)	8.2	-	-	-	17
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↱			↗
Traffic Vol, veh/h	0	782	409	10	0	1
Future Vol, veh/h	0	782	409	10	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	850	445	11	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	451
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	608
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	608
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	608
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s)	-	-	-	10.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

APPENDIX J

NEAR-TERM + PROJECT QUEUEING ANALYSIS WORKSHEETS

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	397	378	191	1028	1592
v/c Ratio	1.03	0.94	0.90	0.31	0.66
Control Delay	92.6	66.9	83.8	7.8	19.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	92.6	66.9	83.8	7.8	19.9
Queue Length 50th (ft)	~286	224	128	90	256
Queue Length 95th (ft)	#480	#415	m#237	112	307
Internal Link Dist (ft)		267		584	420
Turn Bay Length (ft)			300		
Base Capacity (vph)	386	402	212	3310	2415
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.03	0.94	0.90	0.31	0.66

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	172	237	106	194	699	27	536	419	753	742
v/c Ratio	0.53	0.43	0.64	0.67	0.70	0.20	0.30	0.90	0.46	0.69
Control Delay	49.7	38.0	46.1	50.4	20.3	46.7	21.1	53.7	15.7	7.7
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Total Delay	49.7	38.0	46.1	50.4	20.4	46.7	21.1	53.7	15.7	7.8
Queue Length 50th (ft)	54	69	59	127	116	17	75	141	124	88
Queue Length 95th (ft)	89	100	m61	m106	m92	43	115	m#192	m171	m114
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	326	756	168	400	1002	168	1784	463	1654	1074
Starvation Cap Reductn	0	0	0	0	18	0	0	0	0	9
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.31	0.63	0.48	0.71	0.16	0.30	0.90	0.46	0.70

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	427	158	158	32	216	93	96	16	95	936
v/c Ratio	0.75	0.14	0.20	0.16	0.20	0.51	0.50	0.05	0.18	1.63
Control Delay	65.5	21.0	4.0	42.7	33.5	52.3	51.8	0.3	27.1	315.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.5	21.0	4.0	42.7	33.5	52.3	51.8	0.3	27.1	315.4
Queue Length 50th (ft)	139	25	1	19	41	60	62	0	45	~823
Queue Length 95th (ft)	m163	m34	m11	48	65	113	116	0	85	#1066
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	631	1156	789	194	1055	184	191	352	529	575
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.14	0.20	0.16	0.20	0.51	0.50	0.05	0.18	1.63

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	112	16	65	21	58	35	465	32	105	841
v/c Ratio	0.47	0.03	0.12	0.09	0.19	0.20	0.42	0.05	0.42	0.54
Control Delay	40.9	20.5	0.5	35.7	14.0	38.9	23.5	0.2	37.3	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	20.5	0.5	35.7	14.0	38.9	23.5	0.2	37.3	19.1
Queue Length 50th (ft)	40	4	0	7	6	13	85	0	37	109
Queue Length 95th (ft)	#157	22	0	36	36	54	185	0	119	331
Internal Link Dist (ft)		371			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	252	1000	917	252	901	178	1488	746	311	1702
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.02	0.07	0.08	0.06	0.20	0.31	0.04	0.34	0.49

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	113	185	216	337	93	737	196	82	1402
v/c Ratio	0.86	0.32	0.91	0.61	0.56	0.41	0.22	0.55	0.86
Control Delay	103.9	22.9	95.1	45.7	66.0	22.1	4.0	66.5	35.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.9	22.9	95.1	45.7	66.0	22.1	4.0	66.5	35.2
Queue Length 50th (ft)	88	35	87	118	69	185	0	62	483
Queue Length 95th (ft)	#197	59	#161	141	#178	307	50	116	#754
Internal Link Dist (ft)		600		1370		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	131	966	237	964	165	1781	874	167	1628
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.19	0.91	0.35	0.56	0.41	0.22	0.49	0.86

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	131	156	56	11	253	78	387	77	831
v/c Ratio	0.93	0.17	0.11	0.07	0.49	0.50	0.24	0.50	0.51
Control Delay	106.6	29.3	0.4	42.9	35.3	56.3	18.4	56.2	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.6	29.3	0.4	42.9	35.3	56.3	18.4	56.2	16.6
Queue Length 50th (ft)	84	40	0	7	68	47	75	47	142
Queue Length 95th (ft)	#199	66	0	24	88	#128	134	#127	247
Internal Link Dist (ft)		359			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	141	956	550	159	984	155	1635	154	1636
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.16	0.10	0.07	0.26	0.50	0.24	0.50	0.51

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	28	1483	21	2122	20	21	47	25
v/c Ratio	0.29	0.55	0.27	0.80	0.11	0.08	0.30	0.10
Control Delay	66.5	11.1	69.3	18.8	48.1	0.6	53.9	0.8
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
Total Delay	66.5	11.1	69.3	19.4	48.1	0.6	53.9	0.8
Queue Length 50th (ft)	23	282	17	597	16	0	39	0
Queue Length 95th (ft)	56	484	47	#1115	38	0	70	0
Internal Link Dist (ft)		728		868	295		780	
Turn Bay Length (ft)	240		250					
Base Capacity (vph)	100	2678	78	2650	304	373	263	368
Starvation Cap Reductn	0	0	0	197	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.55	0.27	0.87	0.07	0.06	0.18	0.07

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	351	1225	71	1643	121	31	31	20	107	41	446
v/c Ratio	0.83	0.53	0.62	0.96	0.15	0.16	0.11	0.06	0.52	0.15	0.72
Control Delay	70.9	16.1	91.5	51.7	4.1	52.3	51.1	0.3	65.1	51.7	40.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.9	16.1	91.5	51.7	4.1	52.3	51.1	0.3	65.1	51.7	40.4
Queue Length 50th (ft)	314	283	68	794	0	28	28	0	102	37	325
Queue Length 95th (ft)	#588	472	#132	#1036	38	54	53	0	147	66	422
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	424	2319	123	1710	813	317	434	456	324	440	623
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.83	0.53	0.58	0.96	0.15	0.10	0.07	0.04	0.33	0.09	0.72

Intersection Summary

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

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	181	200	428	2069	1420
v/c Ratio	0.71	0.81	0.86	0.55	0.69
Control Delay	59.2	64.6	47.7	4.6	28.1
Queue Delay	0.0	0.0	0.0	0.1	0.0
Total Delay	59.2	64.6	47.7	4.7	28.1
Queue Length 50th (ft)	128	131	286	129	283
Queue Length 95th (ft)	201	212	m294	m204	385
Internal Link Dist (ft)		140		584	143
Turn Bay Length (ft)			300		
Base Capacity (vph)	319	305	584	3762	2072
Starvation Cap Reductn	0	0	0	445	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.57	0.66	0.73	0.62	0.69

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	394	564	89	266	1053	32	1323	372	609	277
v/c Ratio	1.10	0.77	0.53	0.85	1.00	0.25	0.83	0.63	0.37	0.25
Control Delay	123.4	50.2	44.8	56.9	44.7	52.7	39.0	35.0	10.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0
Total Delay	123.4	50.2	44.8	56.9	45.6	52.7	39.0	35.0	10.5	0.4
Queue Length 50th (ft)	~162	204	46	184	~189	22	306	137	53	0
Queue Length 95th (ft)	#260	#306	m60	m209	m#190	53	365	173	61	0
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	358	729	185	330	1056	217	1619	589	1654	1101
Starvation Cap Reductn	0	0	0	0	4	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.10	0.77	0.48	0.81	1.00	0.15	0.82	0.63	0.37	0.25

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	486	404	192	101	530	213	222	61	313	792
v/c Ratio	0.89	0.56	0.29	0.57	0.71	1.08	1.09	0.18	0.47	1.14
Control Delay	70.9	39.0	7.9	60.5	50.0	133.9	134.7	1.1	29.2	110.3
Queue Delay	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Total Delay	70.9	39.0	7.9	60.5	50.0	133.9	134.7	1.1	29.2	110.4
Queue Length 50th (ft)	190	107	39	69	131	~177	~185	0	164	~616
Queue Length 95th (ft)	m#270	m152	m70	126	166	#335	#346	0	260	#892
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	552	833	651	178	890	197	204	345	672	694
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	16	0	0	0	0	12
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.88	0.48	0.29	0.57	0.61	1.08	1.09	0.18	0.47	1.16

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	174	55	68	143	297	95	1027	88	220	710
v/c Ratio	0.84	0.19	0.16	0.59	0.72	0.79	0.92	0.14	0.80	0.51
Control Delay	76.4	33.8	0.8	53.0	22.9	87.0	46.0	0.5	62.4	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.4	33.8	0.8	53.0	22.9	87.0	46.0	0.5	62.4	22.4
Queue Length 50th (ft)	99	28	0	81	52	54	291	0	122	144
Queue Length 95th (ft)	#267	60	0	#223	133	#173	#561	0	#307	267
Internal Link Dist (ft)		313			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	206	642	682	244	674	120	1117	635	274	1400
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.84	0.09	0.10	0.59	0.44	0.79	0.92	0.14	0.80	0.51

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	385	622	240	247	109	1271	375	94	1062
v/c Ratio	0.93	0.70	0.66	0.52	0.84	0.92	0.50	0.94	0.84
Control Delay	75.9	45.4	63.0	40.8	103.3	47.3	12.9	132.5	43.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.9	45.4	63.0	40.8	103.3	47.3	12.9	132.5	43.9
Queue Length 50th (ft)	288	234	92	73	84	471	66	73	380
Queue Length 95th (ft)	#588	300	156	114	#225	#797	194	#215	#641
Internal Link Dist (ft)		600		234		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	416	1317	422	939	129	1389	756	100	1257
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.47	0.57	0.26	0.84	0.92	0.50	0.94	0.84

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	296	443	102	38	277	88	837	65	816
v/c Ratio	0.80	0.41	0.17	0.26	0.55	0.53	0.61	0.49	0.68
Control Delay	60.8	33.4	1.6	52.4	30.1	60.4	30.1	61.9	32.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.8	33.4	1.6	52.4	30.1	60.4	30.1	61.9	32.4
Queue Length 50th (ft)	200	146	0	26	59	59	251	44	243
Queue Length 95th (ft)	#429	178	9	60	86	#162	340	#116	320
Internal Link Dist (ft)		359			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	369	1189	630	144	894	167	1371	134	1205
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.37	0.16	0.26	0.31	0.53	0.61	0.49	0.68

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	69	2013	40	1987	30	40	71	29
v/c Ratio	0.54	0.77	0.40	0.78	0.20	0.16	0.49	0.12
Control Delay	73.6	17.4	71.3	18.9	53.0	1.4	64.1	1.0
Queue Delay	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Total Delay	73.6	17.4	71.3	19.2	53.0	1.4	64.1	1.0
Queue Length 50th (ft)	57	586	33	602	24	0	58	0
Queue Length 95th (ft)	#121	887	#91	#1006	50	1	99	0
Internal Link Dist (ft)		728		868	295		780	
Turn Bay Length (ft)	240		250					
Base Capacity (vph)	132	2602	99	2550	270	372	263	367
Starvation Cap Reductn	0	0	0	167	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.77	0.40	0.83	0.11	0.11	0.27	0.08

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	518	1657	115	1500	213	42	42	21	151	42	632
v/c Ratio	0.87	0.76	0.72	1.15	0.30	0.19	0.14	0.06	0.67	0.14	0.79
Control Delay	62.7	26.1	90.4	119.4	5.0	52.1	50.5	0.3	71.4	50.1	35.7
Queue Delay	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.7	26.9	90.4	119.4	5.0	52.1	50.5	0.3	71.4	50.1	35.7
Queue Length 50th (ft)	459	571	110	~904	0	37	37	0	144	36	436
Queue Length 95th (ft)	#799	847	180	#1044	55	69	67	0	203	67	597
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	598	2170	182	1304	704	317	434	461	321	440	802
Starvation Cap Reductn	0	241	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.86	0.63	1.15	0.30	0.13	0.10	0.05	0.47	0.10	0.79

Intersection Summary

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

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

Intersection: 11: Proj Drwy (W) & La Mirada Dr

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	3	39
Average Queue (ft)	1	23
95th Queue (ft)	7	49
Link Distance (ft)		203
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 12: Proj Drwy (M) & La Mirada Dr

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	6	41
Average Queue (ft)	2	27
95th Queue (ft)	13	50
Link Distance (ft)		209
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 13: Proj Drwy (E) & La Mirada Dr

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	6	35
Average Queue (ft)	1	27
95th Queue (ft)	11	46
Link Distance (ft)		185
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 14: Linda Vista Dr & Proj Drwy (W)

Movement	EB	EB	SB
Directions Served	L	T	LR
Maximum Queue (ft)	3	22	37
Average Queue (ft)	1	4	18
95th Queue (ft)	8	55	44
Link Distance (ft)		688	132
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	25		
Storage Blk Time (%)	0	1	
Queuing Penalty (veh)	0	0	

Intersection: 15: Linda Vista Dr & Proj Drwy (E)

Movement	EB	SB
Directions Served	T	R
Maximum Queue (ft)	19	12
Average Queue (ft)	6	3
95th Queue (ft)	54	18
Link Distance (ft)	190	143
Upstream Blk Time (%)	1	
Queuing Penalty (veh)	3	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 4

Intersection: 11: Proj Drwy (W) & La Mirada Dr

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	24	27
Average Queue (ft)	8	15
95th Queue (ft)	29	40
Link Distance (ft)		170
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	1	

Intersection: 12: Proj Drwy (M) & La Mirada Dr

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	18	30
Average Queue (ft)	8	15
95th Queue (ft)	31	39
Link Distance (ft)		164
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	1	
Queuing Penalty (veh)	1	

Intersection: 13: Proj Drwy (E) & La Mirada Dr

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	28	34
Average Queue (ft)	10	18
95th Queue (ft)	33	46
Link Distance (ft)		152
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	1	
Queuing Penalty (veh)	3	

Intersection: 14: Linda Vista Dr & Proj Drwy (W)

Movement	EB	EB	SB
Directions Served	L	T	LR
Maximum Queue (ft)	3	220	26
Average Queue (ft)	1	106	9
95th Queue (ft)	8	467	32
Link Distance (ft)		691	147
Upstream Blk Time (%)		3	
Queuing Penalty (veh)		19	
Storage Bay Dist (ft)	25		
Storage Blk Time (%)	0	15	
Queuing Penalty (veh)	1	0	

Intersection: 15: Linda Vista Dr & Proj Drwy (E)

Movement	EB	SB
Directions Served	T	R
Maximum Queue (ft)	119	6
Average Queue (ft)	65	1
95th Queue (ft)	204	11
Link Distance (ft)	189	177
Upstream Blk Time (%)	15	
Queuing Penalty (veh)	118	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 144

APPENDIX K

LONG-TERM ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	600	5	180	180	1080	0	0	1380	360
Future Volume (veh/h)	0	0	0	600	5	180	180	1080	0	0	1380	360
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		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				405	305	186	186	1113	0	0	1423	371
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				410	250	153	213	3324	0	0	1944	504
Arrive On Green				0.23	0.23	0.23	0.24	1.00	0.00	0.00	0.48	0.48
Sat Flow, veh/h				1781	1088	663	1781	5274	0	0	4181	1041
Grp Volume(v), veh/h				405	0	491	186	1113	0	0	1206	588
Grp Sat Flow(s),veh/h/ln				1781	0	1751	1781	1702	0	0	1702	1650
Q Serve(g_s), s				22.7	0.0	23.0	10.0	0.0	0.0	0.0	28.3	28.6
Cycle Q Clear(g_c), s				22.7	0.0	23.0	10.0	0.0	0.0	0.0	28.3	28.6
Prop In Lane				1.00		0.38	1.00		0.00	0.00		0.63
Lane Grp Cap(c), veh/h				410	0	403	213	3324	0	0	1649	799
V/C Ratio(X)				0.99	0.00	1.22	0.87	0.33	0.00	0.00	0.73	0.74
Avail Cap(c_a), veh/h				410	0	403	214	3324	0	0	1649	799
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.79	0.79	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				38.4	0.0	38.5	37.3	0.0	0.0	0.0	20.6	20.7
Incr Delay (d2), s/veh				41.2	0.0	119.2	25.2	0.2	0.0	0.0	2.9	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				14.4	0.0	23.0	5.2	0.1	0.0	0.0	10.7	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				79.6	0.0	157.7	62.5	0.2	0.0	0.0	23.5	26.6
LnGrp LOS				E	A	F	E	A	A	A	C	C
Approach Vol, veh/h					896			1299			1794	
Approach Delay, s/veh					122.4			9.1			24.5	
Approach LOS					F			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	71.9		16.7	55.2		28.1						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	65.1		* 12	48.4		23.0						
Max Q Clear Time (g_c+I1), s	2.0		12.0	30.6		25.0						
Green Ext Time (p_c), s	5.5		0.0	8.0		0.0						

Intersection Summary	
HCM 6th Ctrl Delay	41.5
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for 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)	170	220	20	120	200	720	30	380	100	440	780	720
Future Volume (veh/h)	170	220	20	120	200	720	30	380	100	440	780	720
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		1.00	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	183	237	22	129	215	774	32	409	108	473	839	774
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	309	538	49	159	307	992	73	1196	305	662	1583	829
Arrive On Green	0.09	0.16	0.16	0.03	0.05	0.05	0.04	0.29	0.29	0.06	0.15	0.15
Sat Flow, veh/h	3456	3281	302	1781	1870	2790	1781	4054	1033	3456	3554	1544
Grp Volume(v), veh/h	183	127	132	129	215	774	32	341	176	473	839	774
Grp Sat Flow(s),veh/h/ln	1728	1777	1806	1781	1870	1395	1781	1702	1683	1728	1777	1544
Q Serve(g_s), s	5.1	6.4	6.6	7.2	11.3	5.3	1.8	7.8	8.2	13.4	21.8	43.0
Cycle Q Clear(g_c), s	5.1	6.4	6.6	7.2	11.3	5.3	1.8	7.8	8.2	13.4	21.8	43.0
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.61	1.00		1.00
Lane Grp Cap(c), veh/h	309	291	296	159	307	992	73	1004	497	662	1583	829
V/C Ratio(X)	0.59	0.44	0.45	0.81	0.70	0.78	0.44	0.34	0.35	0.71	0.53	0.93
Avail Cap(c_a), veh/h	328	382	388	169	402	1134	169	1004	497	662	1583	829
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	0.94	0.94	0.94	0.49	0.49	0.49
Uniform Delay (d), s/veh	43.8	37.6	37.7	47.7	44.9	12.5	46.8	27.6	27.8	44.2	33.0	32.0
Incr Delay (d2), s/veh	2.6	1.0	1.0	22.6	3.4	3.0	3.8	0.9	1.9	1.8	0.6	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	2.9	3.0	4.3	6.0	4.9	0.8	3.2	3.4	6.3	10.4	20.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	38.7	38.8	70.2	48.3	15.5	50.6	28.5	29.6	46.0	33.6	42.9
LnGrp LOS	D	D	D	E	D	B	D	C	C	D	C	D
Approach Vol, veh/h		442			1118			549			2086	
Approach Delay, s/veh		41.9			28.1			30.1			39.9	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	36.0	15.5	22.9	10.6	51.0	15.4	22.9
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	13.5	29.5	9.5	21.5	9.5	33.5	9.5	21.5
Max Q Clear Time (g_c+I1), s	15.4	10.2	9.2	8.6	3.8	45.0	7.1	13.3
Green Ext Time (p_c), s	0.0	2.9	0.0	1.1	0.0	0.0	0.1	3.1

Intersection Summary	
HCM 6th Ctrl Delay	35.7
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	440	170	170	30	230	0	140	60	20	110	320	680
Future Volume (veh/h)	440	170	170	30	230	0	140	60	20	110	320	680
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	463	179	179	32	242	0	105	122	21	116	337	678
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	541	1099	661	115	1111	0	196	206	174	533	166	333
Arrive On Green	0.16	0.31	0.31	0.06	0.22	0.00	0.11	0.11	0.11	0.30	0.30	0.30
Sat Flow, veh/h	3456	3554	1575	1781	5274	0	1781	1870	1585	1781	554	1115
Grp Volume(v), veh/h	463	179	179	32	242	0	105	122	21	116	0	1015
Grp Sat Flow(s),veh/h/ln	1728	1777	1575	1781	1702	0	1781	1870	1585	1781	0	1670
Q Serve(g_s), s	13.0	3.7	7.4	1.7	3.9	0.0	5.6	6.2	1.2	4.9	0.0	29.9
Cycle Q Clear(g_c), s	13.0	3.7	7.4	1.7	3.9	0.0	5.6	6.2	1.2	4.9	0.0	29.9
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	541	1099	661	115	1111	0	196	206	174	533	0	499
V/C Ratio(X)	0.86	0.16	0.27	0.28	0.22	0.00	0.54	0.59	0.12	0.22	0.00	2.03
Avail Cap(c_a), veh/h	636	1099	661	196	1111	0	196	206	174	533	0	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.47	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.1	25.1	19.0	44.5	32.1	0.0	42.1	42.4	40.1	26.3	0.0	35.1
Incr Delay (d2), s/veh	4.9	0.1	0.5	0.5	0.5	0.0	1.5	3.2	0.1	0.1	0.0	471.9
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	5.9	1.6	3.4	0.8	1.6	0.0	2.5	3.0	0.5	2.1	0.0	77.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.0	25.3	19.5	45.0	32.6	0.0	43.6	45.5	40.3	26.4	0.0	507.0
LnGrp LOS	D	C	B	D	C	A	D	D	D	C	A	F
Approach Vol, veh/h		821			274			248			1131	
Approach Delay, s/veh		35.7			34.0			44.3			457.7	
Approach LOS		D			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	37.7		35.0	20.4	28.6		16.1
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1
Max Green Setting (Gmax), s	* 11	26.4		29.9	* 18	19.0		11.0
Max Q Clear Time (g_c+I1), s	13.7	9.4		31.9	15.0	5.9		8.2
Green Ext Time (p_c), s	0.0	1.0		0.0	0.6	0.8		0.2

Intersection Summary		
HCM 6th Ctrl Delay	229.3	
HCM 6th LOS	F	

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	40	30	50	50	20	20	80	40	10	170	20
Future Vol, veh/h	10	40	30	50	50	20	20	80	40	10	170	20
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	46	34	57	57	23	23	92	46	11	195	23
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.8	9.7	8.9	10.2
HCM LOS	A	A	A	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	20%	0%	20%	0%	50%	0%	6%	0%
Vol Thru, %	80%	0%	80%	0%	50%	0%	94%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	40	50	30	100	20	180	20
LT Vol	20	0	10	0	50	0	10	0
Through Vol	80	0	40	0	50	0	170	0
RT Vol	0	40	0	30	0	20	0	20
Lane Flow Rate	115	46	57	34	115	23	207	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.176	0.06	0.093	0.048	0.188	0.031	0.308	0.029
Departure Headway (Hd)	5.499	4.693	5.799	4.991	5.881	4.924	5.351	4.619
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	648	757	614	711	607	721	668	770
Service Time	3.265	2.459	3.575	2.767	3.652	2.694	3.113	2.38
HCM Lane V/C Ratio	0.177	0.061	0.093	0.048	0.189	0.032	0.31	0.03
HCM Control Delay	9.4	7.8	9.2	8	10	7.9	10.5	7.5
HCM Lane LOS	A	A	A	A	A	A	B	A
HCM 95th-tile Q	0.6	0.2	0.3	0.2	0.7	0.1	1.3	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	20	10	40	20	50	20	530	40	110	830	90
Future Volume (veh/h)	40	20	10	40	20	50	20	530	40	110	830	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	42	21	11	42	21	53	21	558	42	116	874	95
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	230	194	121	61	155	53	1065	473	156	1155	126
Arrive On Green	0.06	0.12	0.12	0.07	0.13	0.13	0.03	0.30	0.30	0.09	0.36	0.36
Sat Flow, veh/h	1781	1870	1581	1781	468	1181	1781	3554	1577	1781	3232	351
Grp Volume(v), veh/h	42	21	11	42	0	74	21	558	42	116	480	489
Grp Sat Flow(s),veh/h/ln	1781	1870	1581	1781	0	1648	1781	1777	1577	1781	1777	1807
Q Serve(g_s), s	1.3	0.6	0.4	1.3	0.0	2.4	0.7	7.6	1.1	3.7	13.8	13.8
Cycle Q Clear(g_c), s	1.3	0.6	0.4	1.3	0.0	2.4	0.7	7.6	1.1	3.7	13.8	13.8
Prop In Lane	1.00		1.00	1.00		0.72	1.00		1.00	1.00		0.19
Lane Grp Cap(c), veh/h	106	230	194	121	0	216	53	1065	473	156	635	646
V/C Ratio(X)	0.40	0.09	0.06	0.35	0.00	0.34	0.40	0.52	0.09	0.74	0.76	0.76
Avail Cap(c_a), veh/h	261	1032	872	261	0	909	184	1501	666	322	888	903
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.3	22.6	22.5	25.8	0.0	22.9	27.6	16.9	14.6	25.8	16.4	16.4
Incr Delay (d2), s/veh	2.4	0.2	0.1	1.7	0.0	0.9	4.8	0.4	0.1	6.9	2.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.2	0.1	0.6	0.0	0.9	0.3	2.6	0.4	1.7	4.9	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	22.7	22.6	27.5	0.0	23.9	32.4	17.3	14.7	32.7	18.8	18.8
LnGrp LOS	C	C	C	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		74			116			621			1085	
Approach Delay, s/veh		26.1			25.2			17.6			20.3	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	23.4	9.9	13.1	8.2	26.7	9.4	13.6
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	10.5	24.5	8.5	32.0	6.0	29.0	8.5	32.0
Max Q Clear Time (g_c+I1), s	5.7	9.6	3.3	2.6	2.7	15.8	3.3	4.4
Green Ext Time (p_c), s	0.1	3.1	0.0	0.1	0.0	4.7	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	100	90	220	230	80	90	750	200	80	1140	280
Future Volume (veh/h)	110	100	90	220	230	80	90	750	200	80	1140	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	103	93	227	237	82	93	773	206	82	1175	289
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	132	245	201	239	342	115	104	1888	841	104	1503	366
Arrive On Green	0.07	0.13	0.13	0.07	0.13	0.13	0.06	0.53	0.53	0.06	0.53	0.53
Sat Flow, veh/h	1781	1848	1511	3456	2610	879	1781	3554	1582	1781	2828	688
Grp Volume(v), veh/h	113	99	97	227	159	160	93	773	206	82	733	731
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1728	1777	1712	1781	1777	1582	1781	1777	1739
Q Serve(g_s), s	7.5	6.1	6.8	7.9	10.3	10.7	6.2	15.6	8.4	5.5	39.5	40.7
Cycle Q Clear(g_c), s	7.5	6.1	6.8	7.9	10.3	10.7	6.2	15.6	8.4	5.5	39.5	40.7
Prop In Lane	1.00		0.96	1.00		0.51	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	132	236	210	239	233	224	104	1888	841	104	944	924
V/C Ratio(X)	0.86	0.42	0.46	0.95	0.68	0.71	0.90	0.41	0.25	0.79	0.78	0.79
Avail Cap(c_a), veh/h	132	492	438	239	489	471	104	1888	841	163	944	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	47.8	48.1	55.6	49.8	50.0	56.1	16.8	15.2	55.8	22.4	22.7
Incr Delay (d2), s/veh	39.0	1.2	1.6	44.3	3.5	4.1	56.3	0.7	0.7	12.5	6.2	6.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	2.8	2.8	4.9	4.8	4.8	4.4	6.5	3.2	2.8	17.5	17.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.9	49.0	49.7	99.9	53.3	54.1	112.4	17.5	15.8	68.2	28.7	29.6
LnGrp LOS	F	D	D	F	D	D	F	B	B	E	C	C
Approach Vol, veh/h		309			546			1072			1546	
Approach Delay, s/veh		65.6			72.9			25.4			31.2	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	69.8	14.8	22.4	13.0	69.8	15.0	22.2
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	7.0	* 43	8.3	33.2	7.0	* 47	8.9	33.0
Max Q Clear Time (g_c+I1), s	17.5	17.6	9.9	8.8	8.2	42.7	9.5	12.7
Green Ext Time (p_c), s	0.0	6.7	0.0	1.1	0.0	2.9	0.0	1.8

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

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Intersection Delay, s/veh	20.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	230	20	30	400	20	30	30	10	10	70	140
Future Vol, veh/h	90	230	20	30	400	20	30	30	10	10	70	140
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	97	247	22	32	430	22	32	32	11	11	75	151
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	15	30.1	12.2	12.3
HCM LOS	B	D	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	50%	0%	100%	0%	0%	100%	0%	0%	12%	0%
Vol Thru, %	50%	0%	0%	100%	0%	0%	100%	0%	88%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	60	10	90	230	20	30	400	20	80	140
LT Vol	30	0	90	0	0	30	0	0	10	0
Through Vol	30	0	0	230	0	0	400	0	70	0
RT Vol	0	10	0	0	20	0	0	20	0	140
Lane Flow Rate	65	11	97	247	22	32	430	22	86	151
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.149	0.022	0.204	0.488	0.038	0.065	0.811	0.036	0.182	0.287
Departure Headway (Hd)	8.287	7.327	7.606	7.098	6.385	7.295	6.787	6.077	7.623	6.856
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	432	488	472	507	560	491	533	589	471	524
Service Time	6.041	5.079	5.35	4.841	4.129	5.035	4.527	3.816	5.367	4.599
HCM Lane V/C Ratio	0.15	0.023	0.206	0.487	0.039	0.065	0.807	0.037	0.183	0.288
HCM Control Delay	12.5	10.2	12.3	16.5	9.4	10.5	32.6	9	12.1	12.4
HCM Lane LOS	B	B	B	C	A	B	D	A	B	B
HCM 95th-tile Q	0.5	0.1	0.8	2.6	0.1	0.2	7.9	0.1	0.7	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	170	70	30	220	60	90	470	50	70	510	380
Future Volume (veh/h)	130	170	70	30	220	60	90	470	50	70	510	380
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	140	183	75	32	237	65	97	505	54	75	548	409
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	143	523	233	94	333	89	107	1604	171	96	943	704
Arrive On Green	0.08	0.15	0.15	0.05	0.12	0.12	0.06	0.50	0.50	0.05	0.49	0.49
Sat Flow, veh/h	1781	3554	1582	1781	2770	743	1781	3235	345	1781	1926	1437
Grp Volume(v), veh/h	140	183	75	32	150	152	97	277	282	75	506	451
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1737	1781	1777	1803	1781	1777	1586
Q Serve(g_s), s	7.8	4.6	4.2	1.7	8.1	8.4	5.4	9.3	9.4	4.2	20.3	20.3
Cycle Q Clear(g_c), s	7.8	4.6	4.2	1.7	8.1	8.4	5.4	9.3	9.4	4.2	20.3	20.3
Prop In Lane	1.00		1.00	1.00		0.43	1.00		0.19	1.00		0.91
Lane Grp Cap(c), veh/h	143	523	233	94	213	209	107	881	894	96	870	777
V/C Ratio(X)	0.98	0.35	0.32	0.34	0.70	0.73	0.91	0.31	0.32	0.78	0.58	0.58
Avail Cap(c_a), veh/h	143	959	427	160	498	486	107	881	894	107	870	777
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	0.92	0.92	0.92
Uniform Delay (d), s/veh	45.9	38.3	38.2	45.7	42.3	42.4	46.7	15.0	15.1	46.7	18.2	18.2
Incr Delay (d2), s/veh	69.8	0.4	0.8	2.1	4.2	4.8	58.7	0.9	0.9	25.9	2.6	2.9
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	6.2	2.0	1.7	0.8	3.8	3.9	4.1	3.7	3.7	2.5	8.1	7.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	115.8	38.7	39.0	47.8	46.5	47.2	105.4	16.0	16.0	72.6	20.8	21.1
LnGrp LOS	F	D	D	D	D	D	F	B	B	E	C	C
Approach Vol, veh/h		398			334			656			1032	
Approach Delay, s/veh		65.9			46.9			29.2			24.7	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	56.1	11.3	20.7	12.5	55.5	14.0	18.0
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	33.0	9.0	27.0	6.0	33.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	10.2	11.4	3.7	6.6	7.4	22.3	9.8	10.4
Green Ext Time (p_c), s	0.0	3.0	0.0	1.3	0.0	4.3	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1460	30	40	2170	70	10	10	30	60	5	20
Future Volume (veh/h)	40	1460	30	40	2170	70	10	10	30	60	5	20
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		1.00
Parking Bus, Adj	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	42	1521	31	42	2260	73	10	10	31	62	5	21
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	75	2231	45	54	2159	69	42	29	306	53	2	305
Arrive On Green	0.04	0.63	0.63	0.03	0.61	0.61	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3560	72	1781	3511	113	0	149	1585	0	12	1580
Grp Volume(v), veh/h	42	758	794	42	1137	1196	20	0	31	67	0	21
Grp Sat Flow(s),veh/h/ln	1781	1777	1855	1781	1777	1847	149	0	1585	12	0	1580
Q Serve(g_s), s	3.0	36.1	36.3	3.0	79.9	79.9	0.0	0.0	2.1	0.0	0.0	1.4
Cycle Q Clear(g_c), s	3.0	36.1	36.3	3.0	79.9	79.9	25.1	0.0	2.1	25.1	0.0	1.4
Prop In Lane	1.00		0.04	1.00		0.06	0.50		1.00	0.93		1.00
Lane Grp Cap(c), veh/h	75	1113	1163	54	1093	1135	70	0	306	56	0	305
V/C Ratio(X)	0.56	0.68	0.68	0.78	1.04	1.05	0.28	0.00	0.10	1.20	0.00	0.07
Avail Cap(c_a), veh/h	100	1113	1163	69	1093	1135	70	0	306	56	0	305
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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.1	15.8	15.8	62.6	25.0	25.0	44.8	0.0	43.2	64.0	0.0	42.9
Incr Delay (d2), s/veh	6.4	3.4	3.3	4.0	21.4	26.7	2.2	0.0	0.1	186.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	14.2	14.8	1.4	35.9	38.9	0.6	0.0	0.8	4.7	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.5	19.2	19.1	66.6	46.4	51.7	47.0	0.0	43.3	250.0	0.0	43.0
LnGrp LOS	E	B	B	E	F	F	D	A	D	F	A	D
Approach Vol, veh/h		1594			2375			51			88	
Approach Delay, s/veh		20.4			49.4			44.8			200.6	
Approach LOS		C			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.4	88.0		31.6	12.0	86.4		31.6
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	5.0	80.4		25.1	7.3	78.1		25.1
Max Q Clear Time (g_c+I1), s	5.0	38.3		27.1	5.0	81.9		27.1
Green Ext Time (p_c), s	0.0	14.3		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	41.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	390	1220	150	180	1700	210	100	100	80	110	170	510
Future Volume (veh/h)	390	1220	150	180	1700	210	100	100	80	110	170	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		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	398	1245	153	184	1735	214	102	102	82	112	173	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	2	2	2	2	2	2	2	2	2
Cap, veh/h	327	2163	265	121	2002	891	167	443	370	279	443	665
Arrive On Green	0.18	0.68	0.68	0.07	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3187	390	1781	3554	1582	750	1870	1563	1200	1870	1581
Grp Volume(v), veh/h	398	692	706	184	1735	214	102	102	82	112	173	520
Grp Sat Flow(s),veh/h/ln	1781	1777	1800	1781	1777	1582	750	1870	1563	1200	1870	1581
Q Serve(g_s), s	27.5	30.7	31.1	10.2	62.5	10.2	19.8	6.6	6.3	12.5	11.7	35.5
Cycle Q Clear(g_c), s	27.5	30.7	31.1	10.2	62.5	10.2	31.5	6.6	6.3	19.1	11.7	35.5
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	327	1206	1221	121	2002	891	167	443	370	279	443	665
V/C Ratio(X)	1.22	0.57	0.58	1.52	0.87	0.24	0.61	0.23	0.22	0.40	0.39	0.78
Avail Cap(c_a), veh/h	327	1206	1221	121	2002	891	167	443	370	279	443	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	12.7	12.7	69.9	27.9	16.5	61.4	46.2	46.1	53.9	48.2	37.6
Incr Delay (d2), s/veh	118.3	1.6	1.6	271.1	5.4	0.6	6.3	0.3	0.3	0.9	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.9	11.6	11.9	13.7	26.3	3.8	4.0	3.1	2.5	3.8	5.5	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	179.6	14.2	14.3	341.0	33.3	17.2	67.7	46.5	46.4	54.9	48.7	43.6
LnGrp LOS	F	B	B	F	C	B	E	D	D	D	D	D
Approach Vol, veh/h		1796			2133			286			805	
Approach Delay, s/veh		50.9			58.2			54.0			46.3	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.7	108.8		42.0	34.0	91.5		42.0
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	10.2	85.3		* 36	27.5	68.0		35.0
Max Q Clear Time (g_c+I1), s	12.2	33.1		37.5	29.5	64.5		33.5
Green Ext Time (p_c), s	0.0	12.5		0.0	0.0	3.0		0.2

Intersection Summary	
HCM 6th Ctrl Delay	53.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

* 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	0	0	190	5	180	450	2230	0	0	1120	420
Future Volume (veh/h)	0	0	0	190	5	180	450	2230	0	0	1120	420
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		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				190	14	179	464	2299	0	0	1155	386
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				251	16	210	494	3833	0	0	1618	540
Arrive On Green				0.14	0.14	0.14	0.37	1.00	0.00	0.00	0.43	0.43
Sat Flow, veh/h				1781	116	1487	1781	5274	0	0	3926	1255
Grp Volume(v), veh/h				190	0	193	464	2299	0	0	1046	495
Grp Sat Flow(s),veh/h/ln				1781	0	1603	1781	1702	0	0	1702	1609
Q Serve(g_s), s				11.3	0.0	12.9	27.7	0.2	0.0	0.0	27.8	27.8
Cycle Q Clear(g_c), s				11.3	0.0	12.9	27.7	0.2	0.0	0.0	27.8	27.8
Prop In Lane				1.00		0.93	1.00		0.00	0.00		0.78
Lane Grp Cap(c), veh/h				251	0	226	494	3833	0	0	1465	693
V/C Ratio(X)				0.76	0.00	0.85	0.94	0.60	0.00	0.00	0.71	0.71
Avail Cap(c_a), veh/h				338	0	305	588	3833	0	0	1465	693
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				45.4	0.0	46.1	33.8	0.0	0.0	0.0	25.8	25.8
Incr Delay (d2), s/veh				4.1	0.0	12.7	3.0	0.1	0.0	0.0	3.0	6.2
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.3	0.0	5.9	10.7	0.0	0.0	0.0	11.1	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				49.5	0.0	58.8	36.8	0.1	0.0	0.0	28.8	32.0
LnGrp LOS				D	A	E	D	A	A	A	C	C
Approach Vol, veh/h					383			2763			1541	
Approach Delay, s/veh					54.2			6.3			29.8	
Approach LOS					D			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	89.4		35.2	54.2		20.6						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	77.2		* 36	36.2		20.9						
Max Q Clear Time (g_c+I1), s	2.2		29.7	29.8		14.9						
Green Ext Time (p_c), s	20.1		0.9	3.6		0.6						

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for 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)	380	560	30	80	280	1120	30	1180	200	400	640	270
Future Volume (veh/h)	380	560	30	80	280	1120	30	1180	200	400	640	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	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	404	596	32	85	298	1085	32	1255	213	426	681	287
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	706	38	135	331	959	71	1378	234	576	1572	867
Arrive On Green	0.10	0.21	0.21	0.02	0.06	0.06	0.04	0.32	0.32	0.06	0.15	0.15
Sat Flow, veh/h	3456	3428	184	1781	1870	2790	1781	4371	742	3456	3554	1585
Grp Volume(v), veh/h	404	309	319	85	298	1085	32	977	491	426	681	287
Grp Sat Flow(s),veh/h/ln	1728	1777	1835	1781	1870	1395	1781	1702	1709	1728	1777	1585
Q Serve(g_s), s	11.5	18.4	18.4	5.2	17.4	13.7	1.9	30.3	30.3	13.4	19.2	14.7
Cycle Q Clear(g_c), s	11.5	18.4	18.4	5.2	17.4	13.7	1.9	30.3	30.3	13.4	19.2	14.7
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.43	1.00		1.00
Lane Grp Cap(c), veh/h	361	366	378	135	331	959	71	1073	539	576	1572	867
V/C Ratio(X)	1.12	0.84	0.85	0.63	0.90	1.13	0.45	0.91	0.91	0.74	0.43	0.33
Avail Cap(c_a), veh/h	361	366	378	186	332	960	219	1099	551	576	1572	867
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.36	0.36	0.36	0.36	0.36	0.36	0.51	0.51	0.51
Uniform Delay (d), s/veh	49.3	42.0	42.0	52.1	50.8	20.3	51.6	36.2	36.2	49.6	34.4	22.4
Incr Delay (d2), s/veh	83.3	16.2	16.0	1.8	11.7	64.3	1.6	5.4	9.9	2.6	0.4	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	9.6	10.0	2.5	9.8	13.4	0.9	12.7	13.4	6.4	9.2	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	132.6	58.2	58.0	53.8	62.5	84.6	53.3	41.6	46.0	52.2	34.8	22.9
LnGrp LOS	F	E	E	D	E	F	D	D	D	D	C	C
Approach Vol, veh/h		1032			1468			1500			1394	
Approach Delay, s/veh		87.3			78.3			43.3			37.7	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.8	41.2	14.8	29.1	10.9	55.2	18.0	26.0
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	17.5	35.5	11.5	19.5	13.5	39.5	11.5	19.5
Max Q Clear Time (g_c+I1), s	15.4	32.3	7.2	20.4	3.9	21.2	13.5	19.4
Green Ext Time (p_c), s	0.4	2.3	0.1	0.0	0.0	5.0	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	59.8
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	540	460	210	110	580	10	300	170	70	350	320	530
Future Volume (veh/h)	540	460	210	110	580	10	300	170	70	350	320	530
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	545	465	212	111	586	10	238	264	71	354	323	502
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	556	852	562	172	907	15	209	219	186	622	230	358
Arrive On Green	0.16	0.24	0.24	0.10	0.18	0.18	0.12	0.12	0.12	0.35	0.35	0.35
Sat Flow, veh/h	3456	3554	1569	1781	5170	88	1781	1870	1585	1781	660	1026
Grp Volume(v), veh/h	545	465	212	111	385	211	238	264	71	354	0	825
Grp Sat Flow(s),veh/h/ln	1728	1777	1569	1781	1702	1854	1781	1870	1585	1781	0	1686
Q Serve(g_s), s	17.3	12.6	11.1	6.6	11.6	11.6	12.9	12.9	4.6	17.8	0.0	38.4
Cycle Q Clear(g_c), s	17.3	12.6	11.1	6.6	11.6	11.6	12.9	12.9	4.6	17.8	0.0	38.4
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		0.61
Lane Grp Cap(c), veh/h	556	852	562	172	597	325	209	219	186	622	0	588
V/C Ratio(X)	0.98	0.55	0.38	0.64	0.65	0.65	1.14	1.20	0.38	0.57	0.00	1.40
Avail Cap(c_a), veh/h	556	852	562	180	597	325	209	219	186	622	0	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.0	36.6	26.3	47.9	42.2	42.2	48.5	48.5	44.9	29.1	0.0	35.8
Incr Delay (d2), s/veh	21.9	1.2	0.9	5.4	5.3	9.6	104.8	126.7	0.5	0.8	0.0	191.0
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	9.1	5.6	5.1	3.2	5.3	6.2	11.8	13.7	1.8	7.6	0.0	46.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.9	37.8	27.2	53.3	47.5	51.8	153.4	175.2	45.3	29.9	0.0	226.8
LnGrp LOS	E	D	C	D	D	D	F	F	D	C	A	F
Approach Vol, veh/h		1222			707			573			1179	
Approach Delay, s/veh		49.4			49.7			150.1			167.7	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	33.2		43.5	22.4	26.1		18.0				
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1				
Max Green Setting (Gmax), s	* 11	25.9		38.4	* 18	19.3		12.9				
Max Q Clear Time (g_c+I1), s	8.6	14.6		40.4	19.3	13.6		14.9				
Green Ext Time (p_c), s	0.0	2.0		0.0	0.0	1.3		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		103.0
HCM 6th LOS		F

Notes

User approved volume balancing among the lanes for turning movement.

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

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	140	30	60	100	20	20	220	90	20	80	20
Future Vol, veh/h	30	140	30	60	100	20	20	220	90	20	80	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	152	33	65	109	22	22	239	98	22	87	22
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.7	11.8	12.2	10.4
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	18%	0%	38%	0%	20%	0%
Vol Thru, %	92%	0%	82%	0%	62%	0%	80%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	240	90	170	30	160	20	100	20
LT Vol	20	0	30	0	60	0	20	0
Through Vol	220	0	140	0	100	0	80	0
RT Vol	0	90	0	30	0	20	0	20
Lane Flow Rate	261	98	185	33	174	22	109	22
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.439	0.144	0.326	0.05	0.313	0.034	0.195	0.034
Departure Headway (Hd)	6.056	5.306	6.348	5.549	6.477	5.577	6.457	5.644
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	595	675	565	644	555	640	554	632
Service Time	3.799	3.048	4.097	3.297	4.226	3.325	4.211	3.398
HCM Lane V/C Ratio	0.439	0.145	0.327	0.051	0.314	0.034	0.197	0.035
HCM Control Delay	13.5	8.9	12.2	8.6	12.2	8.5	10.8	8.6
HCM Lane LOS	B	A	B	A	B	A	B	A
HCM 95th-tile Q	2.2	0.5	1.4	0.2	1.3	0.1	0.7	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	50	50	160	60	240	40	1090	100	220	560	100
Future Volume (veh/h)	140	50	50	160	60	240	40	1090	100	220	560	100
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	53	53	170	64	229	43	1160	106	234	596	106
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	175	359	303	195	72	259	68	1239	550	260	1377	244
Arrive On Green	0.10	0.19	0.19	0.11	0.20	0.20	0.04	0.35	0.35	0.15	0.46	0.46
Sat Flow, veh/h	1781	1870	1583	1781	358	1280	1781	3554	1578	1781	3016	535
Grp Volume(v), veh/h	149	53	53	170	0	293	43	1160	106	234	351	351
Grp Sat Flow(s),veh/h/ln	1781	1870	1583	1781	0	1638	1781	1777	1578	1781	1777	1774
Q Serve(g_s), s	9.9	2.8	3.4	11.3	0.0	20.8	2.9	37.8	5.6	15.5	16.0	16.1
Cycle Q Clear(g_c), s	9.9	2.8	3.4	11.3	0.0	20.8	2.9	37.8	5.6	15.5	16.0	16.1
Prop In Lane	1.00		1.00	1.00		0.78	1.00		1.00	1.00		0.30
Lane Grp Cap(c), veh/h	175	359	303	195	0	332	68	1239	550	260	811	810
V/C Ratio(X)	0.85	0.15	0.17	0.87	0.00	0.88	0.63	0.94	0.19	0.90	0.43	0.43
Avail Cap(c_a), veh/h	181	499	423	195	0	450	129	1266	562	263	811	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.2	40.3	40.5	52.6	0.0	46.4	56.8	37.7	27.3	50.3	22.1	22.1
Incr Delay (d2), s/veh	29.3	0.2	0.3	32.5	0.0	14.6	9.4	12.8	0.2	30.7	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	1.3	1.3	6.7	0.0	9.7	1.4	17.8	2.1	8.9	6.4	6.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.4	40.5	40.8	85.0	0.0	61.0	66.2	50.6	27.4	81.0	22.4	22.4
LnGrp LOS	F	D	D	F	A	E	E	D	C	F	C	C
Approach Vol, veh/h		255			463			1309			936	
Approach Delay, s/veh		65.0			69.8			49.2			37.1	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.0	47.8	19.1	29.0	11.1	60.7	17.8	30.3
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	17.7	42.7	13.1	32.0	8.7	51.7	12.2	32.9
Max Q Clear Time (g_c+I1), s	17.5	39.8	13.3	5.4	4.9	18.1	11.9	22.8
Green Ext Time (p_c), s	0.0	2.0	0.0	0.4	0.0	4.3	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	50.0
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	520	70	240	150	80	110	1270	380	90	910	150
Future Volume (veh/h)	370	520	70	240	150	80	110	1270	380	90	910	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	385	542	73	250	156	83	115	1323	396	94	948	156
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	407	869	117	309	318	159	127	1355	595	99	1114	183
Arrive On Green	0.23	0.28	0.28	0.09	0.14	0.14	0.07	0.38	0.38	0.06	0.37	0.37
Sat Flow, veh/h	1781	3144	422	3456	2265	1134	1781	3554	1560	1781	3048	501
Grp Volume(v), veh/h	385	306	309	250	120	119	115	1323	396	94	552	552
Grp Sat Flow(s),veh/h/ln	1781	1777	1789	1728	1777	1622	1781	1777	1560	1781	1777	1773
Q Serve(g_s), s	26.9	19.0	19.1	9.0	7.9	8.6	8.1	46.4	26.6	6.7	36.2	36.2
Cycle Q Clear(g_c), s	26.9	19.0	19.1	9.0	7.9	8.6	8.1	46.4	26.6	6.7	36.2	36.2
Prop In Lane	1.00		0.24	1.00		0.70	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	407	491	494	309	249	228	127	1355	595	99	649	648
V/C Ratio(X)	0.95	0.62	0.63	0.81	0.48	0.52	0.91	0.98	0.67	0.95	0.85	0.85
Avail Cap(c_a), veh/h	407	652	656	413	464	423	127	1355	595	99	649	648
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.0	40.0	40.0	56.5	50.1	50.4	58.3	38.6	32.4	59.6	36.9	37.0
Incr Delay (d2), s/veh	31.0	1.3	1.3	8.6	1.4	1.8	52.5	19.0	2.8	75.3	10.5	10.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.4	8.5	8.6	4.3	3.6	3.6	5.5	23.4	10.5	5.1	17.4	17.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.0	41.3	41.3	65.1	51.6	52.3	110.8	57.6	35.3	134.8	47.4	47.5
LnGrp LOS	E	D	D	E	D	D	F	E	D	F	D	D
Approach Vol, veh/h		1000			489			1834			1198	
Approach Delay, s/veh		55.8			58.7			56.1			54.3	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	54.2	17.8	41.4	15.0	52.2	35.0	24.2
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	7.0	* 48	15.1	46.4	9.0	* 45	28.9	33.0
Max Q Clear Time (g_c+I1), s	8.7	48.4	11.0	21.1	10.1	38.2	28.9	10.6
Green Ext Time (p_c), s	0.0	0.0	0.3	4.0	0.0	3.6	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	55.9
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Intersection Delay, s/veh	125.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	240	710	50	30	320	20	40	70	40	20	50	100
Future Vol, veh/h	240	710	50	30	320	20	40	70	40	20	50	100
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	253	747	53	32	337	21	42	74	42	21	53	105
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	196.4	31	15.5	14.4
HCM LOS	F	D	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	36%	0%	100%	0%	0%	100%	0%	0%	29%	0%
Vol Thru, %	64%	0%	0%	100%	0%	0%	100%	0%	71%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	110	40	240	710	50	30	320	20	70	100
LT Vol	40	0	240	0	0	30	0	0	20	0
Through Vol	70	0	0	710	0	0	320	0	50	0
RT Vol	0	40	0	0	50	0	0	20	0	100
Lane Flow Rate	116	42	253	747	53	32	337	21	74	105
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.292	0.096	0.554	1.532	0.097	0.075	0.756	0.043	0.184	0.239
Departure Headway (Hd)	9.832	8.932	7.892	7.381	6.666	9.275	8.762	8.043	9.738	8.879
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	368	404	457	493	538	389	414	448	371	407
Service Time	7.532	6.632	5.627	5.116	4.401	6.975	6.462	5.743	7.438	6.579
HCM Lane V/C Ratio	0.315	0.104	0.554	1.515	0.099	0.082	0.814	0.047	0.199	0.258
HCM Control Delay	16.5	12.6	20	269.2	10.1	12.7	34	11.1	14.6	14.3
HCM Lane LOS	C	B	C	F	B	B	D	B	B	B
HCM 95th-tile Q	1.2	0.3	3.3	39.4	0.3	0.2	6.2	0.1	0.7	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	300	460	140	40	170	110	100	840	50	70	650	190
Future Volume (veh/h)	300	460	140	40	170	110	100	840	50	70	650	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	323	495	151	43	183	105	108	903	54	75	699	204
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	285	799	355	99	267	146	113	1596	95	90	1233	360
Arrive On Green	0.16	0.22	0.22	0.06	0.12	0.12	0.06	0.47	0.47	0.05	0.46	0.46
Sat Flow, veh/h	1781	3554	1581	1781	2212	1207	1781	3404	204	1781	2704	789
Grp Volume(v), veh/h	323	495	151	43	145	143	108	471	486	75	459	444
Grp Sat Flow(s),veh/h/ln	1781	1777	1581	1781	1777	1642	1781	1777	1830	1781	1777	1716
Q Serve(g_s), s	20.0	15.7	10.2	2.9	9.8	10.5	7.6	24.0	24.0	5.2	23.7	23.7
Cycle Q Clear(g_c), s	20.0	15.7	10.2	2.9	9.8	10.5	7.6	24.0	24.0	5.2	23.7	23.7
Prop In Lane	1.00		1.00	1.00		0.74	1.00		0.11	1.00		0.46
Lane Grp Cap(c), veh/h	285	799	355	99	214	198	113	833	858	90	811	783
V/C Ratio(X)	1.13	0.62	0.43	0.43	0.68	0.72	0.96	0.57	0.57	0.84	0.57	0.57
Avail Cap(c_a), veh/h	285	1251	556	128	469	434	113	833	858	90	811	783
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	0.89	0.89	0.89
Uniform Delay (d), s/veh	52.5	43.6	41.5	57.1	52.6	52.9	58.4	24.0	24.0	58.8	24.9	24.9
Incr Delay (d2), s/veh	94.2	0.8	0.8	2.9	3.7	4.9	71.8	2.8	2.7	42.6	2.6	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	7.0	4.1	1.4	4.6	4.6	5.6	10.2	10.5	3.4	10.1	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	146.7	44.4	42.3	60.0	56.4	57.8	130.1	26.8	26.7	101.5	27.5	27.6
LnGrp LOS	F	D	D	E	E	E	F	C	C	F	C	C
Approach Vol, veh/h		969			331			1065			978	
Approach Delay, s/veh		78.2			57.5			37.2			33.2	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	65.1	13.0	34.1	14.4	63.5	26.0	21.1
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.3	40.7	9.0	44.0	7.9	39.1	20.0	33.0
Max Q Clear Time (g_c+I1), s	7.2	26.0	4.9	17.7	9.6	25.7	22.0	12.5
Green Ext Time (p_c), s	0.0	4.9	0.0	4.0	0.0	4.5	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	49.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	2010	60	60	2050	80	20	10	40	90	10	40
Future Volume (veh/h)	90	2010	60	60	2050	80	20	10	40	90	10	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		1.00
Parking Bus, Adj	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	91	2030	61	61	2071	81	20	10	40	91	10	40
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	113	2180	65	69	2070	80	46	14	305	53	3	304
Arrive On Green	0.06	0.62	0.62	0.04	0.59	0.59	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3520	105	1781	3484	135	0	75	1585	0	16	1580
Grp Volume(v), veh/h	91	1019	1072	61	1048	1104	30	0	40	101	0	40
Grp Sat Flow(s),veh/h/ln	1781	1777	1849	1781	1777	1842	75	0	1585	16	0	1580
Q Serve(g_s), s	6.6	66.5	68.4	4.4	75.9	77.3	0.0	0.0	2.7	0.0	0.0	2.7
Cycle Q Clear(g_c), s	6.6	66.5	68.4	4.4	75.9	77.3	25.0	0.0	2.7	25.0	0.0	2.7
Prop In Lane	1.00		0.06	1.00		0.07	0.67		1.00	0.90		1.00
Lane Grp Cap(c), veh/h	113	1100	1145	69	1056	1095	61	0	305	56	0	304
V/C Ratio(X)	0.81	0.93	0.94	0.89	0.99	1.01	0.50	0.00	0.13	1.81	0.00	0.13
Avail Cap(c_a), veh/h	116	1100	1145	69	1056	1095	61	0	305	56	0	304
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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.1	22.1	22.4	62.2	26.1	26.4	53.3	0.0	43.5	63.6	0.0	43.5
Incr Delay (d2), s/veh	31.9	14.3	15.2	12.7	6.8	10.2	6.1	0.0	0.2	426.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	28.7	30.8	2.2	30.4	33.1	1.1	0.0	1.1	8.5	0.0	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.0	36.4	37.6	74.9	32.9	36.6	59.4	0.0	43.7	489.7	0.0	43.7
LnGrp LOS	F	D	D	E	C	F	E	A	D	F	A	D
Approach Vol, veh/h		2182			2213			70			141	
Approach Delay, s/veh		39.3			35.9			50.4			363.2	
Approach LOS		D			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	87.0		31.5	14.7	83.8		31.5				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	5.0	80.5		25.0	8.5	77.0		25.0				
Max Q Clear Time (g_c+I1), s	6.4	70.4		27.0	8.6	79.3		27.0				
Green Ext Time (p_c), s	0.0	8.5		0.0	0.0	0.0		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		47.8
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	480	1650	150	320	1450	300	130	130	80	200	180	640
Future Volume (veh/h)	480	1650	150	320	1450	300	130	130	80	200	180	640
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		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	500	1719	156	333	1510	312	135	135	83	208	188	667
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	477	2118	189	184	1701	755	146	443	375	254	443	794
Arrive On Green	0.27	0.64	0.64	0.10	0.48	0.48	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3292	294	1781	3554	1578	645	1870	1585	1163	1870	1561
Grp Volume(v), veh/h	500	916	959	333	1510	312	135	135	83	208	188	667
Grp Sat Flow(s),veh/h/ln	1781	1777	1810	1781	1777	1578	645	1870	1585	1163	1870	1561
Q Serve(g_s), s	40.2	56.9	60.4	15.5	57.8	19.3	22.7	8.9	6.3	26.6	12.8	35.5
Cycle Q Clear(g_c), s	40.2	56.9	60.4	15.5	57.8	19.3	35.5	8.9	6.3	35.5	12.8	35.5
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	477	1143	1164	184	1701	755	146	443	375	254	443	794
V/C Ratio(X)	1.05	0.80	0.82	1.81	0.89	0.41	0.93	0.30	0.22	0.82	0.42	0.84
Avail Cap(c_a), veh/h	477	1143	1164	184	1701	755	146	443	375	254	443	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.34	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	19.7	20.3	67.3	35.4	25.4	66.8	47.1	46.1	61.8	48.6	32.1
Incr Delay (d2), s/veh	37.4	2.1	2.4	384.8	7.3	1.7	53.1	0.4	0.3	18.6	0.6	8.0
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	22.5	22.0	23.8	26.6	25.6	7.4	7.3	4.2	2.5	9.1	6.0	21.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.3	21.8	22.7	452.0	42.8	27.1	119.8	47.5	46.4	80.4	49.2	40.1
LnGrp LOS	F	C	C	F	D	C	F	D	D	F	D	D
Approach Vol, veh/h		2375			2155			353			1063	
Approach Delay, s/veh		37.0			103.7			74.9			49.6	
Approach LOS		D			F			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	103.5		42.0	46.7	78.8		42.0				
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	15.5	80.0		* 36	40.2	55.3		35.0				
Max Q Clear Time (g_c+I1), s	17.5	62.4		37.5	42.2	59.8		37.5				
Green Ext Time (p_c), s	0.0	12.2		0.0	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			65.7									
HCM 6th LOS			E									

Notes

User approved pedestrian interval to be less than phase max green.

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

APPENDIX L

LONG-TERM QUEUEING ANALYSIS WORKSHEETS

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	415	395	186	1113	1794
v/c Ratio	1.08	0.99	0.88	0.34	0.74
Control Delay	105.5	77.2	77.8	8.4	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	105.5	77.2	77.8	8.4	22.0
Queue Length 50th (ft)	~311	241	123	106	309
Queue Length 95th (ft)	#506	#445	m#213	131	369
Internal Link Dist (ft)		267		584	420
Turn Bay Length (ft)			300		
Base Capacity (vph)	386	401	212	3310	2416
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.08	0.99	0.88	0.34	0.74

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	183	259	129	215	774	32	517	473	839	774
v/c Ratio	0.57	0.45	0.78	0.70	0.76	0.23	0.30	1.02	0.52	0.74
Control Delay	50.7	38.0	48.7	49.8	21.7	47.1	21.8	73.6	17.5	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1
Total Delay	50.7	38.0	48.7	49.8	21.9	47.1	21.8	73.6	17.5	8.9
Queue Length 50th (ft)	58	76	72	138	136	20	75	~157	135	96
Queue Length 95th (ft)	93	108	m70	m110	m97	49	112	m#229	m224	m119
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	326	756	168	400	1018	168	1745	463	1618	1043
Starvation Cap Reductn	0	0	0	0	19	0	0	0	0	10
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.34	0.77	0.54	0.77	0.19	0.30	1.02	0.52	0.75

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	463	179	179	32	242	103	107	21	116	1053
v/c Ratio	0.79	0.15	0.22	0.16	0.23	0.56	0.56	0.06	0.22	1.83
Control Delay	66.0	20.4	3.9	42.7	34.6	54.7	54.5	0.3	27.7	402.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	20.4	3.9	42.7	34.6	54.7	54.5	0.3	27.7	402.8
Queue Length 50th (ft)	146	27	2	19	48	66	69	0	55	~980
Queue Length 95th (ft)	m164	m33	m13	48	72	124	128	0	100	#1229
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	631	1156	801	194	1030	184	190	352	529	576
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.73	0.15	0.22	0.16	0.23	0.56	0.56	0.06	0.22	1.83

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	42	21	11	42	74	21	558	42	116	969
v/c Ratio	0.16	0.06	0.03	0.15	0.20	0.10	0.37	0.06	0.38	0.42
Control Delay	35.0	26.1	0.1	34.5	13.3	37.5	22.0	0.1	35.0	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.0	26.1	0.1	34.5	13.3	37.5	22.0	0.1	35.0	15.6
Queue Length 50th (ft)	16	8	0	16	8	8	105	0	43	130
Queue Length 95th (ft)	59	26	0	59	41	37	223	0	#141	#440
Internal Link Dist (ft)		1369			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	304	1204	1070	304	1083	214	1942	922	375	2147
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.02	0.01	0.14	0.07	0.10	0.29	0.05	0.31	0.45

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	113	196	227	319	93	773	206	82	1464
v/c Ratio	0.86	0.34	0.96	0.59	0.56	0.43	0.23	0.55	0.89
Control Delay	103.9	23.5	104.4	44.9	66.0	22.1	4.0	66.5	37.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.9	23.5	104.4	44.9	66.0	22.1	4.0	66.5	37.1
Queue Length 50th (ft)	88	38	92	110	69	194	0	62	514
Queue Length 95th (ft)	#197	62	#173	132	#178	325	51	116	#809
Internal Link Dist (ft)		600		1370		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	131	970	237	963	165	1798	885	167	1644
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.20	0.96	0.33	0.56	0.43	0.23	0.49	0.89

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	140	183	75	32	302	97	559	75	957
v/c Ratio	0.99	0.25	0.16	0.20	0.54	0.53	0.35	0.50	0.65
Control Delay	122.1	34.9	0.8	45.5	37.0	55.1	20.2	56.3	21.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	122.1	34.9	0.8	45.5	37.0	55.1	20.2	56.3	21.7
Queue Length 50th (ft)	91	57	0	19	85	58	120	46	198
Queue Length 95th (ft)	#214	75	0	49	107	#163	196	#121	311
Internal Link Dist (ft)		1365			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	141	955	549	159	984	184	1597	151	1475
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.19	0.14	0.20	0.31	0.53	0.35	0.50	0.65

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	42	1552	42	2333	20	31	68	21
v/c Ratio	0.39	0.60	0.42	0.90	0.12	0.13	0.48	0.09
Control Delay	69.3	12.4	71.5	24.2	50.8	1.1	63.8	0.7
Queue Delay	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0
Total Delay	69.3	12.4	71.5	26.2	50.8	1.1	63.8	0.7
Queue Length 50th (ft)	35	346	34	857	16	0	56	0
Queue Length 95th (ft)	75	524	#93	#1311	38	0	95	0
Internal Link Dist (ft)		728		868	295		780	
Turn Bay Length (ft)	240		250					
Base Capacity (vph)	109	2605	101	2591	297	373	261	368
Starvation Cap Reductn	0	0	0	142	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.60	0.42	0.95	0.07	0.08	0.26	0.06

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	398	1398	184	1735	214	102	102	82	112	173	520
v/c Ratio	0.87	0.71	0.73	1.08	0.26	0.77	0.34	0.23	0.56	0.57	0.78
Control Delay	73.3	25.5	77.3	87.2	3.7	92.0	56.6	3.6	66.4	63.6	42.3
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.3	25.9	77.3	87.2	3.7	92.0	56.6	3.6	66.4	63.6	42.3
Queue Length 50th (ft)	364	496	170	~995	0	100	92	0	105	163	383
Queue Length 95th (ft)	#691	579	#413	#1133	48	156	137	15	156	219	528
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	455	1982	251	1604	821	195	434	456	291	440	670
Starvation Cap Reductn	0	197	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.78	0.73	1.08	0.26	0.52	0.24	0.18	0.38	0.39	0.78

Intersection Summary

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

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

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	176	211	464	2299	1588
v/c Ratio	0.65	0.83	0.89	0.62	0.81
Control Delay	54.5	67.9	42.3	4.9	33.7
Queue Delay	0.0	0.0	0.0	0.1	0.0
Total Delay	54.5	67.9	42.3	5.0	33.7
Queue Length 50th (ft)	122	143	295	212	361
Queue Length 95th (ft)	196	#246	m283	m210	#491
Internal Link Dist (ft)		140		584	143
Turn Bay Length (ft)			300		
Base Capacity (vph)	319	299	584	3717	1954
Starvation Cap Reductn	0	0	0	424	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.55	0.71	0.79	0.70	0.81

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	404	628	85	298	1191	32	1468	426	681	287
v/c Ratio	1.13	0.84	0.51	0.92	1.14	0.25	0.91	0.77	0.42	0.26
Control Delay	132.2	53.9	43.1	60.8	93.3	52.7	44.1	36.0	9.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	132.2	53.9	43.1	60.8	93.3	52.7	44.1	36.0	9.5	0.4
Queue Length 50th (ft)	~170	232	43	209	~466	22	355	158	50	0
Queue Length 95th (ft)	#269	#361	m51	m228	m#290	53	#431	m187	62	m1
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	358	750	185	330	1045	217	1621	556	1635	1097
Starvation Cap Reductn	0	0	0	0	1	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.84	0.46	0.90	1.14	0.15	0.91	0.77	0.42	0.26

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	545	465	212	111	596	233	242	71	354	858
v/c Ratio	0.99	0.61	0.31	0.62	0.76	1.18	1.19	0.21	0.54	1.27
Control Delay	84.6	38.7	7.6	63.8	50.7	165.1	165.2	1.3	31.8	162.4
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Total Delay	84.6	38.7	7.6	63.8	50.9	165.1	165.2	1.3	31.8	162.7
Queue Length 50th (ft)	214	129	44	76	147	~208	~216	0	198	~741
Queue Length 95th (ft)	m#299	m167	m66	#147	187	#372	#382	0	298	#999
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	552	833	678	178	891	197	204	345	653	675
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	33	0	0	0	0	22
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	0.56	0.31	0.62	0.69	1.18	1.19	0.21	0.54	1.31

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	149	53	53	170	319	43	1160	106	234	702
v/c Ratio	0.81	0.19	0.13	0.69	0.83	0.37	0.89	0.15	0.87	0.42
Control Delay	83.2	42.8	0.7	66.3	42.6	63.4	44.9	0.5	78.7	22.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.2	42.8	0.7	66.3	42.6	63.4	44.9	0.5	78.7	22.3
Queue Length 50th (ft)	110	35	0	126	127	31	422	0	172	179
Queue Length 95th (ft)	#251	70	0	#285	232	75	#654	0	#358	278
Internal Link Dist (ft)		1369			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	186	515	566	246	567	133	1306	684	270	1668
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.80	0.10	0.09	0.69	0.56	0.32	0.89	0.15	0.87	0.42

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	385	615	250	239	115	1323	396	94	1104
v/c Ratio	0.92	0.70	0.68	0.50	0.88	0.95	0.52	0.94	0.88
Control Delay	75.5	45.6	63.5	38.9	110.9	51.8	13.9	132.4	45.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	75.5	45.6	63.5	38.9	110.9	51.8	13.9	132.4	45.9
Queue Length 50th (ft)	288	231	95	67	89	501	78	73	402
Queue Length 95th (ft)	#588	296	162	107	#240	#848	215	#215	#683
Internal Link Dist (ft)		600		234		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	417	1319	423	943	130	1392	759	100	1261
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.92	0.47	0.59	0.25	0.88	0.95	0.52	0.94	0.88

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	323	495	151	43	301	108	957	75	903
v/c Ratio	0.90	0.45	0.26	0.34	0.49	0.67	0.73	0.62	0.75
Control Delay	77.4	36.2	6.8	62.9	30.2	75.8	38.5	78.8	39.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.4	36.2	6.8	62.9	30.2	75.8	38.5	78.8	39.6
Queue Length 50th (ft)	257	189	7	34	76	83	329	58	311
Queue Length 95th (ft)	#492	206	52	73	102	#209	460	#154	429
Internal Link Dist (ft)		1365			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	359	1264	647	127	958	161	1309	121	1212
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.90	0.39	0.23	0.34	0.31	0.67	0.73	0.62	0.75

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	91	2091	61	2152	30	40	101	40
v/c Ratio	0.60	0.90	0.48	0.95	0.18	0.15	0.62	0.15
Control Delay	73.8	26.6	70.7	33.2	50.6	1.2	69.3	1.2
Queue Delay	0.0	0.0	0.0	6.6	0.0	0.0	0.0	0.0
Total Delay	73.8	26.6	70.7	39.8	50.6	1.2	69.3	1.2
Queue Length 50th (ft)	74	747	49	841	23	0	83	0
Queue Length 95th (ft)	#174	#1056	#144	#1161	50	1	133	1
Internal Link Dist (ft)		728		868	295		780	
Turn Bay Length (ft)	240		250					
Base Capacity (vph)	151	2316	127	2262	272	372	259	367
Starvation Cap Reductn	0	0	0	109	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.60	0.90	0.48	1.00	0.11	0.11	0.39	0.11

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	500	1875	333	1510	313	135	135	83	208	188	667
v/c Ratio	0.95	1.00	1.40	1.16	0.41	0.76	0.36	0.20	0.90	0.49	0.83
Control Delay	79.0	56.5	248.5	122.4	5.1	82.0	53.1	3.2	96.4	56.3	38.7
Queue Delay	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	79.0	76.5	248.5	122.4	5.1	82.0	53.1	3.2	96.4	56.3	38.7
Queue Length 50th (ft)	491	~953	~461	~915	3	123	113	0	197	161	478
Queue Length 95th (ft)	#760	#1140	#691	#1055	67	#205	175	15	#324	236	656
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	529	1866	238	1304	765	205	434	461	265	440	801
Starvation Cap Reductn	0	101	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.95	1.06	1.40	1.16	0.41	0.66	0.31	0.18	0.78	0.43	0.83

Intersection Summary

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

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

APPENDIX M

LONG-TERM + PROJECT ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	606	5	180	215	1097	0	0	1384	360
Future Volume (veh/h)	0	0	0	606	5	180	215	1097	0	0	1384	360
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		0.97
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				408	309	186	222	1131	0	0	1427	371
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				410	252	151	214	3324	0	0	1944	503
Arrive On Green				0.23	0.23	0.23	0.24	1.00	0.00	0.00	0.48	0.48
Sat Flow, veh/h				1781	1094	658	1781	5274	0	0	4184	1038
Grp Volume(v), veh/h				408	0	495	222	1131	0	0	1208	590
Grp Sat Flow(s),veh/h/ln				1781	0	1752	1781	1702	0	0	1702	1650
Q Serve(g_s), s				22.9	0.0	23.0	12.0	0.0	0.0	0.0	28.4	28.7
Cycle Q Clear(g_c), s				22.9	0.0	23.0	12.0	0.0	0.0	0.0	28.4	28.7
Prop In Lane				1.00		0.38	1.00		0.00	0.00		0.63
Lane Grp Cap(c), veh/h				410	0	403	214	3324	0	0	1648	799
V/C Ratio(X)				1.00	0.00	1.23	1.04	0.34	0.00	0.00	0.73	0.74
Avail Cap(c_a), veh/h				410	0	403	214	3324	0	0	1648	799
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.80	0.80	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				38.5	0.0	38.5	38.0	0.0	0.0	0.0	20.6	20.7
Incr Delay (d2), s/veh				43.3	0.0	122.9	65.5	0.2	0.0	0.0	2.9	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				14.7	0.0	23.4	8.2	0.1	0.0	0.0	10.8	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				81.7	0.0	161.4	103.5	0.2	0.0	0.0	23.6	26.8
LnGrp LOS				F	A	F	F	A	A	A	C	C
Approach Vol, veh/h					903			1353			1798	
Approach Delay, s/veh					125.4			17.2			24.6	
Approach LOS					F			B			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	71.9		16.7	55.2		28.1						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	65.1		* 12	48.4		23.0						
Max Q Clear Time (g_c+I1), s	2.0		14.0	30.7		25.0						
Green Ext Time (p_c), s	5.6		0.0	7.9		0.0						

Intersection Summary	
HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for 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)	170	220	20	129	200	720	30	432	126	440	790	720
Future Volume (veh/h)	170	220	20	129	200	720	30	432	126	440	790	720
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		1.00	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	177	229	21	134	208	750	31	450	131	458	823	750
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	309	516	47	165	299	992	72	1168	329	676	1600	837
Arrive On Green	0.09	0.16	0.16	0.03	0.05	0.05	0.04	0.29	0.29	0.06	0.15	0.15
Sat Flow, veh/h	3456	3285	298	1781	1870	2790	1781	3959	1114	3456	3554	1544
Grp Volume(v), veh/h	177	123	127	134	208	750	31	385	196	458	823	750
Grp Sat Flow(s),veh/h/ln	1728	1777	1806	1781	1870	1395	1781	1702	1669	1728	1777	1544
Q Serve(g_s), s	4.9	6.3	6.4	7.5	10.9	5.1	1.7	9.0	9.4	13.0	21.4	41.2
Cycle Q Clear(g_c), s	4.9	6.3	6.4	7.5	10.9	5.1	1.7	9.0	9.4	13.0	21.4	41.2
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.67	1.00		1.00
Lane Grp Cap(c), veh/h	309	279	284	165	299	992	72	1004	492	676	1600	837
V/C Ratio(X)	0.57	0.44	0.45	0.81	0.69	0.76	0.43	0.38	0.40	0.68	0.51	0.90
Avail Cap(c_a), veh/h	328	382	388	169	402	1145	169	1004	492	676	1600	837
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	0.87	0.87	0.87	0.48	0.48	0.48
Uniform Delay (d), s/veh	43.7	38.2	38.2	47.6	45.0	12.3	46.9	28.0	28.2	43.7	32.5	31.1
Incr Delay (d2), s/veh	2.1	1.1	1.1	23.7	3.1	2.4	3.5	1.0	2.1	1.3	0.6	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	2.8	2.9	4.6	5.7	4.6	0.8	3.6	3.8	6.0	10.1	18.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	39.3	39.3	71.4	48.0	14.7	50.4	29.0	30.3	45.0	33.1	38.8
LnGrp LOS	D	D	D	E	D	B	D	C	C	D	C	D
Approach Vol, veh/h		427			1092			612			2031	
Approach Delay, s/veh		42.0			28.0			30.5			37.9	
Approach LOS		D			C			C			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	26.1	36.0	15.8	22.2	10.5	51.5	15.4	22.5
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	13.5	29.5	9.5	21.5	9.5	33.5	9.5	21.5
Max Q Clear Time (g_c+I1), s	15.0	11.4	9.5	8.4	3.7	43.2	6.9	12.9
Green Ext Time (p_c), s	0.0	3.2	0.0	1.1	0.0	0.0	0.1	3.1

Intersection Summary	
HCM 6th Ctrl Delay	34.6
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	466	170	170	30	230	0	140	60	20	110	320	689
Future Volume (veh/h)	466	170	170	30	230	0	140	60	20	110	320	689
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	491	179	179	32	242	0	105	122	21	116	337	687
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	566	1099	661	115	1074	0	196	206	174	533	164	335
Arrive On Green	0.16	0.31	0.31	0.06	0.21	0.00	0.11	0.11	0.11	0.30	0.30	0.30
Sat Flow, veh/h	3456	3554	1575	1781	5274	0	1781	1870	1585	1781	549	1120
Grp Volume(v), veh/h	491	179	179	32	242	0	105	122	21	116	0	1024
Grp Sat Flow(s),veh/h/ln	1728	1777	1575	1781	1702	0	1781	1870	1585	1781	0	1669
Q Serve(g_s), s	13.9	3.7	7.4	1.7	3.9	0.0	5.6	6.2	1.2	4.9	0.0	29.9
Cycle Q Clear(g_c), s	13.9	3.7	7.4	1.7	3.9	0.0	5.6	6.2	1.2	4.9	0.0	29.9
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	566	1099	661	115	1074	0	196	206	174	533	0	499
V/C Ratio(X)	0.87	0.16	0.27	0.28	0.23	0.00	0.54	0.59	0.12	0.22	0.00	2.05
Avail Cap(c_a), veh/h	636	1099	661	196	1074	0	196	206	174	533	0	499
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.51	0.51	0.51	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.8	25.1	19.0	44.5	32.7	0.0	42.1	42.4	40.1	26.3	0.0	35.1
Incr Delay (d2), s/veh	6.2	0.2	0.5	0.5	0.5	0.0	1.5	3.2	0.1	0.1	0.0	480.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	1.6	3.4	0.8	1.7	0.0	2.5	3.0	0.5	2.1	0.0	78.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.0	25.3	19.5	45.0	33.2	0.0	43.6	45.5	40.3	26.4	0.0	515.5
LnGrp LOS	D	C	B	D	C	A	D	D	D	C	A	F
Approach Vol, veh/h		849			274			248			1140	
Approach Delay, s/veh		36.6			34.6			44.3			465.7	
Approach LOS		D			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.2	37.7		35.0	21.1	27.8		16.1
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1
Max Green Setting (Gmax), s	* 11	26.4		29.9	* 18	19.0		11.0
Max Q Clear Time (g_c+I1), s	13.9	9.4		31.9	15.9	5.9		8.2
Green Ext Time (p_c), s	0.0	1.0		0.0	0.5	0.8		0.2

Intersection Summary	
HCM 6th Ctrl Delay	232.0
HCM 6th LOS	F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for turning movement.

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

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	40	30	80	50	20	20	80	47	10	170	20
Future Vol, veh/h	10	40	30	80	50	20	20	80	47	10	170	20
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	46	34	92	57	23	23	92	54	11	195	23
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	8.8	10.3	9.1	10.5
HCM LOS	A	B	A	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	20%	0%	20%	0%	62%	0%	6%	0%
Vol Thru, %	80%	0%	80%	0%	38%	0%	94%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	47	50	30	130	20	180	20
LT Vol	20	0	10	0	80	0	10	0
Through Vol	80	0	40	0	50	0	170	0
RT Vol	0	47	0	30	0	20	0	20
Lane Flow Rate	115	54	57	34	149	23	207	23
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.179	0.072	0.094	0.049	0.248	0.032	0.314	0.03
Departure Headway (Hd)	5.616	4.81	5.879	5.071	5.967	4.951	5.471	4.738
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	633	736	603	698	598	716	652	748
Service Time	3.4	2.593	3.672	2.863	3.749	2.732	3.249	2.515
HCM Lane V/C Ratio	0.182	0.073	0.095	0.049	0.249	0.032	0.317	0.031
HCM Control Delay	9.6	8	9.3	8.1	10.7	7.9	10.8	7.7
HCM Lane LOS	A	A	A	A	B	A	B	A
HCM 95th-tile Q	0.6	0.2	0.3	0.2	1	0.1	1.3	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	20	62	40	20	50	33	542	40	110	833	106
Future Volume (veh/h)	106	20	62	40	20	50	33	542	40	110	833	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	21	65	42	21	53	35	571	42	116	877	112
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	170	281	238	118	57	143	78	1108	492	150	1117	143
Arrive On Green	0.10	0.15	0.15	0.07	0.12	0.12	0.04	0.31	0.31	0.08	0.35	0.35
Sat Flow, veh/h	1781	1870	1582	1781	468	1180	1781	3554	1577	1781	3169	405
Grp Volume(v), veh/h	112	21	65	42	0	74	35	571	42	116	492	497
Grp Sat Flow(s),veh/h/ln	1781	1870	1582	1781	0	1648	1781	1777	1577	1781	1777	1797
Q Serve(g_s), s	3.8	0.6	2.3	1.4	0.0	2.6	1.2	8.3	1.2	4.0	15.7	15.7
Cycle Q Clear(g_c), s	3.8	0.6	2.3	1.4	0.0	2.6	1.2	8.3	1.2	4.0	15.7	15.7
Prop In Lane	1.00		1.00	1.00		0.72	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	170	281	238	118	0	199	78	1108	492	150	626	633
V/C Ratio(X)	0.66	0.07	0.27	0.36	0.00	0.37	0.45	0.52	0.09	0.77	0.79	0.79
Avail Cap(c_a), veh/h	240	947	801	240	0	834	169	1378	612	296	815	825
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	23.1	23.8	28.2	0.0	25.6	29.5	17.8	15.4	28.3	18.3	18.3
Incr Delay (d2), s/veh	4.3	0.1	0.6	1.8	0.0	1.1	4.0	0.4	0.1	8.2	3.8	3.8
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	1.7	0.3	0.8	0.6	0.0	1.0	0.6	3.0	0.4	1.9	6.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.9	23.2	24.4	30.1	0.0	26.7	33.5	18.2	15.4	36.5	22.1	22.1
LnGrp LOS	C	C	C	C	A	C	C	B	B	D	C	C
Approach Vol, veh/h		198			116			648			1105	
Approach Delay, s/veh		28.5			27.9			18.9			23.6	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	25.7	10.2	15.5	9.3	28.3	12.0	13.6
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	10.5	24.5	8.5	32.0	6.0	29.0	8.5	32.0
Max Q Clear Time (g_c+I1), s	6.0	10.3	3.4	4.3	3.2	17.7	5.8	4.6
Green Ext Time (p_c), s	0.1	3.1	0.0	0.3	0.0	4.4	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	104	90	220	247	80	90	750	200	80	1140	280
Future Volume (veh/h)	110	104	90	220	247	80	90	750	200	80	1140	280
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	113	107	93	227	255	82	93	773	206	82	1175	289
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	132	259	205	239	362	114	104	1870	833	104	1489	362
Arrive On Green	0.07	0.14	0.14	0.07	0.14	0.14	0.06	0.53	0.53	0.06	0.53	0.53
Sat Flow, veh/h	1781	1879	1486	3456	2661	836	1781	3554	1582	1781	2828	688
Grp Volume(v), veh/h	113	101	99	227	168	169	93	773	206	82	733	731
Grp Sat Flow(s),veh/h/ln	1781	1777	1588	1728	1777	1720	1781	1777	1582	1781	1777	1739
Q Serve(g_s), s	7.5	6.2	6.9	7.9	10.8	11.3	6.2	15.8	8.5	5.5	39.9	41.2
Cycle Q Clear(g_c), s	7.5	6.2	6.9	7.9	10.8	11.3	6.2	15.8	8.5	5.5	39.9	41.2
Prop In Lane	1.00		0.94	1.00		0.49	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	132	245	219	239	242	234	104	1870	833	104	935	915
V/C Ratio(X)	0.86	0.41	0.45	0.95	0.70	0.72	0.90	0.41	0.25	0.79	0.78	0.80
Avail Cap(c_a), veh/h	132	492	439	239	489	473	104	1870	833	163	935	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	47.3	47.6	55.6	49.5	49.6	56.1	17.2	15.5	55.8	22.9	23.2
Incr Delay (d2), s/veh	39.0	1.1	1.5	44.3	3.6	4.1	56.3	0.7	0.7	12.5	6.5	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	2.8	2.8	4.9	5.1	5.1	4.4	6.6	3.2	2.8	17.8	18.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.9	48.4	49.1	99.9	53.0	53.8	112.4	17.9	16.2	68.2	29.5	30.4
LnGrp LOS	F	D	D	F	D	D	F	B	B	E	C	C
Approach Vol, veh/h		313			564			1072			1546	
Approach Delay, s/veh		65.0			72.1			25.8			32.0	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	69.2	14.8	23.0	13.0	69.2	15.0	22.8
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	7.0	* 43	8.3	33.2	7.0	* 47	8.9	33.0
Max Q Clear Time (g_c+I1), s	17.5	17.8	9.9	8.9	8.2	43.2	9.5	13.3
Green Ext Time (p_c), s	0.0	6.6	0.0	1.1	0.0	2.6	0.0	1.9

Intersection Summary	
HCM 6th Ctrl Delay	39.5
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection	
Intersection Delay, s/veh	21.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	94	230	20	32	402	21	30	32	10	18	77	155
Future Vol, veh/h	94	230	20	32	402	21	30	32	10	18	77	155
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	101	247	22	34	432	23	32	34	11	19	83	167
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	15.5	33	12.5	12.9
HCM LOS	C	D	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	48%	0%	100%	0%	0%	100%	0%	0%	19%	0%
Vol Thru, %	52%	0%	0%	100%	0%	0%	100%	0%	81%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	62	10	94	230	20	32	402	21	95	155
LT Vol	30	0	94	0	0	32	0	0	18	0
Through Vol	32	0	0	230	0	0	402	0	77	0
RT Vol	0	10	0	0	20	0	0	21	0	155
Lane Flow Rate	67	11	101	247	22	34	432	23	102	167
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.157	0.022	0.219	0.5	0.039	0.071	0.836	0.039	0.22	0.322
Departure Headway (Hd)	8.472	7.518	7.795	7.285	6.572	7.472	6.964	6.252	7.75	6.949
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	423	475	461	495	544	480	519	572	463	517
Service Time	6.236	5.281	5.544	5.034	4.32	5.216	4.707	3.995	5.498	4.698
HCM Lane V/C Ratio	0.158	0.023	0.219	0.499	0.04	0.071	0.832	0.04	0.22	0.323
HCM Control Delay	12.8	10.5	12.7	17.1	9.6	10.8	36	9.3	12.7	13
HCM Lane LOS	B	B	B	C	A	B	E	A	B	B
HCM 95th-tile Q	0.6	0.1	0.8	2.8	0.1	0.2	8.5	0.1	0.8	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	175	82	30	222	63	93	480	50	82	550	383
Future Volume (veh/h)	142	175	82	30	222	63	93	480	50	82	550	383
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	188	88	32	239	68	100	516	54	88	591	412
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	143	529	236	94	335	93	107	1583	165	107	966	673
Arrive On Green	0.08	0.15	0.15	0.05	0.12	0.12	0.06	0.49	0.49	0.06	0.49	0.49
Sat Flow, veh/h	1781	3554	1582	1781	2746	764	1781	3242	338	1781	1979	1379
Grp Volume(v), veh/h	153	188	88	32	153	154	100	282	288	88	531	472
Grp Sat Flow(s),veh/h/ln	1781	1777	1582	1781	1777	1733	1781	1777	1804	1781	1777	1581
Q Serve(g_s), s	8.0	4.8	5.0	1.7	8.3	8.6	5.6	9.7	9.7	4.9	21.8	21.8
Cycle Q Clear(g_c), s	8.0	4.8	5.0	1.7	8.3	8.6	5.6	9.7	9.7	4.9	21.8	21.8
Prop In Lane	1.00		1.00	1.00		0.44	1.00		0.19	1.00		0.87
Lane Grp Cap(c), veh/h	143	529	236	94	217	211	107	867	880	107	867	772
V/C Ratio(X)	1.07	0.36	0.37	0.34	0.71	0.73	0.94	0.33	0.33	0.82	0.61	0.61
Avail Cap(c_a), veh/h	143	959	427	160	498	485	107	867	880	107	867	772
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	0.79	0.79	0.79
Uniform Delay (d), s/veh	46.0	38.2	38.4	45.7	42.2	42.3	46.8	15.6	15.6	46.5	18.7	18.7
Incr Delay (d2), s/veh	96.4	0.4	1.0	2.1	4.2	4.8	66.7	1.0	1.0	32.0	2.5	2.9
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	7.3	2.1	2.0	0.8	3.8	3.9	4.4	3.8	3.9	3.0	8.7	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	142.4	38.6	39.3	47.8	46.3	47.1	113.5	16.6	16.6	78.5	21.2	21.5
LnGrp LOS	F	D	D	D	D	D	F	B	B	E	C	C
Approach Vol, veh/h		429			339			670			1091	
Approach Delay, s/veh		75.8			46.8			31.0			26.0	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	55.3	11.3	20.9	12.5	55.3	14.0	18.2
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	33.0	9.0	27.0	6.0	33.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	10.3	11.7	3.7	7.0	7.6	23.8	10.0	10.6
Green Ext Time (p_c), s	0.0	3.0	0.0	1.4	0.0	4.1	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1464	30	40	2187	70	10	10	30	60	5	29
Future Volume (veh/h)	42	1464	30	40	2187	70	10	10	30	60	5	29
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		1.00
Parking Bus, Adj	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	44	1525	31	42	2278	73	10	10	31	62	5	30
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	76	2231	45	54	2157	69	42	29	306	53	2	305
Arrive On Green	0.04	0.63	0.63	0.03	0.61	0.61	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3560	72	1781	3512	112	0	149	1585	0	12	1580
Grp Volume(v), veh/h	44	760	796	42	1145	1206	20	0	31	67	0	30
Grp Sat Flow(s),veh/h/ln	1781	1777	1855	1781	1777	1847	149	0	1585	12	0	1580
Q Serve(g_s), s	3.2	36.3	36.5	3.0	79.8	79.8	0.0	0.0	2.1	0.0	0.0	2.0
Cycle Q Clear(g_c), s	3.2	36.3	36.5	3.0	79.8	79.8	25.1	0.0	2.1	25.1	0.0	2.0
Prop In Lane	1.00		0.04	1.00		0.06	0.50		1.00	0.93		1.00
Lane Grp Cap(c), veh/h	76	1113	1163	54	1091	1134	70	0	306	56	0	305
V/C Ratio(X)	0.58	0.68	0.68	0.78	1.05	1.06	0.28	0.00	0.10	1.20	0.00	0.10
Avail Cap(c_a), veh/h	100	1113	1163	69	1091	1134	70	0	306	56	0	305
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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	61.1	15.8	15.9	62.6	25.1	25.1	44.8	0.0	43.2	64.0	0.0	43.1
Incr Delay (d2), s/veh	6.7	3.4	3.3	4.0	25.2	30.6	2.2	0.0	0.1	186.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	14.2	14.9	1.4	37.0	40.1	0.6	0.0	0.8	4.7	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	67.8	19.2	19.2	66.6	50.2	55.7	47.0	0.0	43.3	250.0	0.0	43.3
LnGrp LOS	E	B	B	E	F	F	D	A	D	F	A	D
Approach Vol, veh/h		1600			2393			51			97	
Approach Delay, s/veh		20.5			53.3			44.8			186.1	
Approach LOS		C			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.4	88.0		31.6	12.1	86.3		31.6
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	5.0	80.4		25.1	7.3	78.1		25.1
Max Q Clear Time (g_c+I1), s	5.0	38.5		27.1	5.2	81.8		27.1
Green Ext Time (p_c), s	0.0	14.3		0.0	0.0	0.0		0.0

Intersection Summary		
HCM 6th Ctrl Delay		43.6
HCM 6th LOS		D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	394	1220	150	180	1700	219	100	100	80	145	170	527
Future Volume (veh/h)	394	1220	150	180	1700	219	100	100	80	145	170	527
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	402	1245	153	184	1735	223	102	102	82	148	173	538
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	327	2163	265	121	2002	891	165	443	370	279	443	665
Arrive On Green	0.18	0.68	0.68	0.07	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3187	390	1781	3554	1582	738	1870	1563	1200	1870	1581
Grp Volume(v), veh/h	402	692	706	184	1735	223	102	102	82	148	173	538
Grp Sat Flow(s),veh/h/ln	1781	1777	1800	1781	1777	1582	738	1870	1563	1200	1870	1581
Q Serve(g_s), s	27.5	30.7	31.1	10.2	62.5	10.8	20.2	6.6	6.3	17.0	11.7	35.5
Cycle Q Clear(g_c), s	27.5	30.7	31.1	10.2	62.5	10.8	31.9	6.6	6.3	23.6	11.7	35.5
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	327	1206	1221	121	2002	891	165	443	370	279	443	665
V/C Ratio(X)	1.23	0.57	0.58	1.52	0.87	0.25	0.62	0.23	0.22	0.53	0.39	0.81
Avail Cap(c_a), veh/h	327	1206	1221	121	2002	891	165	443	370	279	443	665
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	12.7	12.7	69.9	27.9	16.6	61.6	46.2	46.1	55.8	48.2	38.2
Incr Delay (d2), s/veh	123.3	1.6	1.6	271.1	5.4	0.7	6.8	0.3	0.3	1.9	0.6	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.4	11.6	11.9	13.7	26.3	4.0	4.0	3.1	2.5	5.2	5.5	18.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	184.5	14.2	14.3	341.0	33.3	17.3	68.3	46.5	46.4	57.7	48.7	45.7
LnGrp LOS	F	B	B	F	C	B	E	D	D	E	D	D
Approach Vol, veh/h		1800			2142			286			859	
Approach Delay, s/veh		52.3			58.1			54.3			48.3	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	16.7	108.8		42.0	34.0	91.5		42.0
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	10.2	85.3		* 36	27.5	68.0		35.0
Max Q Clear Time (g_c+I1), s	12.2	33.1		37.5	29.5	64.5		33.9
Green Ext Time (p_c), s	0.0	12.5		0.0	0.0	3.0		0.2

Intersection Summary	
HCM 6th Ctrl Delay	54.2
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	95	2	8	141	9	31
Future Vol, veh/h	95	2	8	141	9	31
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	345	-	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	103	2	9	153	10	34

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	105	0	275	104
Stage 1	-	-	-	-	104	-
Stage 2	-	-	-	-	171	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1486	-	715	951
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	859	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1486	-	711	951
Mov Cap-2 Maneuver	-	-	-	-	711	-
Stage 1	-	-	-	-	920	-
Stage 2	-	-	-	-	854	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	884	-	-	1486	-
HCM Lane V/C Ratio	0.049	-	-	0.006	-
HCM Control Delay (s)	9.3	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	104	2	8	150	9	33
Future Vol, veh/h	104	2	8	150	9	33
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	370	-	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	113	2	9	163	10	36

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	115	0	295	114
Stage 1	-	-	-	-	114	-
Stage 2	-	-	-	-	181	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1474	-	696	939
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	850	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1474	-	692	939
Mov Cap-2 Maneuver	-	-	-	-	692	-
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	845	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	872	-	-	1474	-
HCM Lane V/C Ratio	0.052	-	-	0.006	-
HCM Control Delay (s)	9.4	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	134	3	13	146	12	54
Future Vol, veh/h	134	3	13	146	12	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	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	146	3	14	159	13	59

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	149	0	335	148
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	187	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1432	-	660	899
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	845	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1432	-	653	899
Mov Cap-2 Maneuver	-	-	-	-	653	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	837	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	841	-	-	1432	-
HCM Lane V/C Ratio	0.085	-	-	0.01	-
HCM Control Delay (s)	9.7	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	377	694	3	22	1
Future Vol, veh/h	1	377	694	3	22	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	-	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	1	410	754	3	24	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	757	0	-	0	1168	756
Stage 1	-	-	-	-	756	-
Stage 2	-	-	-	-	412	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	854	-	-	-	214	408
Stage 1	-	-	-	-	464	-
Stage 2	-	-	-	-	669	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	854	-	-	-	214	408
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	464	-
Stage 2	-	-	-	-	669	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	23.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	854	-	-	-	219
HCM Lane V/C Ratio	0.001	-	-	-	0.114
HCM Control Delay (s)	9.2	-	-	-	23.5
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	399	695	3	0	2
Future Vol, veh/h	0	399	695	3	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	434	755	3	0	2

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	757
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	408
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	408
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	408
HCM Lane V/C Ratio	-	-	-	0.005
HCM Control Delay (s)	-	-	-	13.9
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	215	5	180	465	2237	0	0	1137	420
Future Volume (veh/h)	0	0	0	215	5	180	465	2237	0	0	1137	420
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		0.98
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach					No			No			No	
Adj Sat Flow, veh/h/ln				1870	1870	1870	1870	1870	0	0	1870	1870
Adj Flow Rate, veh/h				203	32	179	479	2306	0	0	1172	386
Peak Hour Factor				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	0	0	2	2
Cap, veh/h				268	37	207	508	3786	0	0	1560	513
Arrive On Green				0.15	0.15	0.15	0.38	0.99	0.00	0.00	0.41	0.41
Sat Flow, veh/h				1781	246	1377	1781	5274	0	0	3942	1242
Grp Volume(v), veh/h				203	0	211	479	2306	0	0	1057	501
Grp Sat Flow(s),veh/h/ln				1781	0	1623	1781	1702	0	0	1702	1612
Q Serve(g_s), s				12.0	0.0	14.0	28.6	1.7	0.0	0.0	29.1	29.1
Cycle Q Clear(g_c), s				12.0	0.0	14.0	28.6	1.7	0.0	0.0	29.1	29.1
Prop In Lane				1.00		0.85	1.00		0.00	0.00		0.77
Lane Grp Cap(c), veh/h				268	0	244	508	3786	0	0	1407	666
V/C Ratio(X)				0.76	0.00	0.86	0.94	0.61	0.00	0.00	0.75	0.75
Avail Cap(c_a), veh/h				338	0	308	588	3786	0	0	1407	666
HCM Platoon Ratio				1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.09	0.09	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				44.8	0.0	45.6	33.3	0.2	0.0	0.0	27.5	27.5
Incr Delay (d2), s/veh				5.3	0.0	15.7	3.3	0.1	0.0	0.0	3.7	7.7
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				5.7	0.0	6.7	11.1	0.2	0.0	0.0	11.8	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh				50.1	0.0	61.4	36.5	0.3	0.0	0.0	31.2	35.1
LnGrp LOS				D	A	E	D	A	A	A	C	D
Approach Vol, veh/h					414			2785			1558	
Approach Delay, s/veh					55.8			6.5			32.5	
Approach LOS					E			A			C	

Timer - Assigned Phs	2		5	6		8						
Phs Duration (G+Y+Rc), s	88.4		36.1	52.3		21.6						
Change Period (Y+Rc), s	6.8		* 4.7	6.8		5.1						
Max Green Setting (Gmax), s	77.2		* 36	36.2		20.9						
Max Q Clear Time (g_c+I1), s	3.7		30.6	31.1		16.0						
Green Ext Time (p_c), s	20.2		0.8	3.1		0.6						

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for 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)	380	560	30	114	280	1120	30	1202	211	400	682	270
Future Volume (veh/h)	380	560	30	114	280	1120	30	1202	211	400	682	270
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.97	1.00		1.00
Parking Bus, Adj	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	404	596	32	121	298	1085	32	1279	224	426	726	287
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	361	677	36	150	331	951	71	1383	242	567	1572	867
Arrive On Green	0.10	0.20	0.20	0.03	0.06	0.06	0.04	0.32	0.32	0.05	0.15	0.15
Sat Flow, veh/h	3456	3428	184	1781	1870	2790	1781	4347	761	3456	3554	1585
Grp Volume(v), veh/h	404	309	319	121	298	1085	32	1001	502	426	726	287
Grp Sat Flow(s),veh/h/ln	1728	1777	1835	1781	1870	1395	1781	1702	1705	1728	1777	1585
Q Serve(g_s), s	11.5	18.5	18.6	7.4	17.4	13.8	1.9	31.3	31.3	13.4	20.6	14.7
Cycle Q Clear(g_c), s	11.5	18.5	18.6	7.4	17.4	13.8	1.9	31.3	31.3	13.4	20.6	14.7
Prop In Lane	1.00		0.10	1.00		1.00	1.00		0.45	1.00		1.00
Lane Grp Cap(c), veh/h	361	351	363	150	331	951	71	1083	542	567	1572	867
V/C Ratio(X)	1.12	0.88	0.88	0.81	0.90	1.14	0.45	0.93	0.93	0.75	0.46	0.33
Avail Cap(c_a), veh/h	361	351	363	186	332	952	219	1099	550	567	1572	867
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.36	0.36	0.36	0.31	0.31	0.31	0.46	0.46	0.46
Uniform Delay (d), s/veh	49.3	42.9	42.9	52.6	50.8	20.5	51.6	36.2	36.2	49.8	35.0	22.4
Incr Delay (d2), s/veh	83.3	21.6	21.4	7.5	11.7	68.3	1.4	5.5	9.8	2.6	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.1	10.2	10.5	3.8	9.8	13.8	0.9	13.1	13.8	6.4	9.8	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	132.6	64.5	64.3	60.1	62.5	88.8	53.0	41.7	46.1	52.5	35.4	22.9
LnGrp LOS	F	E	E	E	E	F	D	D	D	D	D	C
Approach Vol, veh/h		1032			1504			1535			1439	
Approach Delay, s/veh		91.1			81.3			43.4			38.0	
Approach LOS		F			F			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	41.5	15.7	28.2	10.9	55.2	18.0	26.0
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	7.5	35.5	11.5	19.5	13.5	39.5	11.5	19.5
Max Q Clear Time (g_c+I1), s	5.4	33.3	9.4	20.6	3.9	22.6	13.5	19.4
Green Ext Time (p_c), s	0.4	1.7	0.1	0.0	0.0	5.2	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	61.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	551	460	210	110	580	10	300	170	70	350	320	564
Future Volume (veh/h)	551	460	210	110	580	10	300	170	70	350	320	564
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	557	465	212	111	586	10	238	264	71	354	323	537
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	556	852	562	172	907	15	209	219	186	622	220	367
Arrive On Green	0.16	0.24	0.24	0.10	0.18	0.18	0.12	0.12	0.12	0.35	0.35	0.35
Sat Flow, veh/h	3456	3554	1569	1781	5170	88	1781	1870	1585	1781	631	1050
Grp Volume(v), veh/h	557	465	212	111	385	211	238	264	71	354	0	860
Grp Sat Flow(s),veh/h/ln	1728	1777	1569	1781	1702	1854	1781	1870	1585	1781	0	1681
Q Serve(g_s), s	17.7	12.6	11.1	6.6	11.6	11.6	12.9	12.9	4.6	17.8	0.0	38.4
Cycle Q Clear(g_c), s	17.7	12.6	11.1	6.6	11.6	11.6	12.9	12.9	4.6	17.8	0.0	38.4
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		0.62
Lane Grp Cap(c), veh/h	556	852	562	172	597	325	209	219	186	622	0	587
V/C Ratio(X)	1.00	0.55	0.38	0.64	0.65	0.65	1.14	1.20	0.38	0.57	0.00	1.47
Avail Cap(c_a), veh/h	556	852	562	180	597	325	209	219	186	622	0	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.32	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	46.2	36.6	26.3	47.9	42.2	42.2	48.5	48.5	44.9	29.1	0.0	35.8
Incr Delay (d2), s/veh	22.0	0.8	0.6	5.4	5.3	9.6	104.8	126.7	0.5	0.8	0.0	218.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	5.5	5.1	3.2	5.3	6.2	11.8	13.7	1.8	7.6	0.0	51.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.1	37.4	26.9	53.3	47.5	51.8	153.4	175.2	45.3	29.9	0.0	254.4
LnGrp LOS	F	D	C	D	D	D	F	F	D	C	A	F
Approach Vol, veh/h		1234			707			573			1214	
Approach Delay, s/veh		49.5			49.7			150.1			188.9	
Approach LOS		D			D			F			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	15.3	33.2		43.5	22.4	26.1		18.0
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1
Max Green Setting (Gmax), s	* 11	25.9		38.4	* 18	19.3		12.9
Max Q Clear Time (g_c+I1), s	19.6	14.6		40.4	19.7	13.6		14.9
Green Ext Time (p_c), s	0.0	2.0		0.0	0.0	1.3		0.0

Intersection Summary	
HCM 6th Ctrl Delay	110.4
HCM 6th LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

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

Intersection	
Intersection Delay, s/veh	12
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	140	30	73	100	20	20	220	119	20	80	20
Future Vol, veh/h	30	140	30	73	100	20	20	220	119	20	80	20
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	152	33	79	109	22	22	239	129	22	87	22
Number of Lanes	0	1	1	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	11.8	12.4	12.3	10.6
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	8%	0%	18%	0%	42%	0%	20%	0%
Vol Thru, %	92%	0%	82%	0%	58%	0%	80%	0%
Vol Right, %	0%	100%	0%	100%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	240	119	170	30	173	20	100	20
LT Vol	20	0	30	0	73	0	20	0
Through Vol	220	0	140	0	100	0	80	0
RT Vol	0	119	0	30	0	20	0	20
Lane Flow Rate	261	129	185	33	188	22	109	22
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.444	0.193	0.332	0.051	0.344	0.034	0.199	0.035
Departure Headway (Hd)	6.126	5.375	6.459	5.659	6.587	5.662	6.575	5.761
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	587	666	556	631	545	630	545	619
Service Time	3.873	3.122	4.215	3.414	4.342	3.417	4.335	3.521
HCM Lane V/C Ratio	0.445	0.194	0.333	0.052	0.345	0.035	0.2	0.036
HCM Control Delay	13.7	9.4	12.4	8.7	12.8	8.6	11	8.7
HCM Lane LOS	B	A	B	A	B	A	B	A
HCM 95th-tile Q	2.3	0.7	1.4	0.2	1.5	0.1	0.7	0.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	50	72	160	60	240	91	1095	100	220	572	164
Future Volume (veh/h)	168	50	72	160	60	240	91	1095	100	220	572	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	179	53	77	170	64	229	97	1165	106	234	609	174
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	364	308	193	72	259	120	1236	549	260	1163	332
Arrive On Green	0.10	0.19	0.19	0.11	0.20	0.20	0.07	0.35	0.35	0.15	0.43	0.43
Sat Flow, veh/h	1781	1870	1583	1781	358	1280	1781	3554	1578	1781	2729	778
Grp Volume(v), veh/h	179	53	77	170	0	293	97	1165	106	234	396	387
Grp Sat Flow(s),veh/h/ln	1781	1870	1583	1781	0	1638	1781	1777	1578	1781	1777	1730
Q Serve(g_s), s	12.1	2.8	5.0	11.4	0.0	21.0	6.5	38.4	5.7	15.6	19.9	20.0
Cycle Q Clear(g_c), s	12.1	2.8	5.0	11.4	0.0	21.0	6.5	38.4	5.7	15.6	19.9	20.0
Prop In Lane	1.00		1.00	1.00		0.78	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	180	364	308	193	0	331	120	1236	549	260	757	737
V/C Ratio(X)	0.99	0.15	0.25	0.88	0.00	0.88	0.81	0.94	0.19	0.90	0.52	0.52
Avail Cap(c_a), veh/h	180	496	420	193	0	446	128	1257	558	261	761	741
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	40.3	41.1	53.0	0.0	46.8	55.5	38.2	27.5	50.7	25.6	25.6
Incr Delay (d2), s/veh	65.3	0.2	0.4	33.9	0.0	14.9	28.8	13.8	0.2	31.1	0.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	1.3	2.0	6.9	0.0	9.8	3.8	18.2	2.2	9.0	8.1	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	119.5	40.4	41.5	86.9	0.0	61.7	84.3	52.0	27.7	81.8	26.2	26.3
LnGrp LOS	F	D	D	F	A	E	F	D	C	F	C	C
Approach Vol, veh/h		309			463			1368			1017	
Approach Delay, s/veh		86.5			70.9			52.4			39.0	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.1	48.0	19.1	29.5	14.7	57.4	18.2	30.4
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	17.6	42.7	13.1	32.0	8.7	51.7	12.2	32.9
Max Q Clear Time (g_c+I1), s	17.6	40.4	13.4	7.0	8.5	22.0	14.1	23.0
Green Ext Time (p_c), s	0.0	1.6	0.0	0.5	0.0	4.9	0.0	1.2

Intersection Summary	
HCM 6th Ctrl Delay	54.1
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	370	537	70	240	157	80	110	1270	380	90	910	150
Future Volume (veh/h)	370	537	70	240	157	80	110	1270	380	90	910	150
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.97	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	385	559	73	250	164	83	115	1323	396	94	948	156
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	406	876	114	309	327	156	127	1352	594	98	1112	183
Arrive On Green	0.23	0.28	0.28	0.09	0.14	0.14	0.07	0.38	0.38	0.06	0.36	0.36
Sat Flow, veh/h	1781	3157	411	3456	2305	1102	1781	3554	1560	1781	3048	501
Grp Volume(v), veh/h	385	314	318	250	124	123	115	1323	396	94	552	552
Grp Sat Flow(s),veh/h/ln	1781	1777	1791	1728	1777	1630	1781	1777	1560	1781	1777	1773
Q Serve(g_s), s	27.0	19.6	19.8	9.0	8.2	8.9	8.1	46.5	26.7	6.7	36.3	36.4
Cycle Q Clear(g_c), s	27.0	19.6	19.8	9.0	8.2	8.9	8.1	46.5	26.7	6.7	36.3	36.4
Prop In Lane	1.00		0.23	1.00		0.68	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	406	493	497	309	252	231	127	1352	594	98	648	647
V/C Ratio(X)	0.95	0.64	0.64	0.81	0.49	0.53	0.91	0.98	0.67	0.95	0.85	0.85
Avail Cap(c_a), veh/h	406	651	656	412	463	425	127	1352	594	98	648	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.1	40.1	40.2	56.6	50.1	50.4	58.4	38.7	32.6	59.7	37.1	37.1
Incr Delay (d2), s/veh	31.4	1.4	1.4	8.7	1.5	1.9	53.0	19.4	2.8	75.9	10.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	8.8	8.9	4.3	3.7	3.7	5.5	23.6	10.5	5.1	17.5	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.6	41.5	41.6	65.3	51.6	52.3	111.4	58.2	35.4	135.6	47.7	47.8
LnGrp LOS	E	D	D	E	D	D	F	E	D	F	D	D
Approach Vol, veh/h		1017			497			1834			1198	
Approach Delay, s/veh		55.9			58.7			56.6			54.7	
Approach LOS		E			E			E			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	54.2	17.8	41.7	15.0	52.2	35.0	24.5
Change Period (Y+Rc), s	6.0	* 6	6.5	6.5	6.0	* 6	6.1	6.5
Max Green Setting (Gmax), s	7.0	* 48	15.1	46.4	9.0	* 45	28.9	33.0
Max Q Clear Time (g_c+I1), s	10.7	48.5	11.0	21.8	10.1	38.4	29.0	10.9
Green Ext Time (p_c), s	0.0	0.0	0.3	4.1	0.0	3.5	0.0	1.4

Intersection Summary	
HCM 6th Ctrl Delay	56.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

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

Intersection	
Intersection Delay, s/veh	131.1
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	255	712	50	31	320	27	40	77	42	22	54	107
Future Vol, veh/h	255	712	50	31	320	27	40	77	42	22	54	107
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	268	749	53	33	337	28	42	81	44	23	57	113
Number of Lanes	1	1	1	1	1	1	0	1	1	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	206.7	32.3	16.1	15
HCM LOS	F	D	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	34%	0%	100%	0%	0%	100%	0%	0%	29%	0%
Vol Thru, %	66%	0%	0%	100%	0%	0%	100%	0%	71%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	42	255	712	50	31	320	27	76	107
LT Vol	40	0	255	0	0	31	0	0	22	0
Through Vol	77	0	0	712	0	0	320	0	54	0
RT Vol	0	42	0	0	50	0	0	27	0	107
Lane Flow Rate	123	44	268	749	53	33	337	28	80	113
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.315	0.103	0.601	1.571	0.1	0.079	0.769	0.059	0.203	0.26
Departure Headway (Hd)	9.998	9.109	8.056	7.545	6.828	9.475	8.961	8.241	9.902	9.04
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	362	396	448	487	525	380	408	437	365	400
Service Time	7.698	6.809	5.797	5.285	4.569	7.175	6.661	5.941	7.602	6.74
HCM Lane V/C Ratio	0.34	0.111	0.598	1.538	0.101	0.087	0.826	0.064	0.219	0.282
HCM Control Delay	17.2	12.9	22.3	286.6	10.3	13	35.9	11.5	15.1	14.9
HCM Lane LOS	C	B	C	F	B	B	E	B	C	B
HCM 95th-tile Q	1.3	0.3	3.9	40.7	0.3	0.3	6.4	0.2	0.7	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	472	145	40	175	122	112	879	50	75	667	202
Future Volume (veh/h)	315	472	145	40	175	122	112	879	50	75	667	202
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	339	508	156	43	188	118	120	945	54	81	717	217
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	285	820	365	99	270	161	113	1581	90	90	1203	364
Arrive On Green	0.16	0.23	0.23	0.06	0.13	0.13	0.06	0.46	0.46	0.05	0.45	0.45
Sat Flow, veh/h	1781	3554	1581	1781	2135	1273	1781	3414	195	1781	2671	808
Grp Volume(v), veh/h	339	508	156	43	155	151	120	492	507	81	477	457
Grp Sat Flow(s),veh/h/ln	1781	1777	1581	1781	1777	1631	1781	1777	1832	1781	1777	1703
Q Serve(g_s), s	20.0	16.0	10.5	2.9	10.4	11.2	7.9	25.7	25.7	5.7	25.2	25.2
Cycle Q Clear(g_c), s	20.0	16.0	10.5	2.9	10.4	11.2	7.9	25.7	25.7	5.7	25.2	25.2
Prop In Lane	1.00		1.00	1.00		0.78	1.00		0.11	1.00		0.47
Lane Grp Cap(c), veh/h	285	820	365	99	225	206	113	823	848	90	800	767
V/C Ratio(X)	1.19	0.62	0.43	0.43	0.69	0.73	1.07	0.60	0.60	0.90	0.60	0.60
Avail Cap(c_a), veh/h	285	1251	556	128	469	430	113	823	848	90	800	767
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	0.85	0.85	0.85
Uniform Delay (d), s/veh	52.5	43.2	41.0	57.1	52.2	52.6	58.6	24.9	24.9	59.0	25.8	25.8
Incr Delay (d2), s/veh	114.7	0.8	0.8	2.9	3.7	5.0	103.7	3.2	3.1	57.6	2.8	2.9
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	18.0	7.2	4.2	1.4	4.9	4.9	6.7	11.0	11.3	3.9	10.7	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	167.2	43.9	41.8	60.0	56.0	57.5	162.2	28.1	28.0	116.7	28.6	28.7
LnGrp LOS	F	D	D	E	E	E	F	C	C	F	C	C
Approach Vol, veh/h		1003			349			1119			1015	
Approach Delay, s/veh		85.3			57.1			42.5			35.7	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	64.4	13.0	34.8	14.4	62.8	26.0	21.8
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.3	40.7	9.0	44.0	7.9	39.1	20.0	33.0
Max Q Clear Time (g_c+I1), s	7.7	27.7	4.9	18.0	9.9	27.2	22.0	13.2
Green Ext Time (p_c), s	0.0	4.8	0.0	4.2	0.0	4.4	0.0	1.7

Intersection Summary	
HCM 6th Ctrl Delay	54.3
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	2027	60	60	2057	80	20	10	40	90	10	44
Future Volume (veh/h)	98	2027	60	60	2057	80	20	10	40	90	10	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	99	2047	61	61	2078	81	20	10	40	91	10	44
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	2181	65	69	2064	80	46	14	305	53	3	304
Arrive On Green	0.07	0.62	0.62	0.04	0.59	0.59	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1781	3521	104	1781	3484	135	0	75	1585	0	16	1580
Grp Volume(v), veh/h	99	1027	1081	61	1052	1107	30	0	40	101	0	44
Grp Sat Flow(s),veh/h/ln	1781	1777	1849	1781	1777	1842	75	0	1585	16	0	1580
Q Serve(g_s), s	7.2	67.8	69.7	4.4	76.9	77.0	0.0	0.0	2.7	0.0	0.0	3.0
Cycle Q Clear(g_c), s	7.2	67.8	69.7	4.4	76.9	77.0	25.0	0.0	2.7	25.0	0.0	3.0
Prop In Lane	1.00		0.06	1.00		0.07	0.67		1.00	0.90		1.00
Lane Grp Cap(c), veh/h	116	1100	1145	69	1052	1091	61	0	305	56	0	304
V/C Ratio(X)	0.85	0.93	0.94	0.89	1.00	1.01	0.50	0.00	0.13	1.81	0.00	0.14
Avail Cap(c_a), veh/h	116	1100	1145	69	1052	1091	61	0	305	56	0	304
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	0.09	0.09	0.09	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	60.1	22.3	22.7	62.2	26.5	26.5	53.3	0.0	43.5	63.6	0.0	43.6
Incr Delay (d2), s/veh	41.5	15.2	16.2	12.7	8.2	12.2	6.1	0.0	0.2	426.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	29.4	31.7	2.2	31.1	33.6	1.1	0.0	1.1	8.5	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.6	37.5	38.9	74.9	34.7	38.7	59.4	0.0	43.7	489.7	0.0	43.8
LnGrp LOS	F	D	D	E	C	F	E	A	D	F	A	D
Approach Vol, veh/h		2207			2220			70			145	
Approach Delay, s/veh		41.1			37.8			50.4			354.4	
Approach LOS		D			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.5	87.0		31.5	15.0	83.5		31.5
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	5.0	80.5		25.0	8.5	77.0		25.0
Max Q Clear Time (g_c+I1), s	10.4	71.7		27.0	9.2	79.0		27.0
Green Ext Time (p_c), s	0.0	7.5		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	49.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	497	1650	150	320	1450	334	130	130	80	215	180	647
Future Volume (veh/h)	497	1650	150	320	1450	334	130	130	80	215	180	647
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		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	518	1719	156	333	1510	348	135	135	83	224	188	674
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	477	2118	189	184	1701	755	145	443	375	254	443	794
Arrive On Green	0.27	0.64	0.64	0.10	0.48	0.48	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	3292	294	1781	3554	1578	641	1870	1585	1163	1870	1561
Grp Volume(v), veh/h	518	916	959	333	1510	348	135	135	83	224	188	674
Grp Sat Flow(s),veh/h/ln	1781	1777	1810	1781	1777	1578	641	1870	1585	1163	1870	1561
Q Serve(g_s), s	40.2	56.9	60.4	15.5	57.8	22.1	22.7	8.9	6.3	26.6	12.8	35.5
Cycle Q Clear(g_c), s	40.2	56.9	60.4	15.5	57.8	22.1	35.5	8.9	6.3	35.5	12.8	35.5
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	477	1143	1164	184	1701	755	145	443	375	254	443	794
V/C Ratio(X)	1.09	0.80	0.82	1.81	0.89	0.46	0.93	0.30	0.22	0.88	0.42	0.85
Avail Cap(c_a), veh/h	477	1143	1164	184	1701	755	145	443	375	254	443	794
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.32	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.9	19.7	20.3	67.3	35.4	26.2	66.8	47.1	46.1	62.8	48.6	32.3
Incr Delay (d2), s/veh	50.1	2.0	2.3	384.8	7.3	2.0	54.3	0.4	0.3	28.0	0.6	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.2	21.9	23.8	26.6	25.6	8.5	7.3	4.2	2.5	10.5	6.0	22.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	105.0	21.7	22.6	452.0	42.8	28.2	121.1	47.5	46.4	90.8	49.2	40.9
LnGrp LOS	F	C	C	F	D	C	F	D	D	F	D	D
Approach Vol, veh/h		2393			2191			353			1086	
Approach Delay, s/veh		40.1			102.6			75.4			52.7	
Approach LOS		D			F			E			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	22.0	103.5		42.0	46.7	78.8		42.0
Change Period (Y+Rc), s	6.5	6.5		* 6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	15.5	80.0		* 36	40.2	55.3		35.0
Max Q Clear Time (g_c+I1), s	17.5	62.4		37.5	42.2	59.8		37.5
Green Ext Time (p_c), s	0.0	12.2		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 6th Ctrl Delay	67.2
HCM 6th LOS	E

Notes

User approved pedestrian interval to be less than phase max green.

* 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	270	9	30	189	4	13
Future Vol, veh/h	270	9	30	189	4	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	345	-	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	293	10	33	205	4	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	303	0	569	298
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	271	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1258	-	484	741
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	775	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1258	-	471	741
Mov Cap-2 Maneuver	-	-	-	-	471	-
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	755	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	653	-	-	1258	-
HCM Lane V/C Ratio	0.028	-	-	0.026	-
HCM Control Delay (s)	10.7	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	265	8	33	235	4	14
Future Vol, veh/h	265	8	33	235	4	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	370	-	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	288	9	36	255	4	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	297	0	620	293
Stage 1	-	-	-	-	293	-
Stage 2	-	-	-	-	327	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1264	-	452	746
Stage 1	-	-	-	-	757	-
Stage 2	-	-	-	-	731	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1264	-	439	746
Mov Cap-2 Maneuver	-	-	-	-	439	-
Stage 1	-	-	-	-	757	-
Stage 2	-	-	-	-	711	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	646	-	-	1264	-
HCM Lane V/C Ratio	0.03	-	-	0.028	-
HCM Control Delay (s)	10.7	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	267	12	52	263	5	23
Future Vol, veh/h	267	12	52	263	5	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	130	-	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	290	13	57	286	5	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	303	0	697	297
Stage 1	-	-	-	-	297	-
Stage 2	-	-	-	-	400	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1258	-	407	742
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	677	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1258	-	389	742
Mov Cap-2 Maneuver	-	-	-	-	389	-
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	10.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	639	-	-	1258	-
HCM Lane V/C Ratio	0.048	-	-	0.045	-
HCM Control Delay (s)	10.9	-	-	8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	923	468	12	9	0
Future Vol, veh/h	3	923	468	12	9	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	50	-	-	-	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	3	1003	509	13	10	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	522	0	-	0	1525	516
Stage 1	-	-	-	-	516	-
Stage 2	-	-	-	-	1009	-
Critical Hdwy	4.12	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	1044	-	-	-	130	559
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	352	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1044	-	-	-	130	559
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	352	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	19.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1044	-	-	-	256
HCM Lane V/C Ratio	0.003	-	-	-	0.038
HCM Control Delay (s)	8.5	-	-	-	19.6
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	932	479	10	0	1
Future Vol, veh/h	0	932	479	10	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1013	521	11	0	1

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	527
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	0	-	-	-	0	551
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	551
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	11.5
HCM LOS			B

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	551
HCM Lane V/C Ratio	-	-	-	0.002
HCM Control Delay (s)	-	-	-	11.5
HCM Lane LOS	-	-	-	B
HCM 95th %tile Q(veh)	-	-	-	0

APPENDIX N

LONG-TERM + PROJECT QUEUEING ANALYSIS WORKSHEETS

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	419	397	222	1131	1798
v/c Ratio	1.09	0.99	1.05	0.34	0.74
Control Delay	108.6	79.2	114.4	8.1	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	108.6	79.2	114.4	8.1	22.0
Queue Length 50th (ft)	~316	243	~160	105	311
Queue Length 95th (ft)	#513	#450	m#275	128	371
Internal Link Dist (ft)		267		584	420
Turn Bay Length (ft)			300		
Base Capacity (vph)	386	400	212	3310	2414
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	1.09	0.99	1.05	0.34	0.74

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	177	250	134	208	750	31	581	458	823	750
v/c Ratio	0.55	0.44	0.81	0.69	0.76	0.23	0.33	0.99	0.51	0.71
Control Delay	50.2	37.9	49.4	50.0	22.7	47.0	22.1	64.9	17.2	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.1
Total Delay	50.2	37.9	49.4	50.0	22.9	47.0	22.1	64.9	17.2	7.7
Queue Length 50th (ft)	56	73	75	134	138	19	85	145	131	90
Queue Length 95th (ft)	91	105	m71	m105	m97	47	126	m#216	m215	m112
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	326	756	168	400	988	168	1756	463	1628	1052
Starvation Cap Reductn	0	0	0	0	17	0	0	0	0	11
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.33	0.80	0.52	0.77	0.18	0.33	0.99	0.51	0.72

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	491	179	179	32	242	103	107	21	116	1062
v/c Ratio	0.82	0.15	0.22	0.16	0.24	0.56	0.56	0.06	0.22	1.84
Control Delay	65.6	20.8	3.7	42.7	34.8	54.7	54.5	0.3	27.7	408.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.6	20.8	3.7	42.7	34.8	54.7	54.5	0.3	27.7	408.2
Queue Length 50th (ft)	155	28	2	19	48	66	69	0	55	~991
Queue Length 95th (ft)	m179	m36	m12	48	72	124	128	0	100	#1242
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	631	1156	801	194	1011	184	190	352	529	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.15	0.22	0.16	0.24	0.56	0.56	0.06	0.22	1.84

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	112	21	65	42	74	35	571	42	116	989
v/c Ratio	0.53	0.06	0.14	0.20	0.25	0.22	0.48	0.07	0.49	0.62
Control Delay	45.4	26.7	0.7	37.2	14.2	40.6	25.0	0.2	41.2	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.4	26.7	0.7	37.2	14.2	40.6	25.0	0.2	41.2	21.5
Queue Length 50th (ft)	44	8	0	16	8	14	110	0	44	136
Queue Length 95th (ft)	#157	26	0	59	41	54	228	0	#141	#455
Internal Link Dist (ft)		323			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	221	878	826	221	803	156	1385	706	273	1583
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.51	0.02	0.08	0.19	0.09	0.22	0.41	0.06	0.42	0.62

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	113	200	227	337	93	773	206	82	1464
v/c Ratio	0.86	0.34	0.96	0.61	0.56	0.43	0.23	0.55	0.90
Control Delay	103.9	23.7	104.4	45.7	66.0	22.4	4.0	66.5	38.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	103.9	23.7	104.4	45.7	66.0	22.4	4.0	66.5	38.2
Queue Length 50th (ft)	88	39	92	118	69	196	0	62	521
Queue Length 95th (ft)	#197	63	#173	141	#178	325	51	116	#809
Internal Link Dist (ft)		600		1370		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	131	971	237	964	165	1781	879	167	1628
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.86	0.21	0.96	0.35	0.56	0.43	0.23	0.49	0.90

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	153	188	88	32	307	100	570	88	1003
v/c Ratio	1.09	0.26	0.19	0.20	0.55	0.53	0.39	0.52	0.69
Control Delay	145.4	34.9	0.9	45.5	37.0	54.7	21.9	56.0	23.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	145.4	34.9	0.9	45.5	37.0	54.7	21.9	56.0	23.6
Queue Length 50th (ft)	~110	59	0	19	86	60	125	53	221
Queue Length 95th (ft)	#236	77	0	49	108	#168	200	#147	341
Internal Link Dist (ft)		359			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	141	955	549	159	984	190	1470	169	1450
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.09	0.20	0.16	0.20	0.31	0.53	0.39	0.52	0.69

Intersection Summary

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	44	1556	42	2351	20	31	68	30
v/c Ratio	0.40	0.60	0.42	0.91	0.12	0.13	0.48	0.13
Control Delay	69.9	12.4	71.5	24.9	50.8	1.1	63.8	1.1
Queue Delay	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0
Total Delay	69.9	12.4	71.5	27.2	50.8	1.1	63.8	1.1
Queue Length 50th (ft)	36	347	34	880	16	0	56	0
Queue Length 95th (ft)	78	526	#93	#1328	38	0	95	0
Internal Link Dist (ft)		728		868	295		780	
Turn Bay Length (ft)	240		250					
Base Capacity (vph)	110	2605	101	2589	297	373	261	368
Starvation Cap Reductn	0	0	0	140	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.60	0.42	0.96	0.07	0.08	0.26	0.08

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	402	1398	184	1735	223	102	102	82	148	173	538
v/c Ratio	0.91	0.71	0.77	1.08	0.27	0.72	0.33	0.23	0.71	0.55	0.80
Control Delay	78.4	25.5	81.4	87.2	3.6	84.5	55.7	3.5	75.6	62.1	44.2
Queue Delay	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.4	25.9	81.4	87.2	3.6	84.5	55.7	3.5	75.6	62.1	44.2
Queue Length 50th (ft)	375	496	173	~995	0	98	91	0	142	161	403
Queue Length 95th (ft)	#701	579	#413	#1133	48	155	137	15	203	219	555
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	444	1982	240	1604	826	199	434	456	292	440	670
Starvation Cap Reductn	0	197	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.78	0.77	1.08	0.27	0.51	0.24	0.18	0.51	0.39	0.80

Intersection Summary

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

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

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Group Flow (vph)	200	213	479	2306	1605
v/c Ratio	0.74	0.83	0.90	0.62	0.83
Control Delay	60.0	68.3	42.5	4.8	34.9
Queue Delay	0.0	0.0	0.0	0.1	0.0
Total Delay	60.0	68.3	42.5	4.9	34.9
Queue Length 50th (ft)	141	145	304	210	373
Queue Length 95th (ft)	222	#249	m291	m209	#500
Internal Link Dist (ft)		140		584	143
Turn Bay Length (ft)			300		
Base Capacity (vph)	319	299	584	3714	1926
Starvation Cap Reductn	0	0	0	431	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.71	0.82	0.70	0.83

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	404	628	121	298	1191	32	1503	426	726	287
v/c Ratio	1.13	0.98	0.69	0.90	1.14	0.25	0.93	0.78	0.45	0.26
Control Delay	132.2	75.1	48.0	57.4	91.8	52.7	46.4	37.0	10.3	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	132.2	75.1	48.0	57.4	91.8	52.7	46.4	37.0	10.3	0.4
Queue Length 50th (ft)	~170	~236	66	209	~464	22	367	154	57	0
Queue Length 95th (ft)	#269	#361	m79	m224	m#275	53	#464	m184	m70	m0
Internal Link Dist (ft)		288		279			1088		584	
Turn Bay Length (ft)	200					470		310		
Base Capacity (vph)	358	644	185	330	1046	217	1619	546	1623	1093
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.98	0.65	0.90	1.14	0.15	0.93	0.78	0.45	0.26

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	557	465	212	111	596	233	242	71	354	893
v/c Ratio	1.01	0.61	0.31	0.62	0.76	1.18	1.19	0.21	0.54	1.32
Control Delay	84.8	37.0	7.4	63.8	50.7	165.1	165.2	1.3	31.8	182.2
Queue Delay	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2
Total Delay	84.8	37.0	7.4	63.8	50.9	165.1	165.2	1.3	31.8	182.4
Queue Length 50th (ft)	~221	129	44	76	147	~208	~216	0	198	~789
Queue Length 95th (ft)	m#271	m150	m55	#147	187	#372	#382	0	298	#1048
Internal Link Dist (ft)		279			1051		902			153
Turn Bay Length (ft)	100		160	140		170				
Base Capacity (vph)	552	833	678	178	891	197	204	345	653	677
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	33	0	0	0	0	22
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	0.56	0.31	0.62	0.69	1.18	1.19	0.21	0.54	1.36

Intersection Summary

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

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	179	53	77	170	319	97	1165	106	234	783
v/c Ratio	0.96	0.19	0.20	0.69	0.83	0.73	0.89	0.15	0.87	0.51
Control Delay	110.3	42.8	1.1	66.0	42.7	85.1	45.4	0.5	78.9	24.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.3	42.8	1.1	66.0	42.7	85.1	45.4	0.5	78.9	24.3
Queue Length 50th (ft)	135	35	0	126	127	72	424	0	172	204
Queue Length 95th (ft)	#313	70	0	#285	232	#181	#660	0	#358	312
Internal Link Dist (ft)		349			258		1033			1088
Turn Bay Length (ft)	110		110	120		250		250	480	
Base Capacity (vph)	186	514	565	247	566	133	1305	684	270	1548
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.96	0.10	0.14	0.69	0.56	0.73	0.89	0.15	0.87	0.51

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	385	632	250	247	115	1323	396	94	1104
v/c Ratio	0.93	0.71	0.68	0.51	0.89	0.95	0.52	0.94	0.88
Control Delay	76.4	45.9	63.8	40.6	112.1	52.7	14.0	132.6	46.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	76.4	45.9	63.8	40.6	112.1	52.7	14.0	132.6	46.4
Queue Length 50th (ft)	291	240	96	73	90	507	79	74	407
Queue Length 95th (ft)	#588	305	162	114	#240	#848	215	#215	#683
Internal Link Dist (ft)		600		234		523			547
Turn Bay Length (ft)	160		110		245			230	
Base Capacity (vph)	415	1315	421	937	129	1386	757	100	1256
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.93	0.48	0.59	0.26	0.89	0.95	0.52	0.94	0.88

Intersection Summary

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

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	339	508	156	43	319	120	999	81	934
v/c Ratio	1.00	0.48	0.28	0.34	0.51	0.65	0.75	0.63	0.78
Control Delay	99.5	37.6	7.5	62.9	29.0	71.8	38.8	77.9	40.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.5	37.6	7.5	62.9	29.0	71.8	38.8	77.9	40.9
Queue Length 50th (ft)	~308	202	10	34	77	92	337	63	318
Queue Length 95th (ft)	#522	212	55	73	104	#234	#491	#167	450
Internal Link Dist (ft)		359			1014		1036		1033
Turn Bay Length (ft)	170		60	130		240		130	
Base Capacity (vph)	340	1254	643	127	967	184	1331	129	1202
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.00	0.41	0.24	0.34	0.33	0.65	0.75	0.63	0.78

Intersection Summary

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

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

Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	99	2108	61	2159	30	40	101	44
v/c Ratio	0.61	0.91	0.48	0.96	0.18	0.15	0.62	0.17
Control Delay	72.9	27.3	70.7	35.7	50.6	1.2	69.3	2.3
Queue Delay	0.0	0.0	0.0	8.2	0.0	0.0	0.0	0.0
Total Delay	72.9	27.3	70.7	43.8	50.6	1.2	69.3	2.3
Queue Length 50th (ft)	80	762	49	871	23	0	83	0
Queue Length 95th (ft)	#191	#1072	#144	#1166	50	1	133	5
Internal Link Dist (ft)		728		868	295		780	
Turn Bay Length (ft)	240		250					
Base Capacity (vph)	162	2316	127	2239	272	372	259	367
Starvation Cap Reductn	0	0	0	101	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.91	0.48	1.01	0.11	0.11	0.39	0.12

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	518	1875	333	1510	348	135	135	83	224	188	674
v/c Ratio	1.01	1.00	1.51	1.16	0.46	0.71	0.34	0.19	0.92	0.47	0.84
Control Delay	94.8	56.5	295.2	122.4	7.6	74.7	51.9	3.1	97.4	54.8	39.3
Queue Delay	0.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	94.8	76.5	295.2	122.4	7.6	74.7	51.9	3.1	97.4	54.8	39.3
Queue Length 50th (ft)	~570	~953	~490	~915	27	120	110	0	210	158	487
Queue Length 95th (ft)	#799	#1140	#691	#1055	106	202	175	15	#359	236	667
Internal Link Dist (ft)		868		1062			90			329	
Turn Bay Length (ft)	240		250		670				240		
Base Capacity (vph)	512	1866	220	1304	762	210	434	461	267	440	801
Starvation Cap Reductn	0	101	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.01	1.06	1.51	1.16	0.46	0.64	0.31	0.18	0.84	0.43	0.84

Intersection Summary

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

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

Intersection: 11: Proj Drwy (W) & La Mirada Dr

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	6	38
Average Queue (ft)	1	23
95th Queue (ft)	11	48
Link Distance (ft)		146
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 12: Proj Drwy (M) & La Mirada Dr

Movement	NB
Directions Served	LR
Maximum Queue (ft)	42
Average Queue (ft)	25
95th Queue (ft)	52
Link Distance (ft)	166
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 13: Proj Drwy (E) & La Mirada Dr

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	3	39
Average Queue (ft)	1	29
95th Queue (ft)	11	47
Link Distance (ft)		139
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 14: Linda Vista Dr & Proj Drwy (W)

Movement	EB	SB
Directions Served	T	LR
Maximum Queue (ft)	48	30
Average Queue (ft)	12	16
95th Queue (ft)	126	40
Link Distance (ft)	692	189
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)	3	
Queuing Penalty (veh)	0	

Intersection: 15: Linda Vista Dr & Proj Drwy (E)

Movement	EB	SB
Directions Served	T	R
Maximum Queue (ft)	26	12
Average Queue (ft)	11	3
95th Queue (ft)	80	18
Link Distance (ft)	190	192
Upstream Blk Time (%)	3	
Queuing Penalty (veh)	11	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 11

Intersection: 11: Proj Drwy (W) & La Mirada Dr

Movement	WB	WB	NB
Directions Served	L	T	LR
Maximum Queue (ft)	23	5	24
Average Queue (ft)	8	1	12
95th Queue (ft)	31	13	36
Link Distance (ft)		301	179
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	25		
Storage Blk Time (%)	0		
Queuing Penalty (veh)	1		

Intersection: 12: Proj Drwy (M) & La Mirada Dr

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	21	27
Average Queue (ft)	7	12
95th Queue (ft)	27	37
Link Distance (ft)		170
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	25	
Storage Blk Time (%)	1	
Queuing Penalty (veh)	1	

Intersection: 13: Proj Drwy (E) & La Mirada Dr

Movement	WB	WB	NB
Directions Served	L	T	LR
Maximum Queue (ft)	26	5	28
Average Queue (ft)	8	1	19
95th Queue (ft)	31	13	43
Link Distance (ft)		357	136
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	25		
Storage Blk Time (%)	1		
Queuing Penalty (veh)	3		

Intersection: 14: Linda Vista Dr & Proj Drwy (W)

Movement	EB	EB	SB
Directions Served	L	T	LR
Maximum Queue (ft)	6	9	27
Average Queue (ft)	2	2	8
95th Queue (ft)	12	23	28
Link Distance (ft)		691	169
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)	25		
Storage Blk Time (%)	0	0	
Queuing Penalty (veh)	2	0	

Intersection: 15: Linda Vista Dr & Proj Drwy (E)

Movement	EB	SB
Directions Served	T	R
Maximum Queue (ft)	20	6
Average Queue (ft)	4	1
95th Queue (ft)	51	11
Link Distance (ft)	190	171
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	2	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Zone Summary

Zone wide Queuing Penalty: 8

APPENDIX O

NEAR-TERM + PROJECT & LONG-TERM + PROJECT IMPROVEMENTS ANALYSIS WORKSHEETS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	406	150	150	30	200	5	120	60	15	90	290	599
Future Volume (veh/h)	406	150	150	30	200	5	120	60	15	90	290	599
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	427	158	158	32	211	5	94	107	16	95	305	593
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	511	1100	661	115	1162	27	195	205	174	533	559	474
Arrive On Green	0.15	0.31	0.31	0.06	0.23	0.23	0.11	0.11	0.11	0.30	0.30	0.30
Sat Flow, veh/h	3456	3554	1575	1781	5132	121	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	427	158	158	32	140	76	94	107	16	95	305	593
Grp Sat Flow(s),veh/h/ln	1728	1777	1575	1781	1702	1849	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	12.0	3.2	6.5	1.7	3.3	3.3	5.0	5.4	0.9	3.9	13.7	29.9
Cycle Q Clear(g_c), s	12.0	3.2	6.5	1.7	3.3	3.3	5.0	5.4	0.9	3.9	13.7	29.9
Prop In Lane	1.00		1.00	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	511	1100	661	115	771	418	195	205	174	533	559	474
V/C Ratio(X)	0.84	0.14	0.24	0.28	0.18	0.18	0.48	0.52	0.09	0.18	0.55	1.25
Avail Cap(c_a), veh/h	667	1100	661	196	771	418	198	208	176	533	559	474
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	24.9	18.7	44.5	31.2	31.2	41.8	42.0	40.0	26.0	29.4	35.0
Incr Delay (d2), s/veh	4.4	0.2	0.5	0.5	0.5	1.0	0.7	1.0	0.1	0.1	0.6	129.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	1.4	3.0	0.8	1.4	1.6	2.2	2.5	0.4	1.7	6.1	28.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.8	25.1	19.3	45.0	31.7	32.2	42.5	43.1	40.1	26.0	30.0	164.6
LnGrp LOS	D	C	B	D	C	C	D	D	D	C	C	F
Approach Vol, veh/h		743			248			217			993	
Approach Delay, s/veh		35.8			33.6			42.6			110.0	
Approach LOS		D			C			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	37.7		35.0	19.5	29.4		16.1				
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1				
Max Green Setting (Gmax), s	* 11	26.3		29.9	* 19	18.0		11.1				
Max Q Clear Time (g_c+I1), s	3.7	8.5		31.9	14.0	5.3		7.4				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.8	0.6		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		69.7
HCM 6th LOS		E

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for 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)	106	15	62	20	15	40	33	442	30	100	703	96
Future Volume (veh/h)	106	15	62	20	15	40	33	442	30	100	703	96
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	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	16	65	21	16	42	35	465	32	105	740	101
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	344	59	240	70	56	147	79	996	442	148	1003	137
Arrive On Green	0.10	0.18	0.18	0.04	0.12	0.12	0.04	0.28	0.28	0.08	0.32	0.32
Sat Flow, veh/h	3456	322	1310	1781	454	1192	1781	3554	1577	1781	3141	428
Grp Volume(v), veh/h	112	0	81	21	0	58	35	465	32	105	419	422
Grp Sat Flow(s),veh/h/ln	1728	0	1632	1781	0	1646	1781	1777	1577	1781	1777	1792
Q Serve(g_s), s	1.8	0.0	2.5	0.7	0.0	1.9	1.1	6.4	0.9	3.4	12.4	12.4
Cycle Q Clear(g_c), s	1.8	0.0	2.5	0.7	0.0	1.9	1.1	6.4	0.9	3.4	12.4	12.4
Prop In Lane	1.00		0.80	1.00		0.72	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	344	0	299	70	0	203	79	996	442	148	567	572
V/C Ratio(X)	0.33	0.00	0.27	0.30	0.00	0.29	0.44	0.47	0.07	0.71	0.74	0.74
Avail Cap(c_a), veh/h	496	0	882	256	0	889	183	1530	679	286	867	875
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	20.8	27.7	0.0	23.6	27.6	17.7	15.7	26.4	18.0	18.0
Incr Delay (d2), s/veh	0.5	0.0	0.5	2.3	0.0	0.8	3.9	0.3	0.1	6.1	1.9	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.9	0.3	0.0	0.7	0.5	2.3	0.3	1.5	4.5	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.4	0.0	21.3	30.0	0.0	24.4	31.4	18.0	15.7	32.5	19.9	19.8
LnGrp LOS	C	A	C	C	A	C	C	B	B	C	B	B
Approach Vol, veh/h		193			79			532			946	
Approach Delay, s/veh		23.6			25.9			18.7			21.3	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	22.6	8.3	16.9	9.1	24.9	11.9	13.3
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.5	25.5	8.5	32.0	6.1	28.9	8.5	32.0
Max Q Clear Time (g_c+I1), s	5.4	8.4	2.7	4.5	3.1	14.4	3.8	3.9
Green Ext Time (p_c), s	0.1	2.6	0.0	0.4	0.0	4.2	0.1	0.3

Intersection Summary	
HCM 6th Ctrl Delay	21.0
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	220	20	27	382	21	25	32	10	18	67	145
Future Volume (veh/h)	84	220	20	27	382	21	25	32	10	18	67	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	90	237	22	29	411	23	27	34	11	19	72	156
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	135	633	535	60	520	29	57	371	314	42	100	216
Arrive On Green	0.08	0.34	0.34	0.03	0.30	0.30	0.03	0.20	0.20	0.02	0.19	0.19
Sat Flow, veh/h	1781	1870	1583	1781	1755	98	1781	1870	1585	1781	525	1137
Grp Volume(v), veh/h	90	237	22	29	0	434	27	34	11	19	0	228
Grp Sat Flow(s),veh/h/ln	1781	1870	1583	1781	0	1853	1781	1870	1585	1781	0	1662
Q Serve(g_s), s	2.2	4.3	0.4	0.7	0.0	9.5	0.7	0.7	0.2	0.5	0.0	5.7
Cycle Q Clear(g_c), s	2.2	4.3	0.4	0.7	0.0	9.5	0.7	0.7	0.2	0.5	0.0	5.7
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		0.68
Lane Grp Cap(c), veh/h	135	633	535	60	0	549	57	371	314	42	0	316
V/C Ratio(X)	0.67	0.37	0.04	0.48	0.00	0.79	0.48	0.09	0.03	0.45	0.00	0.72
Avail Cap(c_a), veh/h	205	797	675	205	0	790	201	759	644	201	0	675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.0	11.1	9.8	21.0	0.0	14.3	21.1	14.5	14.3	21.4	0.0	16.9
Incr Delay (d2), s/veh	5.6	0.4	0.0	5.8	0.0	3.5	6.0	0.1	0.0	7.5	0.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	1.5	0.1	0.4	0.0	3.8	0.3	0.2	0.1	0.3	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	11.5	9.9	26.9	0.0	17.8	27.1	14.6	14.4	28.8	0.0	20.0
LnGrp LOS	C	B	A	C	A	B	C	B	B	C	A	B
Approach Vol, veh/h		349			463			72			247	
Approach Delay, s/veh		15.0			18.4			19.3			20.7	
Approach LOS		B			B			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	19.5	5.9	12.9	7.8	17.6	5.5	13.3
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	18.9	5.0	18.0	5.1	18.9	5.0	18.0
Max Q Clear Time (g_c+I1), s	2.7	6.3	2.7	7.7	4.2	11.5	2.5	2.7
Green Ext Time (p_c), s	0.0	1.1	0.0	0.9	0.0	1.6	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	17.9
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	145	52	10	182	53	73	330	30	72	430	343
Future Volume (veh/h)	122	145	52	10	182	53	73	330	30	72	430	343
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	131	156	56	11	196	57	78	355	32	77	462	369
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	143	488	169	42	248	210	100	1589	142	99	895	712
Arrive On Green	0.08	0.19	0.19	0.02	0.13	0.13	0.06	0.48	0.48	0.06	0.48	0.48
Sat Flow, veh/h	1781	2589	895	1781	1870	1585	1781	3294	295	1781	1858	1479
Grp Volume(v), veh/h	131	105	107	11	196	57	78	190	197	77	442	389
Grp Sat Flow(s),veh/h/ln	1781	1777	1708	1781	1870	1585	1781	1777	1812	1781	1777	1560
Q Serve(g_s), s	7.3	5.1	5.4	0.6	10.2	3.2	4.3	6.2	6.3	4.3	17.2	17.2
Cycle Q Clear(g_c), s	7.3	5.1	5.4	0.6	10.2	3.2	4.3	6.2	6.3	4.3	17.2	17.2
Prop In Lane	1.00		0.52	1.00		1.00	1.00		0.16	1.00		0.95
Lane Grp Cap(c), veh/h	143	335	322	42	248	210	100	857	874	99	856	751
V/C Ratio(X)	0.92	0.31	0.33	0.26	0.79	0.27	0.78	0.22	0.22	0.78	0.52	0.52
Avail Cap(c_a), veh/h	143	480	461	160	524	444	107	857	874	107	856	751
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	0.90	0.90	0.90
Uniform Delay (d), s/veh	45.7	35.0	35.1	48.0	42.0	39.0	46.6	15.0	15.0	46.6	17.9	17.9
Incr Delay (d2), s/veh	51.8	0.5	0.6	3.2	5.6	0.7	28.9	0.6	0.6	26.1	2.0	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	5.3	2.2	2.3	0.3	5.0	1.3	2.6	2.4	2.5	2.5	6.9	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.5	35.5	35.7	51.2	47.7	39.7	75.5	15.6	15.6	72.8	19.9	20.2
LnGrp LOS	F	D	D	D	D	D	E	B	B	E	B	C
Approach Vol, veh/h		343			264			465			908	
Approach Delay, s/veh		59.2			46.1			25.7			24.5	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	54.7	8.4	24.9	12.1	54.7	14.0	19.2
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	33.0	9.0	27.0	6.0	33.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	6.3	8.3	2.6	7.4	6.3	19.2	9.3	12.2
Green Ext Time (p_c), s	0.0	2.0	0.0	1.1	0.0	4.2	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	481	400	190	100	510	15	270	160	60	310	290	494
Future Volume (veh/h)	481	400	190	100	510	15	270	160	60	310	290	494
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	486	404	192	101	515	15	218	240	61	313	293	466
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	543	973	616	170	1081	31	209	219	186	563	591	501
Arrive On Green	0.16	0.27	0.27	0.10	0.21	0.21	0.12	0.12	0.12	0.32	0.32	0.32
Sat Flow, veh/h	3456	3554	1571	1781	5100	148	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	486	404	192	101	343	187	218	240	61	313	293	466
Grp Sat Flow(s),veh/h/ln	1728	1777	1571	1781	1702	1843	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	15.2	10.2	9.3	6.0	9.7	9.8	12.9	12.9	3.9	16.0	14.0	31.3
Cycle Q Clear(g_c), s	15.2	10.2	9.3	6.0	9.7	9.8	12.9	12.9	3.9	16.0	14.0	31.3
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	543	973	616	170	722	391	209	219	186	563	591	501
V/C Ratio(X)	0.89	0.42	0.31	0.59	0.48	0.48	1.04	1.09	0.33	0.56	0.50	0.93
Avail Cap(c_a), veh/h	556	973	616	180	722	391	209	219	186	622	653	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	32.7	23.2	47.7	38.0	38.0	48.5	48.5	44.6	31.2	30.5	36.4
Incr Delay (d2), s/veh	11.5	0.8	0.8	3.0	2.2	4.1	74.2	88.2	0.4	0.3	0.2	20.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	4.5	4.4	2.8	4.3	4.9	10.0	11.4	1.5	6.9	6.3	14.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.9	33.5	24.1	50.7	40.2	42.1	122.7	136.7	45.0	31.5	30.7	56.9
LnGrp LOS	E	C	C	D	D	D	F	F	D	C	C	E
Approach Vol, veh/h		1082			631			519			1072	
Approach Delay, s/veh		42.4			42.5			120.1			42.3	
Approach LOS		D			D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.2	36.9		39.9	22.0	30.1		18.0				
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1				
Max Green Setting (Gmax), s	* 11	25.9		38.4	* 18	19.3		12.9				
Max Q Clear Time (g_c+I1), s	8.0	12.2		33.3	17.2	11.8		14.9				
Green Ext Time (p_c), s	0.0	1.8		1.5	0.1	1.4		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		54.6
HCM 6th LOS		D

Notes

User approved volume balancing among the lanes for 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)	158	50	62	130	50	220	86	935	80	200	492	154
Future Volume (veh/h)	158	50	62	130	50	220	86	935	80	200	492	154
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	174	55	68	143	55	242	95	1027	88	220	541	169
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	255	145	179	174	65	285	119	1097	487	254	1024	319
Arrive On Green	0.07	0.19	0.19	0.10	0.21	0.21	0.07	0.31	0.31	0.14	0.38	0.38
Sat Flow, veh/h	3456	760	940	1781	302	1328	1781	3554	1577	1781	2668	830
Grp Volume(v), veh/h	174	0	123	143	0	297	95	1027	88	220	360	350
Grp Sat Flow(s),veh/h/ln	1728	0	1699	1781	0	1629	1781	1777	1577	1781	1777	1721
Q Serve(g_s), s	4.6	0.0	5.9	7.4	0.0	16.5	4.9	26.4	3.8	11.4	14.7	14.8
Cycle Q Clear(g_c), s	4.6	0.0	5.9	7.4	0.0	16.5	4.9	26.4	3.8	11.4	14.7	14.8
Prop In Lane	1.00		0.55	1.00		0.81	1.00		1.00	1.00		0.48
Lane Grp Cap(c), veh/h	255	0	324	174	0	350	119	1097	487	254	682	661
V/C Ratio(X)	0.68	0.00	0.38	0.82	0.00	0.85	0.80	0.94	0.18	0.87	0.53	0.53
Avail Cap(c_a), veh/h	397	0	579	186	0	537	119	1108	492	273	707	685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	0.0	33.2	41.6	0.0	35.4	43.2	31.6	23.8	39.4	22.4	22.4
Incr Delay (d2), s/veh	3.2	0.0	0.7	23.5	0.0	7.8	30.0	14.3	0.2	23.3	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	2.5	4.3	0.0	7.1	3.1	12.6	1.4	6.4	5.8	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.7	0.0	33.9	65.0	0.0	43.2	73.2	45.9	24.0	62.7	23.0	23.1
LnGrp LOS	D	A	C	E	A	D	E	D	C	E	C	C
Approach Vol, veh/h		297			440			1210			930	
Approach Delay, s/veh		40.8			50.3			46.4			32.4	
Approach LOS		D			D			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.9	35.0	15.2	23.9	12.8	42.1	12.9	26.2
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	14.4	29.3	9.8	32.0	6.3	37.4	10.8	31.0
Max Q Clear Time (g_c+I1), s	13.4	28.4	9.4	7.9	6.9	16.8	6.6	18.5
Green Ext Time (p_c), s	0.1	0.6	0.0	0.6	0.0	4.0	0.2	1.4

Intersection Summary	
HCM 6th Ctrl Delay	41.9
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	235	662	50	31	290	27	40	67	37	22	44	107
Future Volume (veh/h)	235	662	50	31	290	27	40	67	37	22	44	107
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		1.00	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	247	697	53	33	305	28	42	71	39	23	46	113
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	307	835	687	64	523	48	77	296	244	48	67	164
Arrive On Green	0.17	0.45	0.45	0.04	0.31	0.31	0.04	0.16	0.16	0.03	0.14	0.14
Sat Flow, veh/h	1781	1870	1539	1781	1687	155	1781	1870	1541	1781	470	1156
Grp Volume(v), veh/h	247	697	53	33	0	333	42	71	39	23	0	159
Grp Sat Flow(s),veh/h/ln	1781	1870	1539	1781	0	1842	1781	1870	1541	1781	0	1626
Q Serve(g_s), s	7.2	17.8	1.1	1.0	0.0	8.2	1.3	1.8	1.2	0.7	0.0	5.0
Cycle Q Clear(g_c), s	7.2	17.8	1.1	1.0	0.0	8.2	1.3	1.8	1.2	0.7	0.0	5.0
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.71
Lane Grp Cap(c), veh/h	307	835	687	64	0	571	77	296	244	48	0	231
V/C Ratio(X)	0.80	0.83	0.08	0.51	0.00	0.58	0.55	0.24	0.16	0.48	0.00	0.69
Avail Cap(c_a), veh/h	496	1174	965	164	0	813	164	621	512	164	0	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.5	13.2	8.6	25.6	0.0	15.7	25.4	20.0	19.7	26.0	0.0	22.1
Incr Delay (d2), s/veh	4.9	3.8	0.0	6.2	0.0	0.9	5.9	0.4	0.3	7.2	0.0	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	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	6.9	0.3	0.5	0.0	3.2	0.6	0.7	0.4	0.4	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	17.0	8.6	31.8	0.0	16.7	31.3	20.4	20.0	33.2	0.0	25.7
LnGrp LOS	C	B	A	C	A	B	C	C	C	C	A	C
Approach Vol, veh/h		997			366			152			182	
Approach Delay, s/veh		18.9			18.0			23.3			26.7	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.5	28.7	6.8	12.2	13.8	21.3	6.0	13.1
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	34.0	5.0	18.0	15.1	23.9	5.0	18.0
Max Q Clear Time (g_c+I1), s	3.0	19.8	3.3	7.0	9.2	10.2	2.7	3.8
Green Ext Time (p_c), s	0.0	4.4	0.0	0.6	0.4	1.6	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	412	95	35	155	102	82	749	30	60	577	182
Future Volume (veh/h)	275	412	95	35	155	102	82	749	30	60	577	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	296	443	102	38	167	97	88	805	32	65	620	196
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	243	575	131	100	225	189	97	1634	65	84	1219	385
Arrive On Green	0.14	0.20	0.20	0.06	0.12	0.12	0.05	0.47	0.47	0.05	0.46	0.46
Sat Flow, veh/h	1781	2871	656	1781	1870	1573	1781	3482	138	1781	2641	834
Grp Volume(v), veh/h	296	273	272	38	167	97	88	411	426	65	417	399
Grp Sat Flow(s),veh/h/ln	1781	1777	1750	1781	1870	1573	1781	1777	1843	1781	1777	1698
Q Serve(g_s), s	15.0	16.0	16.2	2.3	9.5	6.4	5.4	17.6	17.6	4.0	18.1	18.2
Cycle Q Clear(g_c), s	15.0	16.0	16.2	2.3	9.5	6.4	5.4	17.6	17.6	4.0	18.1	18.2
Prop In Lane	1.00		0.37	1.00		1.00	1.00		0.08	1.00		0.49
Lane Grp Cap(c), veh/h	243	356	350	100	225	189	97	834	865	84	821	784
V/C Ratio(X)	1.22	0.77	0.78	0.38	0.74	0.51	0.91	0.49	0.49	0.78	0.51	0.51
Avail Cap(c_a), veh/h	243	533	525	146	459	386	97	834	865	97	821	784
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82
Uniform Delay (d), s/veh	47.5	41.6	41.7	50.1	46.8	45.4	51.7	20.2	20.2	51.8	20.8	20.8
Incr Delay (d2), s/veh	129.7	3.8	4.2	2.4	4.8	2.2	61.8	2.1	2.0	23.7	1.8	1.9
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	15.4	7.3	7.3	1.1	4.7	2.6	4.0	7.2	7.5	2.3	7.4	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	177.2	45.3	45.9	52.4	51.6	47.5	113.5	22.2	22.2	75.5	22.7	22.8
LnGrp LOS	F	D	D	D	D	D	F	C	C	E	C	C
Approach Vol, veh/h		841			302			925			881	
Approach Delay, s/veh		91.9			50.4			30.9			26.6	
Approach LOS		F			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	58.1	12.2	28.0	12.5	57.3	21.0	19.2
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	37.0	9.0	33.0	6.0	37.0	15.0	27.0
Max Q Clear Time (g_c+I1), s	6.0	19.6	4.3	18.2	7.4	20.2	17.0	11.5
Green Ext Time (p_c), s	0.0	4.5	0.0	2.9	0.0	4.4	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	49.0
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	466	170	170	30	230	0	140	60	20	110	320	689
Future Volume (veh/h)	466	170	170	30	230	0	140	60	20	110	320	689
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	491	179	179	32	242	0	105	122	21	116	337	687
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	579	1064	645	115	1003	0	196	206	174	550	578	490
Arrive On Green	0.17	0.30	0.30	0.06	0.20	0.00	0.11	0.11	0.11	0.31	0.31	0.31
Sat Flow, veh/h	3456	3554	1574	1781	5274	0	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	491	179	179	32	242	0	105	122	21	116	337	687
Grp Sat Flow(s),veh/h/ln	1728	1777	1574	1781	1702	0	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	13.8	3.7	7.6	1.7	4.0	0.0	5.6	6.2	1.2	4.8	15.2	30.9
Cycle Q Clear(g_c), s	13.8	3.7	7.6	1.7	4.0	0.0	5.6	6.2	1.2	4.8	15.2	30.9
Prop In Lane	1.00		1.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	579	1064	645	115	1003	0	196	206	174	550	578	490
V/C Ratio(X)	0.85	0.17	0.28	0.28	0.24	0.00	0.54	0.59	0.12	0.21	0.58	1.40
Avail Cap(c_a), veh/h	743	1064	645	196	1003	0	196	206	174	550	578	490
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.51	0.51	0.51	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.4	25.8	19.7	44.5	33.9	0.0	42.1	42.4	40.1	25.5	29.1	34.5
Incr Delay (d2), s/veh	3.9	0.2	0.5	0.5	0.6	0.0	1.5	3.2	0.1	0.1	1.0	193.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	1.6	3.4	0.8	1.7	0.0	2.5	3.0	0.5	2.0	6.9	37.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.3	26.0	20.2	45.0	34.5	0.0	43.6	45.5	40.3	25.6	30.1	227.8
LnGrp LOS	D	C	C	D	C	A	D	D	D	C	C	F
Approach Vol, veh/h		849			274			248			1140	
Approach Delay, s/veh		35.4			35.7			44.3			148.8	
Approach LOS		D			D			D			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.2	36.7		36.0	21.5	26.5		16.1				
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1				
Max Green Setting (Gmax), s	* 11	25.4		30.9	* 22	14.9		11.0				
Max Q Clear Time (g_c+I1), s	3.7	9.6		32.9	15.8	6.0		8.2				
Green Ext Time (p_c), s	0.0	0.9		0.0	1.0	0.7		0.2				

Intersection Summary		
HCM 6th Ctrl Delay		87.8
HCM 6th LOS		F

Notes

User approved pedestrian interval to be less than phase max green.

User approved volume balancing among the lanes for 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)	106	20	62	40	20	50	33	542	40	110	833	106
Future Volume (veh/h)	106	20	62	40	20	50	33	542	40	110	833	106
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	112	21	65	42	21	53	35	571	42	116	877	112
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	329	60	187	118	57	143	78	1108	492	150	1116	143
Arrive On Green	0.10	0.15	0.15	0.07	0.12	0.12	0.04	0.31	0.31	0.08	0.35	0.35
Sat Flow, veh/h	3456	401	1242	1781	468	1180	1781	3554	1577	1781	3169	405
Grp Volume(v), veh/h	112	0	86	42	0	74	35	571	42	116	492	497
Grp Sat Flow(s),veh/h/ln	1728	0	1644	1781	0	1648	1781	1777	1577	1781	1777	1797
Q Serve(g_s), s	1.9	0.0	3.0	1.4	0.0	2.6	1.2	8.3	1.2	4.0	15.7	15.7
Cycle Q Clear(g_c), s	1.9	0.0	3.0	1.4	0.0	2.6	1.2	8.3	1.2	4.0	15.7	15.7
Prop In Lane	1.00		0.76	1.00		0.72	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	329	0	247	118	0	199	78	1108	492	150	626	633
V/C Ratio(X)	0.34	0.00	0.35	0.36	0.00	0.37	0.45	0.52	0.09	0.77	0.79	0.79
Avail Cap(c_a), veh/h	465	0	833	240	0	835	172	1423	632	274	813	822
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.7	0.0	24.1	28.2	0.0	25.5	29.5	17.8	15.4	28.3	18.3	18.3
Incr Delay (d2), s/veh	0.6	0.0	0.8	1.8	0.0	1.1	4.0	0.4	0.1	8.3	3.9	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	1.1	0.6	0.0	1.0	0.6	2.9	0.4	1.9	6.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	0.0	24.9	30.0	0.0	26.7	33.5	18.2	15.4	36.6	22.2	22.1
LnGrp LOS	C	A	C	C	A	C	C	B	B	D	C	C
Approach Vol, veh/h		198			116			648			1105	
Approach Delay, s/veh		26.3			27.9			18.8			23.7	
Approach LOS		C			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	25.7	10.2	15.5	9.3	28.3	12.0	13.6
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.7	25.3	8.5	32.0	6.1	28.9	8.5	32.0
Max Q Clear Time (g_c+I1), s	6.0	10.3	3.4	5.0	3.2	17.7	3.9	4.6
Green Ext Time (p_c), s	0.1	3.1	0.0	0.4	0.0	4.4	0.1	0.4

Intersection Summary	
HCM 6th Ctrl Delay	22.7
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	230	20	32	402	21	30	32	10	18	77	155
Future Volume (veh/h)	94	230	20	32	402	21	30	32	10	18	77	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	101	247	22	34	432	23	32	34	11	19	83	167
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	139	639	540	68	531	28	65	401	340	42	111	224
Arrive On Green	0.08	0.34	0.34	0.04	0.30	0.30	0.04	0.21	0.21	0.02	0.20	0.20
Sat Flow, veh/h	1781	1870	1583	1781	1760	94	1781	1870	1585	1781	553	1113
Grp Volume(v), veh/h	101	247	22	34	0	455	32	34	11	19	0	250
Grp Sat Flow(s),veh/h/ln	1781	1870	1583	1781	0	1853	1781	1870	1585	1781	0	1667
Q Serve(g_s), s	2.6	4.7	0.4	0.9	0.0	10.7	0.8	0.7	0.3	0.5	0.0	6.6
Cycle Q Clear(g_c), s	2.6	4.7	0.4	0.9	0.0	10.7	0.8	0.7	0.3	0.5	0.0	6.6
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		0.67
Lane Grp Cap(c), veh/h	139	639	540	68	0	559	65	401	340	42	0	336
V/C Ratio(X)	0.73	0.39	0.04	0.50	0.00	0.81	0.49	0.08	0.03	0.46	0.00	0.74
Avail Cap(c_a), veh/h	193	752	636	193	0	745	189	716	607	189	0	638
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	11.7	10.3	22.2	0.0	15.2	22.2	14.8	14.6	22.7	0.0	17.6
Incr Delay (d2), s/veh	8.2	0.4	0.0	5.6	0.0	5.2	5.7	0.1	0.0	7.6	0.0	3.3
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	1.3	1.7	0.1	0.4	0.0	4.6	0.4	0.3	0.1	0.3	0.0	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.4	12.1	10.4	27.8	0.0	20.4	28.0	14.9	14.7	30.3	0.0	20.9
LnGrp LOS	C	B	B	C	A	C	C	B	B	C	A	C
Approach Vol, veh/h		370			489			77			269	
Approach Delay, s/veh		16.7			20.9			20.3			21.6	
Approach LOS		B			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.3	20.6	6.2	14.0	8.2	18.7	5.6	14.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.1	18.9	5.0	18.0	5.1	18.9	5.0	18.0
Max Q Clear Time (g_c+I1), s	2.9	6.7	2.8	8.6	4.6	12.7	2.5	2.7
Green Ext Time (p_c), s	0.0	1.1	0.0	0.9	0.0	1.5	0.0	0.1

Intersection Summary	
HCM 6th Ctrl Delay	19.7
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	175	82	30	222	63	93	480	50	82	550	383
Future Volume (veh/h)	142	175	82	30	222	63	93	480	50	82	550	383
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	153	188	88	32	239	68	100	516	54	88	591	412
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	143	437	196	94	293	248	107	1470	153	107	897	625
Arrive On Green	0.08	0.18	0.18	0.05	0.16	0.16	0.06	0.45	0.45	0.06	0.45	0.45
Sat Flow, veh/h	1781	2382	1071	1781	1870	1585	1781	3242	338	1781	1978	1379
Grp Volume(v), veh/h	153	138	138	32	239	68	100	282	288	88	531	472
Grp Sat Flow(s),veh/h/ln	1781	1777	1676	1781	1870	1585	1781	1777	1804	1781	1777	1581
Q Serve(g_s), s	8.0	6.9	7.3	1.7	12.4	3.8	5.6	10.3	10.4	4.9	23.3	23.3
Cycle Q Clear(g_c), s	8.0	6.9	7.3	1.7	12.4	3.8	5.6	10.3	10.4	4.9	23.3	23.3
Prop In Lane	1.00		0.64	1.00		1.00	1.00		0.19	1.00		0.87
Lane Grp Cap(c), veh/h	143	326	307	94	293	248	107	806	818	107	806	717
V/C Ratio(X)	1.07	0.42	0.45	0.34	0.82	0.27	0.94	0.35	0.35	0.82	0.66	0.66
Avail Cap(c_a), veh/h	143	480	452	160	524	444	107	806	818	107	806	717
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	0.84	0.84	0.84
Uniform Delay (d), s/veh	46.0	36.1	36.3	45.7	40.8	37.2	46.8	17.7	17.8	46.5	21.3	21.3
Incr Delay (d2), s/veh	96.4	0.9	1.0	2.1	5.5	0.6	66.7	1.2	1.2	33.5	3.5	4.0
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	7.3	3.0	3.1	0.8	6.1	1.5	4.4	4.2	4.3	3.1	9.6	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	142.4	37.0	37.3	47.8	46.3	37.8	113.5	18.9	19.0	80.0	24.8	25.3
LnGrp LOS	F	D	D	D	D	D	F	B	B	F	C	C
Approach Vol, veh/h		429			339			670			1091	
Approach Delay, s/veh		74.7			44.7			33.1			29.5	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	51.9	11.3	24.3	12.5	51.9	14.0	21.6
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.0	33.0	9.0	27.0	6.0	33.0	8.0	28.0
Max Q Clear Time (g_c+I1), s	6.9	12.4	3.7	9.3	7.6	25.3	10.0	14.4
Green Ext Time (p_c), s	0.0	3.0	0.0	1.4	0.0	3.6	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	40.1
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	551	460	210	110	580	10	300	170	70	350	320	564
Future Volume (veh/h)	551	460	210	110	580	10	300	170	70	350	320	564
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	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	557	465	212	111	586	10	238	264	71	354	323	537
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	556	852	562	172	907	15	209	219	186	622	653	553
Arrive On Green	0.16	0.24	0.24	0.10	0.18	0.18	0.12	0.12	0.12	0.35	0.35	0.35
Sat Flow, veh/h	3456	3554	1569	1781	5170	88	1781	1870	1585	1781	1870	1585
Grp Volume(v), veh/h	557	465	212	111	385	211	238	264	71	354	323	537
Grp Sat Flow(s),veh/h/ln	1728	1777	1569	1781	1702	1854	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	17.7	12.6	11.1	6.6	11.6	11.6	12.9	12.9	4.6	17.8	14.9	36.7
Cycle Q Clear(g_c), s	17.7	12.6	11.1	6.6	11.6	11.6	12.9	12.9	4.6	17.8	14.9	36.7
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	556	852	562	172	597	325	209	219	186	622	653	553
V/C Ratio(X)	1.00	0.55	0.38	0.64	0.65	0.65	1.14	1.20	0.38	0.57	0.49	0.97
Avail Cap(c_a), veh/h	556	852	562	180	597	325	209	219	186	622	653	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.32	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	36.6	26.3	47.9	42.2	42.2	48.5	48.5	44.9	29.1	28.2	35.2
Incr Delay (d2), s/veh	22.0	0.8	0.6	5.4	5.3	9.6	104.8	126.7	0.5	0.8	0.2	30.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	5.5	5.1	3.2	5.3	6.2	11.8	13.7	1.8	7.6	6.7	18.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.1	37.4	26.9	53.3	47.5	51.8	153.4	175.2	45.3	29.9	28.4	65.9
LnGrp LOS	F	D	C	D	D	D	F	F	D	C	C	E
Approach Vol, veh/h		1234			707			573			1214	
Approach Delay, s/veh		49.5			49.7			150.1			45.4	
Approach LOS		D			D			F			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	33.2		43.5	22.4	26.1		18.0				
Change Period (Y+Rc), s	* 4.7	6.8		5.1	* 4.7	6.8		5.1				
Max Green Setting (Gmax), s	* 11	25.9		38.4	* 18	19.3		12.9				
Max Q Clear Time (g_c+I1), s	8.6	14.6		38.7	19.7	13.6		14.9				
Green Ext Time (p_c), s	0.0	2.0		0.0	0.0	1.3		0.0				

Intersection Summary		
HCM 6th Ctrl Delay		63.6
HCM 6th LOS		E

Notes

User approved volume balancing among the lanes for 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)	168	50	72	160	60	240	91	1095	100	220	572	164
Future Volume (veh/h)	168	50	72	160	60	240	91	1095	100	220	572	164
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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	179	53	77	170	64	229	97	1165	106	234	609	174
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	113	164	198	73	262	122	1283	570	262	1199	342
Arrive On Green	0.07	0.16	0.16	0.11	0.20	0.20	0.07	0.36	0.36	0.15	0.44	0.44
Sat Flow, veh/h	3456	688	1000	1781	358	1280	1781	3554	1578	1781	2729	778
Grp Volume(v), veh/h	179	0	130	170	0	293	97	1165	106	234	396	387
Grp Sat Flow(s),veh/h/ln	1728	0	1688	1781	0	1638	1781	1777	1578	1781	1777	1730
Q Serve(g_s), s	5.7	0.0	7.9	10.6	0.0	19.6	6.1	35.2	5.2	14.6	18.2	18.2
Cycle Q Clear(g_c), s	5.7	0.0	7.9	10.6	0.0	19.6	6.1	35.2	5.2	14.6	18.2	18.2
Prop In Lane	1.00		0.59	1.00		0.78	1.00		1.00	1.00		0.45
Lane Grp Cap(c), veh/h	242	0	277	198	0	336	122	1283	570	262	781	760
V/C Ratio(X)	0.74	0.00	0.47	0.86	0.00	0.87	0.79	0.91	0.19	0.89	0.51	0.51
Avail Cap(c_a), veh/h	361	0	478	205	0	481	232	1352	601	276	781	760
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.5	0.0	42.8	49.4	0.0	43.5	51.8	34.3	24.7	47.3	22.8	22.9
Incr Delay (d2), s/veh	4.4	0.0	1.2	28.1	0.0	11.8	10.8	8.9	0.2	27.7	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	3.4	6.2	0.0	8.9	3.0	15.9	1.9	8.3	7.3	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.0	0.0	44.0	77.5	0.0	55.3	62.7	43.2	24.9	75.0	23.4	23.4
LnGrp LOS	E	A	D	E	A	E	E	D	C	E	C	C
Approach Vol, veh/h		309			463			1368			1017	
Approach Delay, s/veh		50.9			63.4			43.2			35.3	
Approach LOS		D			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	23.1	46.8	18.6	24.5	14.3	55.7	13.9	29.2
Change Period (Y+Rc), s	6.5	6.0	6.0	6.0	6.5	6.0	6.0	6.0
Max Green Setting (Gmax), s	17.5	43.0	13.0	32.0	14.7	45.8	11.8	33.2
Max Q Clear Time (g_c+I1), s	16.6	37.2	12.6	9.9	8.1	20.2	7.7	21.6
Green Ext Time (p_c), s	0.1	3.6	0.0	0.6	0.1	4.7	0.2	1.3

Intersection Summary	
HCM 6th Ctrl Delay	44.4
HCM 6th LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	712	50	31	320	27	40	77	42	22	54	107
Future Volume (veh/h)	255	712	50	31	320	27	40	77	42	22	54	107
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		1.00	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	268	749	53	33	337	28	42	81	44	23	57	113
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	327	870	716	63	540	45	76	302	249	48	80	159
Arrive On Green	0.18	0.46	0.46	0.04	0.32	0.32	0.04	0.16	0.16	0.03	0.15	0.15
Sat Flow, veh/h	1781	1870	1539	1781	1703	142	1781	1870	1541	1781	550	1090
Grp Volume(v), veh/h	268	749	53	33	0	365	42	81	44	23	0	170
Grp Sat Flow(s),veh/h/ln	1781	1870	1539	1781	0	1845	1781	1870	1541	1781	0	1640
Q Serve(g_s), s	8.4	20.7	1.1	1.1	0.0	9.7	1.3	2.2	1.4	0.7	0.0	5.7
Cycle Q Clear(g_c), s	8.4	20.7	1.1	1.1	0.0	9.7	1.3	2.2	1.4	0.7	0.0	5.7
Prop In Lane	1.00		1.00	1.00		0.08	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	327	870	716	63	0	585	76	302	249	48	0	239
V/C Ratio(X)	0.82	0.86	0.07	0.52	0.00	0.62	0.56	0.27	0.18	0.48	0.00	0.71
Avail Cap(c_a), veh/h	496	1100	905	154	0	730	154	582	480	154	0	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.7	13.8	8.6	27.4	0.0	16.8	27.2	21.3	20.9	27.8	0.0	23.5
Incr Delay (d2), s/veh	6.5	5.9	0.0	6.5	0.0	1.1	6.2	0.5	0.3	7.4	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	8.6	0.3	0.5	0.0	3.8	0.7	0.9	0.5	0.4	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.2	19.7	8.6	33.9	0.0	17.9	33.4	21.7	21.3	35.2	0.0	27.4
LnGrp LOS	C	B	A	C	A	B	C	C	C	D	A	C
Approach Vol, veh/h		1070			398			167			193	
Approach Delay, s/veh		21.5			19.2			24.5			28.3	
Approach LOS		C			B			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.6	31.4	7.0	12.9	15.1	22.8	6.0	13.8
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	34.0	5.0	18.0	16.1	22.9	5.0	18.0
Max Q Clear Time (g_c+I1), s	3.1	22.7	3.3	7.7	10.4	11.7	2.7	4.2
Green Ext Time (p_c), s	0.0	4.2	0.0	0.6	0.4	1.7	0.0	0.4

Intersection Summary	
HCM 6th Ctrl Delay	22.0
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	315	472	145	40	175	122	112	879	50	75	667	202
Future Volume (veh/h)	315	472	145	40	175	122	112	879	50	75	667	202
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		0.99	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	339	508	156	43	188	118	120	945	54	81	717	217
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	292	640	196	99	245	206	113	1552	89	90	1181	357
Arrive On Green	0.16	0.24	0.24	0.06	0.13	0.13	0.06	0.45	0.45	0.05	0.44	0.44
Sat Flow, veh/h	1781	2679	818	1781	1870	1574	1781	3414	195	1781	2671	808
Grp Volume(v), veh/h	339	336	328	43	188	118	120	492	507	81	477	457
Grp Sat Flow(s),veh/h/ln	1781	1777	1721	1781	1870	1574	1781	1777	1832	1781	1777	1703
Q Serve(g_s), s	20.5	22.2	22.4	2.9	12.1	8.8	7.9	26.1	26.1	5.7	25.6	25.6
Cycle Q Clear(g_c), s	20.5	22.2	22.4	2.9	12.1	8.8	7.9	26.1	26.1	5.7	25.6	25.6
Prop In Lane	1.00		0.48	1.00		1.00	1.00		0.11	1.00		0.47
Lane Grp Cap(c), veh/h	292	425	411	99	245	206	113	808	833	90	785	752
V/C Ratio(X)	1.16	0.79	0.80	0.43	0.77	0.57	1.07	0.61	0.61	0.90	0.61	0.61
Avail Cap(c_a), veh/h	292	625	606	128	486	409	113	808	833	90	785	752
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	0.78	0.78	0.78
Uniform Delay (d), s/veh	52.3	44.6	44.7	57.1	52.5	51.0	58.6	25.7	25.7	59.0	26.6	26.6
Incr Delay (d2), s/veh	103.3	4.2	4.6	2.9	5.0	2.5	103.7	3.4	3.3	54.6	2.7	2.8
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	17.5	10.3	10.1	1.4	6.0	3.6	6.7	11.2	11.6	3.9	10.9	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	155.6	48.8	49.3	60.0	57.5	53.5	162.2	29.1	29.0	113.6	29.3	29.4
LnGrp LOS	F	D	D	E	E	D	F	C	C	F	C	C
Approach Vol, veh/h		1003			349			1119			1015	
Approach Delay, s/veh		85.1			56.5			43.3			36.1	
Approach LOS		F			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.8	63.3	13.0	35.9	14.4	61.7	26.5	22.4
Change Period (Y+Rc), s	6.5	6.5	6.0	6.0	6.5	6.5	6.0	6.0
Max Green Setting (Gmax), s	6.3	40.7	9.0	44.0	7.9	39.1	20.5	32.5
Max Q Clear Time (g_c+I1), s	7.7	28.1	4.9	24.4	9.9	27.6	22.5	14.1
Green Ext Time (p_c), s	0.0	4.7	0.0	4.1	0.0	4.3	0.0	1.3

Intersection Summary	
HCM 6th Ctrl Delay	54.6
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

APPENDIX P

SIGNAL WARRANT WORKSHEETS

Peak Hour	Opening Year 2025 + Project			
	Major Street *(both approaches)*	**Minor Street** *(higher approach)*	**Minor Street** *(lower approach)*	**Total Entering**
AM	754	230	67	1,051
PM	1,295	173	144	1,612

Warrant 3 Part A - Peak Hour Delay Warrant

Linda Vista Drive / S. Pacific Street
Opening Year 2025 + Project AM

Intersection Information

Delay on stop-controlled approach:	26.8	sec/veh
Total entering volumes:	1051	vehicles
Vehicles on stop-controlled approach:	230	vehicles
Number of lanes on stop-controlled approach:	1	Lanes
Total number of approaches:	4	approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	**1.7**	hours
Part Satisfied?	**No**	

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	**230**	vehicles
Part Satisfied?	**Yes**	

PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	**1051**	vehicles
Part Satisfied?	**Yes**	

Warrant Satisfied? No

Warrant 3 Part A - Peak Hour Delay Warrant

Linda Vista Drive / S. Pacific Street
Opening Year 2025 + Project PM

Intersection Information

Delay on stop-controlled approach:	155.0	sec/veh
Total entering volumes:	1612	vehicles
Vehicles on stop-controlled approach:	173	vehicles
Number of lanes on stop-controlled approach:	1	Lanes
Total number of approaches:	4	approaches

PART 1

Do total vehicle hours of delay equal or exceed four hours for a one lane approach or five hours for a two or more lane approach?

Vehicle Hours of Delay:	**7.4**	hours
Part Satisfied?	**Yes**	

PART 2

Volume on minor street equals or exceeds 100 vph for a one lane approach or 150 vph for a two lane approach?

Vehicles on stop controlled approach:	**173**	vehicles
Part Satisfied?	**Yes**	

PART 3

Volume entering intersection equals or exceeds 650 vph for intersections with three approaches or 800 vph for intersections with four or more approaches?

Total entering volumes:	**1612**	vehicles
Part Satisfied?	**Yes**	

Warrant Satisfied? Yes

Linda Vista Drive / S. Pacific Street

Figure 4C-3, Warrant 3, Peak Hour

Opening Year 2025 + Project Volumes