APPENDIX I-1

Local Transportation Analysis

HUGHES CIRCUITS

FINAL
Local Transportation Analysis

DECEMBER 2023

Prepared For
Hughes SMCC, LCC
546 S Pacific Street
San Marcos, CA 90278

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Executive Summary

Project Setting and Description

The Hughes Circuits project (the "Project") proposes to construct a building with 8,000 square feet (SF) of offices, 44,410 SF of warehouse, and 15,000 SF of manufacturing. The Project is located along South Pacific Street, approximately 800 feet south of the South Pacific Street & Linda Vista Drive intersection in the City of San Marcos (the "City"). The project site is currently vacant and designated as light industrial use. Per the City's General Plan and Zoning Ordinance, the Project's proposed land uses are permitted. The expected opening year of the Project is Year 2024.

Project site access will be provided via the following four new project driveways:

- Project Driveway #1 – This new, full-access driveway will be located along the east side of South Pacific Street to the west of the project site. This driveway will be a new side-street stop-controlled intersection with South Pacific Street as the uncontrolled approach and the project driveway as the stop-controlled approach.
- Project Driveway #2 – This new, full-access driveway will be located along the north side of South Pacific Street to the south of the project site. This driveway will be a new side-street stop-controlled intersection with South Pacific Street as the uncontrolled approach and the project driveway as the stop-controlled approach.

Additionally, the Project will implement Class II bicycle facilities along South Pacific Street between Linda Vista Drive and West San Marcos Boulevard. Per the City of San Marcos Draft Active Transportation Plan[1], this segment of South Pacific Street has an ultimate classification of Class II Buffered Bike Lane. Therefore, the proposed bicycle facility will have a 1 ½-foot buffer where on-street parking is allowed and a 3-foot buffer where on-street parking is prohibited.

Based on the preliminary review of the project site plan, the Project would not conflict with existing or planned transit, bicycle, or pedestrian facilities. The Project will reconstruct curb ramps located along project driveways, including detectable surface warning tactiles (yellow truncated domes). Implementation of the above should enhance the overall bicycle and pedestrian environment.

The Project is acting as an "expansion" of the existing Hughes Circuits facility located across the street from the project site, with similar operations except the Project will operate with two shifts instead of three (two 8-hour shifts, 5 days a week). Therefore, a trip generation study was conducted at the existing Hughes Circuits facility. Driveway counts were collected over a three-day period (Tuesday, March 1, Wednesday, March 2, and Thursday, March 3) to determine daily traffic and peak hour trip generation rates for the Project.

The Project is anticipated to generate a net total of 348 daily trips, including 38 trips (32-in/6-out) during the AM peak hour and 43 (9-in/34-out) during the PM peak hour.

[1] San Marcos Active Transportation Plan

The following roadway segments and intersections were included for analysis:

Roadway Segments

- South Pacific Street, between Linda Vista Drive and West San Marcos Boulevard
- Linda Vista Drive, between South Rancho Santa Fe Road and South Pacific Street
- Linda Vista Drive, between South Pacific Street and South Las Posas Road

Intersections

1. South Pacific Street & Linda Vista Drive
2. South Pacific Street & West San Marcos Boulevard
3. South Pacific Street & Project Driveway #1
4. Project Driveway #2 & South Pacific Street

LOS Deficiencies and Improvement Requirements

Determination of the Need for Off-Site Improvements to Accommodate Project Traffic – Near-Term Year 2024 with Project Conditions

Roadway Segment Analysis
No improvements required.

Intersection Analysis
The implementation of the Project would have an adverse effect on traffic operations at the following study intersection:

- *South Pacific Street & Linda Vista Drive* – Implementation of the Project would add more than 2.0 seconds of delay to this intersection already operating at LOS F during the PM peak hour. To improve traffic conditions, the Project shall pay a fair share contribution towards the construction of a traffic signal at this intersection.

However, based on the traffic volumes projected under Near-Term Year 2024, this intersection would not meet the requirements (traffic signal warrant) for the installation of a traffic signal. Therefore, it is not recommended to construct this traffic signal under Near-Term Year 2024 conditions.

Determination of the Need for Off-Site Improvements to Accommodate Project Traffic – Horizon Year 2050 with Project Conditions

Roadway Segment Analysis
The implementation of the Project would have an adverse effect on traffic operations at the following study roadway segments:

- South Pacific Street, between Linda Vista Drive and Project Driveway #1
- South Pacific Street, between Project Driveway #2 and West San Marcos Boulevard

However, daily roadway LOS is typically used only at the planning level and does not necessarily indicate true roadway operations. Therefore, to determine if the identified roadway segments operate at acceptable levels during peak times (worst case), peak hour arterial analyses were conducted to better understand the actual travel flow along the roadways. Roadway segments in

which the peak hour arterial LOS, as well as the intersection LOS at either end of the segment are projected to operate at acceptable LOS D or better would not require improvements since the actual travel flow along the segment is considered to be acceptable.

- South Pacific Street, between Linda Vista Drive and Project Driveway #1 (LOS F). The Proposed Project would add 174 average daily trips resulting in an increase of 0.021 in V/C ratio, which is above the allowable 0.02 increase in V/C ratio. Therefore, the following additional analyses were conducted to determine if the roadway segment would still require improvements as a result of the Proposed Project:
    - The arterial LOS analysis identifies this roadway segment to operate as LOS D or better in the NB and SB directions during both the AM and PM peak hours.[2]
    - The intersection of South Pacific Street & Linda Vista Drive and South Pacific Street & Project Driveway #1 are projected to operate at LOS B or better during both the AM and PM peak hours.[3]
    - Therefore, the roadway segment would not require improvements as a result of the Proposed Project.
- South Pacific Street, between Project Driveway #2 and West San Marcos Boulevard (LOS F). The Proposed Project would add 174 average daily trips resulting in an increase of 0.021 in V/C ratio, which is above the allowable 0.02 increase in V/C ratio. Therefore, the following additional analyses were conducted to determine if the roadway segment would still require improvements as a result of the Proposed Project:
    - The arterial LOS analysis identifies this roadway segment to operate as LOS D or better in the NB and SB directions during both the AM and PM peak hours.
    - The intersection of South Pacific Street & Project Driveway #2 and South Pacific Street & West San Marcos Boulevard are projected to operate at LOS B or better during both the AM and PM peak hours.
    - Therefore, the roadway segment would not require improvements as a result of the Proposed Project.

Therefore, since these study roadway segments are projected to operate efficiently during peak hours, implementation of the Project would not result in adverse effects on traffic operations and no improvements are required.

[2] Due to limitations in Synchro software, and only for the purpose of arterial analysis, the intersection of South Pacific Street was input as a traffic signal but modeled to mimic the behavior of an all-way stop-controlled intersection.

[3] The Project will pay a fair share contribution towards the signalization of South Pacific Street & Linda Vista Road by Horizon Year 2050 with Improvements conditions.

Intersection Analysis

The implementation of the Project would have an adverse effect on traffic operations at the following study intersection:

- *South Pacific Street & Linda Vista Drive* – Implementation of the Project would add more than 2.0 seconds of delay to this intersection already operating at LOS F during the PM peak hour. To improve traffic conditions, the Project shall pay a fair share contribution towards the construction of a traffic signal at this intersection. This would reduce the overall delay from 63.8 seconds (LOS F) to 14.4 seconds (LOS B). The improvement would enhance traffic operations during the PM peak hour to better than pre-project conditions. Thus, upon implementation of this improvement, the Project would no longer have an adverse effect on traffic operations at this intersection.

  The total number of vehicle trips passing through this intersection during the PM peak hour is 1,415, of which 22 (1.6% of the total volume) are vehicle trips generated by the Project. The Project shall pay a 1.6% fair share contribution towards the installation of a traffic signal at this intersection.

  It should be noted that based on discussions with City of San Marcos staff, the Upham/Pacific project will signalize this intersection as part of project frontage improvements. However, due to the uncertainty of the Upham/Pacific opening year, the intersection was assumed to remain unsignalized under Horizon Year 2050 conditions, resulting in the above adverse effect. If the Upham/Pacific project constructs a traffic signal at this intersection as part of their project, the Project would not be required to pay a 1.6% fair share contribution towards the installation of a traffic signal at this intersection.

Based on the traffic volumes projected under Horizon Year 2050, this intersection would meet the requirements for the installation of a traffic signal. Therefore, it is recommended that the Project pay a 1.6% fair share contribution towards the installation of a traffic signal.

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Tables

1.0 Introduction

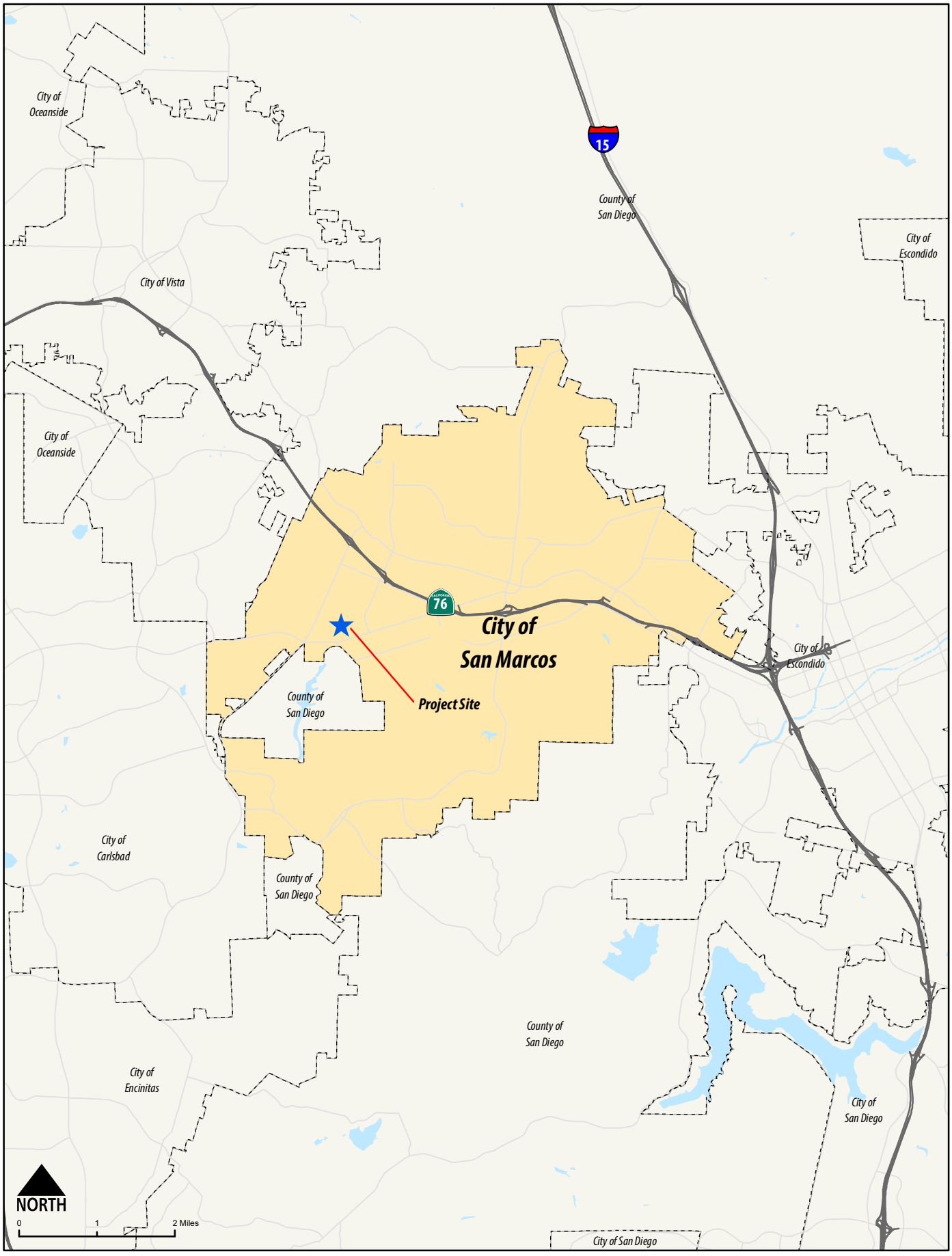
The purpose of this Local Transportation Analysis (LTA) is to document the effect the Hughes Circuits project (the "Project") would have on the circulation network and to determine if improvements are required. Per the City's Transportation Impact Analysis Guidelines (TIAG), the City strives to maintain intersection and roadway segment operations based on LOS standards outlined in the General Plan Mobility Element. Improvements should be identified for any study facilities that do not meet City LOS standards to increase performance to acceptable or pre-project conditions.

1.1 Project Description

The Hughes Circuits project (the "Project") proposes to construct a building with 8,000 square feet (SF) of offices, 44,410 SF of warehouse, and 15,000 SF of manufacturing. The Project is located along South Pacific Street, approximately 800 feet south of the South Pacific Street & Linda Vista Drive intersection in the City of San Marcos (the "City"). The project site is currently vacant and designated as light industrial use. Per the City's General Plan and Zoning Ordinance, the Project's proposed land uses are permitted. The expected opening year of the Project is Year 2024.

Access to the Project will be provided via two separate full-access driveways with one located along South Pacific Street to the west of the project site and the other along South Pacific Street to the south of the project site. Additionally, the Project will implement Class II bicycle facilities along South Pacific Street between Linda Vista Drive and West San Marcos Boulevard. The Class II bicycle lanes will have a 1 ½-foot buffer where on-street parking is allowed and a 3-foot buffer where on-street parking is prohibited.

Figure 1.1 displays the Project's regional location. **Figure 1.2** displays the project site plan and **Figure 1.3** displays the conceptual striping plan for bicycle facilities along South Pacific Street.



Hughes Circuits
Transportation Impact Analysis

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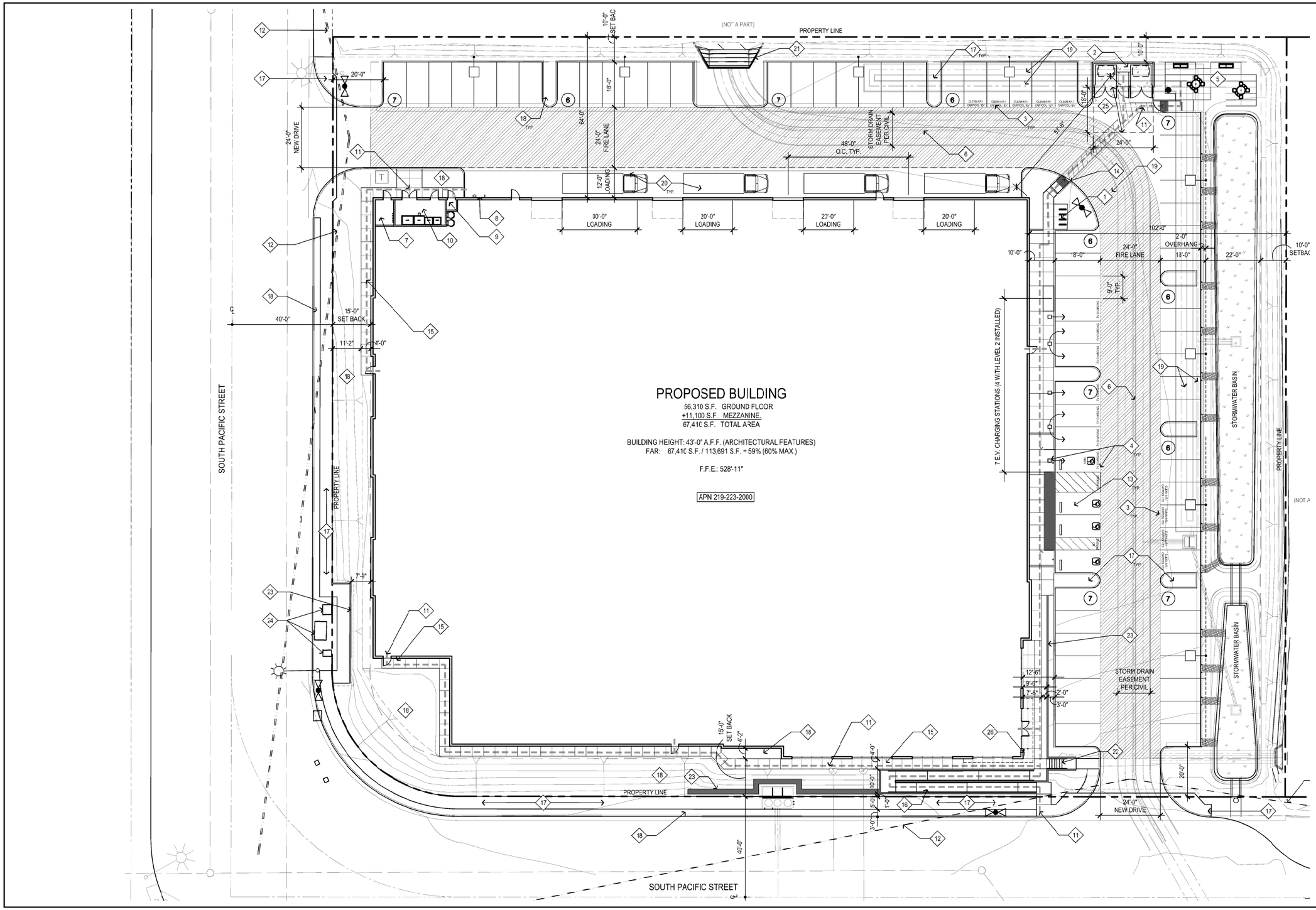
Figure 1.1
Project Regional Location



PROPOSED BUILDING

56,310 S.F. GROUND FLOOR
+11,100 S.F. MEZZANINE.
67,410 S.F. TOTAL AREA

BUILDING HEIGHT: 43'-0" A.F.F. (ARCHITECTURAL FEATURES)
FAR: 67,410 S.F. / 113,691 S.F. = 59% (60% MAX.)

F.F.E.: 528'-11"

APN 219-223-2000

Figure 1.2
Project Site Plan

HUGHES CIRCUITS
STRIPING CONCEPT
APN 219-223-20 & 22

SHEET 1 OF 1 SHEET
STRIPING

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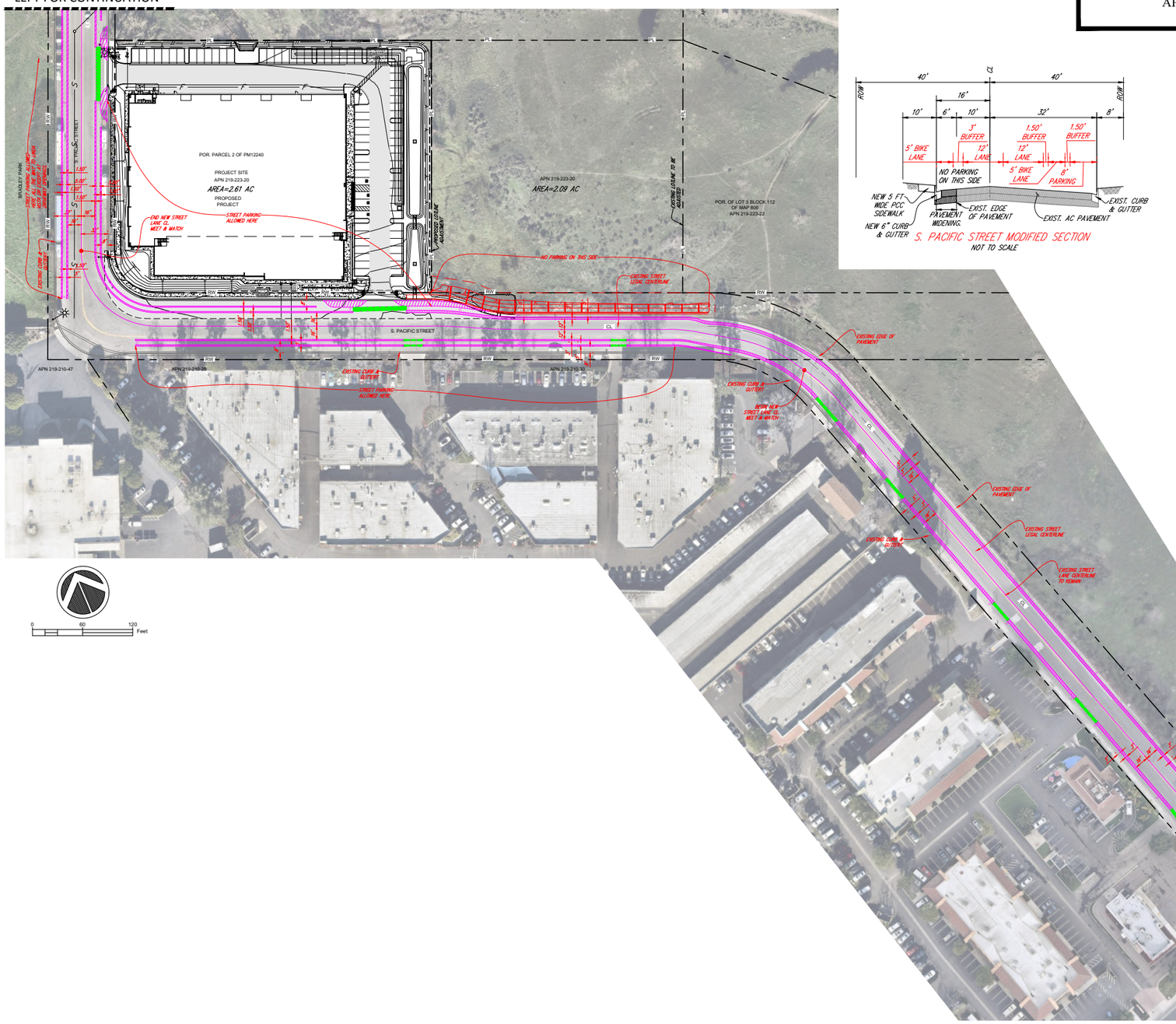

S. PACIFIC STREET MODIFIED SECTION
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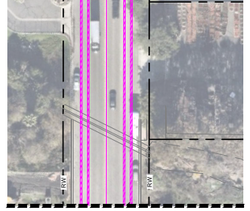

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1.2 Report Organization

Following this introductory chapter, this report is organized into the following chapters:

2. Analysis Methodology – This chapter reviews the methods utilized to evaluate any significant impacts and potential General Plan inconsistencies associated with the implementation of the Project, as required by the City's TIAG.

3. Project Traffic - This chapter describes the Project's land uses and associated trip generation. Additional information such as trip distribution patterns and project trip assignment are also included in this chapter, which is used to determine the project study area.

4. Existing Conditions – This chapter describes and evaluates the existing transportation network. Vehicular operations within the study area are evaluated. LOS analysis results are also provided for existing vehicular traffic conditions.

5. Near-Term Year 2024 Conditions – This chapter describes near-term developments anticipated to generate additional study area trips and establishes a near-term baseline against which traffic generated by the Project can be compared to at the project opening day, expected to be Year 2024. LOS analysis results are also provided for Near-Term Year 2024 Base and Near-Term Year 2024 Base with Project vehicular traffic conditions.

6. Horizon Year 2050 Conditions – This chapter describes projected long-range conditions of the transportation network within the study area. Horizon Year 2050 scenario analysis is required per the City's TIAG. LOS analysis results are also provided for Horizon Year 2050 and Horizon Year 2050 with Project vehicular traffic conditions.

7. LOS Deficiencies and Improvement Requirements - This chapter identifies any substandard facilities and provides improvement requirements to improve substandard facilities to acceptable LOS or pre-project conditions.

8. Site Access & Circulation – This chapter addresses access to the Project site and discusses the functionality of the Project's internal circulation.

2.0 Analysis Methodology

This study was performed in accordance with the standards and requirements in the City's TIAG. All analysis assumptions were documented within a scoping agreement memorandum, provided in **Appendix A**, and approved by the City. The following sections describe the analysis methods outlined in the TIAG to evaluate the Project's effect on traffic in relation to LOS.

2.1 Level of Service (LOS) Definition

Level of Service (LOS) is a quantitative measure describing operational conditions within a traffic stream, and the motorist's and/or passengers' perception of operations. A LOS definition generally describes these conditions in terms of such factors as delay, speed, travel time, freedom to maneuver, interruptions in traffic flow, queuing, comfort, and convenience. **Table 2.1** describes generalized definitions of the various LOS categories (A through F) as applied to roadway operations.

Table 2.1 - LOS Definitions

LOS	Definition of Operation
A	This LOS represents a completely free-flow condition, where the operation of vehicles is virtually unaffected by the presence of other vehicles and only constrained by the geometric features of the highway and by driver preferences.
B	This LOS represents a relatively free-flow condition, although the presence of other vehicles becomes noticeable. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.
C	At this LOS, the influence of traffic density on operations becomes marked. The ability to maneuver within the traffic stream is clearly affected by other vehicles.
D	At this LOS, the ability to maneuver is notably restricted due to traffic congestion, and only minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
E	This LOS represents operations at or near capacity. LOS E is an unstable level, with vehicles operating with minimum spacing for maintaining uniform flow. At LOS E, disruptions cannot be dissipated readily thus causing deterioration down to LOS F.
F	At this LOS, forced or breakdown of traffic flow occurs, although operations appear to be at capacity, queues form behind these breakdowns. Operations within queues are highly unstable, with vehicles experiencing brief periods of movement followed by stoppages.

Source: Highway Capacity Manual 6th Edition

2.2 Roadway Segment LOS Standards and Thresholds

Roadway segment LOS standards and thresholds provide the basis for analysis of arterial roadway segment performance. The analysis of roadway segment LOS is based on the functional classification of the roadway, the maximum capacity, roadway geometrics, and existing or forecast Average Daily Traffic (ADT) volumes. **Table 2.2** displays roadway segment capacity standards found in the City's TIAG. The actual capacity of a roadway facility varies according to its physical attributes.

Table 2.2 - Roadway Segment Daily Capacity and LOS Standards

Street Classification	LOS/ADT Thresholds				
	A	B	C	D	E
Expressway (6-lane)	< 30,000	< 42,000	< 60,000	< 70,000	< 80,000
Prime Arterial (6-lane)	< 25,000	< 35,000	< 50,000	< 55,000	< 60,000
Major Arterial (6-lane, divided)	< 20,000	< 28,000	< 40,000	< 45,000	< 50,000
Major Arterial (4-lane, divided)	< 15,000	< 21,000	< 30,000	< 35,000	< 40,000
Major Arterial (3-lane, one-way)	< 12,500	< 16,500	< 22,500	< 25,000	< 27,500
Major Arterial (2-lane, one-way)	<10,000	<13,000	<17,500	<20,000	<22,500
Secondary Arterial/Collector (4-lane w/ center lane)	< 10,000	< 14,000	< 20,000	< 25,000	< 30,000
Secondary Arterial/Collector (3-lane w/ center lane) [1]	< 7,500	< 10,500	< 15,000	< 18,750	< 22,500
Collector (4-lane w/o center lane)	< 5,000	< 7,000	< 10,000	< 13,000	< 15,000
Collector (2-lane w/ continuous left-turn lane)	< 5,000	< 7,000	< 10,000	< 13,000	< 15,000
Collector (2-lane no fronting property)	< 4,000	< 5,500	< 7,500	< 9,000	< 10,000
Collector (2-lane w/commercial fronting)	< 2,500	< 3,500	< 5,000	< 6,500	< 8,000
Collector (2-lane w/multi-family)	< 2,500	< 3,500	< 5,000	< 6,500	< 8,000
Collector (3-lane, one-way)	< 11,000	< 14,000	< 19,000	< 22,500	< 26,000
Collector (2-lane, one-way)	< 7,500	< 9,500	< 12,500	< 15,000	< 17,500
Collector (1-lane, one-way)	< 2,500	< 3,500	< 5,000	< 6,500	< 7,500
Sub-Collector (2-lane single family)	-	-	< 2,200	-	-

Source: City of San Marcos Transportation Impact Analysis Guidelines (November 2020)

Note:
Bold number indicates the ADT thresholds for acceptable LOS.
[1] Based on the capacity of a 4-Lane Secondary Arterial/Collector, reduced to exclude a lane. (3/4*30,000 = 22,500).

These standards are generally used as long-range planning guidelines to determine the functional classification of roadways. For the purposes of this traffic analysis, LOS D or better is considered acceptable for circulation element roadway segments.

Arterial Analysis

Daily roadway LOS is typically used only at the planning level and does not necessarily indicate true roadway operations. The actual performance of a roadway varies according to its physical attributes and is heavily influenced by the ability of its intersections to accommodate peak hour traffic volumes. Therefore, roadway segments identified to operate at unacceptable LOS may be further examined through an arterial analysis to determine the need for improvements. If the addition of project traffic results in unacceptable LOS along a roadway segment and the intersections at the ends of the roadway segment operate at LOS E or F, improvements should be identified to increase performance to acceptable or pre-project conditions.

2.3 Peak Hour Intersection LOS Standards and Thresholds

This section presents the methodologies used to perform peak hour intersection capacity analyses at signalized and unsignalized intersections within the study area. The following assumptions were utilized in conducting all intersection LOS analyses:

- Peak Hour Factor (PHF) – Field-collected PHF for Existing and Near-Term Year 2024 Base Conditions. A PHF of 0.95 was assumed for Horizon Year 2050 analysis.
- Lane Utilization Factor – HCM 6th Edition defaults were used for all scenarios.
- Conflicting Pedestrians/Bicycles – Existing pedestrian and bicycle counts are utilized for all scenarios.
- Signal Timing – Based on existing signal timing plans (as of June 2022), provided in **Appendix B**.
- Heavy Vehicle Factor (HVF) – Based on heavy vehicle counts conducted along Pacific Street, between Linda Vista Drive and West San Marcos Boulevard. Heavy vehicle counts included in **Appendix C.**

2.3.1 Signalized Intersections

The analysis of signalized intersections utilized the operational analysis procedure as outlined in the Highway Capacity Manual (HCM) 6th Edition signalized (Chapter 19) intersection analysis methodology. This method defines LOS in terms of delay, or more specifically, average stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption and lost travel time. This technique uses 1,900 vehicles per hour per lane (VPHPL) as the maximum saturation volume of an intersection. This saturation volume is adjusted to account for lane width, on-street parking, pedestrians, traffic composition (i.e., percentage trucks) and shared lane movements (i.e., through and right-turn movements originating from the same lane). The LOS criteria used for the analysis of signalized intersections are described in **Table 2.3**, identifying the thresholds of control delays and the associated LOS. The computerized analysis of intersection operations was performed utilizing the Synchro Version 11 traffic analysis software by Trafficware Ltd.

Table 2.3 - Signalized Intersection LOS Operational Analysis Method

Average Stopped Delay Per Vehicle (Seconds)	LOS Characteristics
<10	LOS A describes operations with very low delay. This occurs when progression is extremely favorable, and most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
>10– 20	LOS B describes operations with generally good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
>20 – 35	LOS C describes operations with higher delays, which may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
>35– 55	LOS D describes operations with high delay, resulting from some combination of unfavorable progression, long cycle lengths, or high volumes. The influence of congestion becomes more noticeable, and individual cycle failures are noticeable.
>55 – 80	LOS E is considered the limit of acceptable delay. Individual cycle failures are frequent occurrences.
>80	LOS F describes a condition of excessively high delay, considered unacceptable to most drivers. This condition often occurs when arrival flow rates exceed the LOS D capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.

Source: Highway Capacity Manual 6th Edition

2.3.2 Unsignalized Intersections

Unsignalized intersections were analyzed using the Highway Capacity 6th Edition side-street stop (Chapter 20) and all-way stop (Chapter 21) intersection analysis methodology. The computerized analysis of intersection operations was performed utilizing the Synchro Version 11 traffic analysis software by Trafficware Ltd.

LOS was determined as follows:

- All-way stop intersections: Reported for the entire intersection as an average value
- Side-street stop intersections: Reported for the worst-case movement

The LOS criteria used for the analysis of unsignalized intersections are described in **Table 2.4**.

Table 2.4 - LOS Criteria for Stop Controlled Unsignalized Intersections

Average Stopped Delay Per Vehicle (Seconds)	LOS
0-10	A
> 10-15	B
> 15-25	C
> 25-35	D
> 35-50	E
> 50	F

Source: Highway Capacity Manual 6th Edition

2.4 Determination of Project Study Area

Per the City's TIAG, the study area was defined using the following criteria:

- Signalized and unsignalized intersections along and adjacent to the project site
- Site access driveways
- Any classified (non-residential) roadway segments that are linked to the intersections that are being studied

2.5 City of San Marcos LOS Standards

This section outlines the Mobility Element Policies that are relevant to the Proposed Project. The City strives to maintain intersection and roadway segment operations LOS standards based on the following policy:

- Policy M-1.4: LOS D or better for Vehicles as a prioritized mode – Generally provides facilities that have minimum vehicle congestion during peak periods. Most motorists are delayed less than 55 seconds at a signal (or less than one signalized cycle).

Based on the policy listed above, LOS D or better is considered acceptable for study roadway segments and intersections. The TIAG provides the following thresholds to determine if the Proposed Project is required provide improvements for study area facilities:

- Implementation of the Proposed Project 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.
- Implementation of the Proposed Project increases the V/C ratio for a study roadway segment that is already operating at unacceptable LOS by more than 0.02.
- Implementation of the Proposed Project triggers an intersection operating at acceptable LOS to operate at unacceptable LOS and increases the average delay per vehicle by more than 2.0 seconds.
- Implementation of the Proposed Project increases the average delay for a study intersection that is already operating at unacceptable LOS by more than 2.0 seconds.

Improvements should be identified to increase performance to acceptable or pre-project conditions under each scenario.

3.0 Project Traffic

This chapter describes the Project's trip generation, trip distribution patterns, and trip assignment.

3.1 Project Trip Generation

Per the City's Transportation Analysis Guidelines (City's TIAG), trip generation rates should be derived from SANDAG's *(not so) Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region* (April 2002). However, the Project is acting as an "expansion" of the existing Hughes Circuits facility located across the street from the project site, with similar operations except the Project will operate with two shifts instead of three (two 8-hour shifts, 5 days a week). Therefore, a trip generation study was conducted at the existing Hughes Circuits facility. Driveway counts were collected over a three-day period (Tuesday, March 1, Wednesday, March 2, and Thursday, March 3) to determine daily traffic and peak hour trip generation rates for the Project. **Table 3.1** displays the projected daily, as well as AM and PM peak hour, project trip generation. A technical memorandum with detailed information regarding the Project's trip generation is provided in **Appendix D**. Driveway counts are provided in Appendix C.

Table 3.1 - Project Trip Generation

Land Use	ADT	AM Peak Hour			PM Peak Hour		
		Trips	In	Out	Trips	In	Out
Hughes Circuits	348	38	32	6	43	9	34

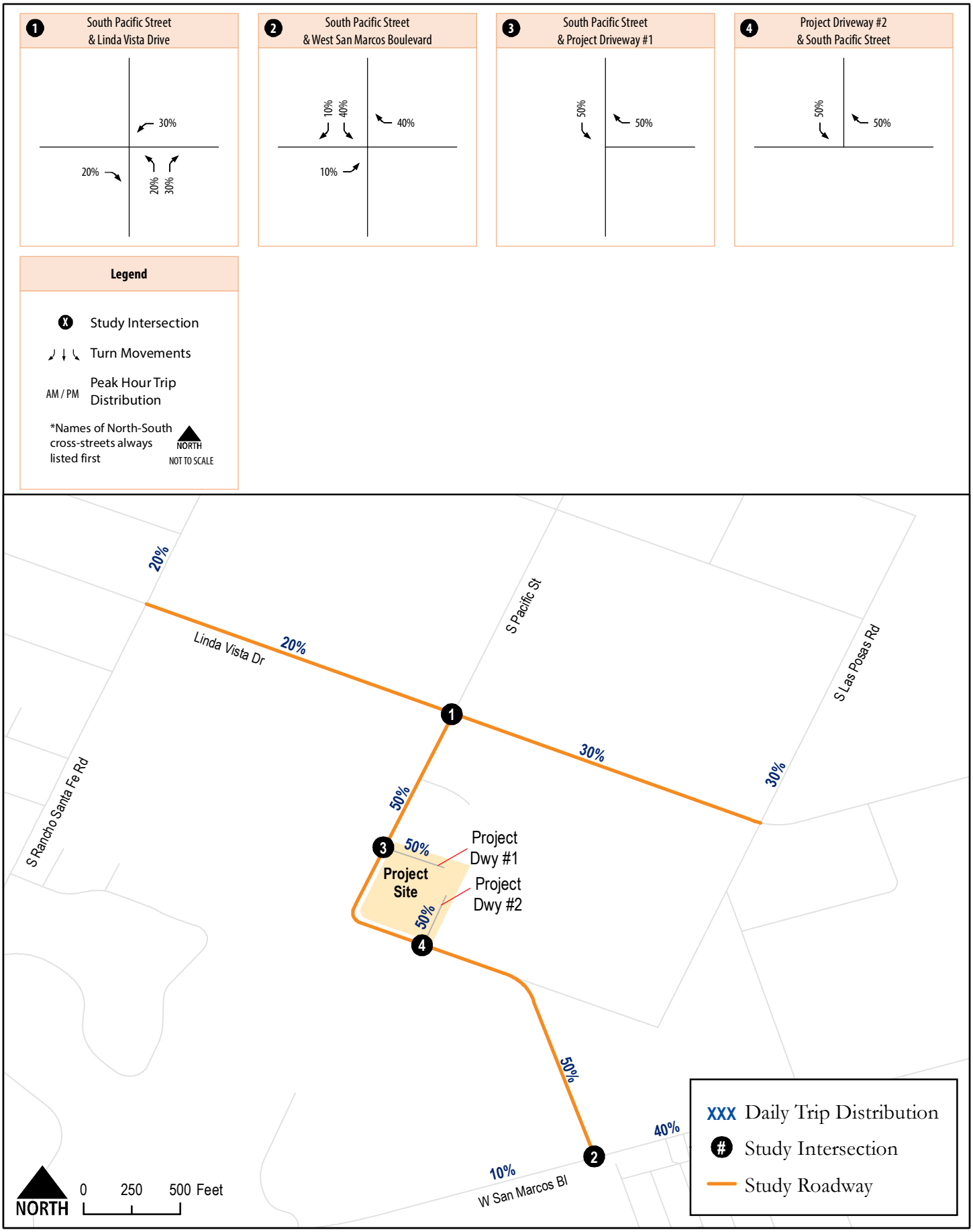
Source: CR Associates (2023)

As shown, the Project is anticipated to generate a net total of 348 daily trips, including 38 trips (32-in/6-out) during the AM peak hour and 43 (9-in/34-out) during the PM peak hour. It should be noted that the Project, similar to the existing site, would not generate a significant amount of heavy vehicle traffic. Therefore, the trip generation analysis did not require application of passenger car equivalents.

3.2 Project Trip Distribution and Assignment

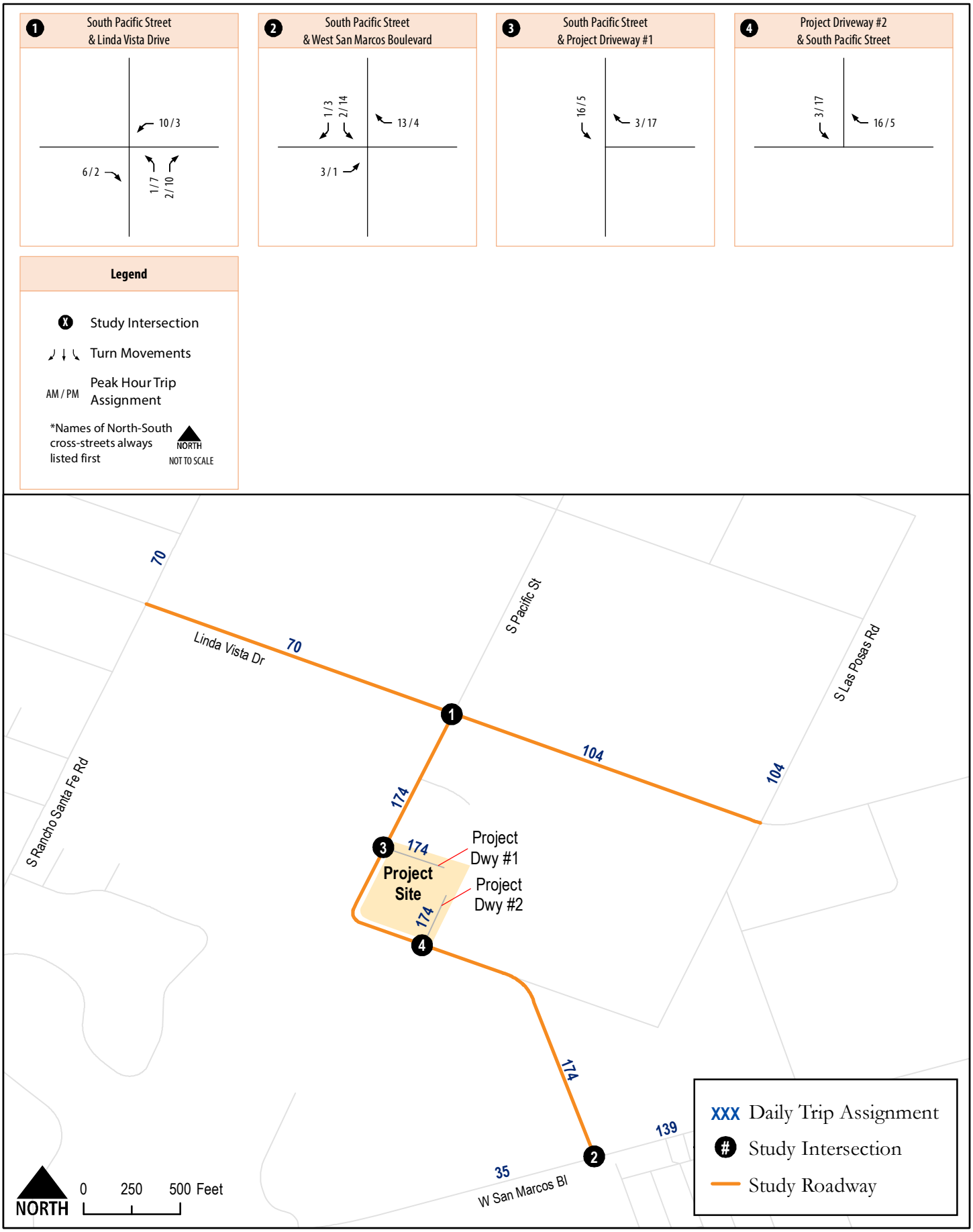
The project trip distribution was manually developed based on the geographical location of the Project, as well as the characteristics of the proposed and surrounding land uses. **Figure 3.1** displays the regional trip distribution patterns for project trips.

Based upon the project trip distribution patterns, daily and AM/PM peak hour project trips were assigned to the adjacent roadway network. **Figure 3.2** displays the daily and AM/PM peak hour project trip assignment.



Hughes Circuits
Transportation Impact Analysis

Figure 3.1
Project Trip Distribution



Hughes Circuits
Transportation Impact Analysis

Figure 3.2
Project Trip Assignment

3.3 Project Study Area

Based on the study area criteria previously outlined in Chapter 2, the project trip assignment shown in Figure 3.2, and preliminary project scoping with City staff, the following roadway segments and intersections were included for analysis:

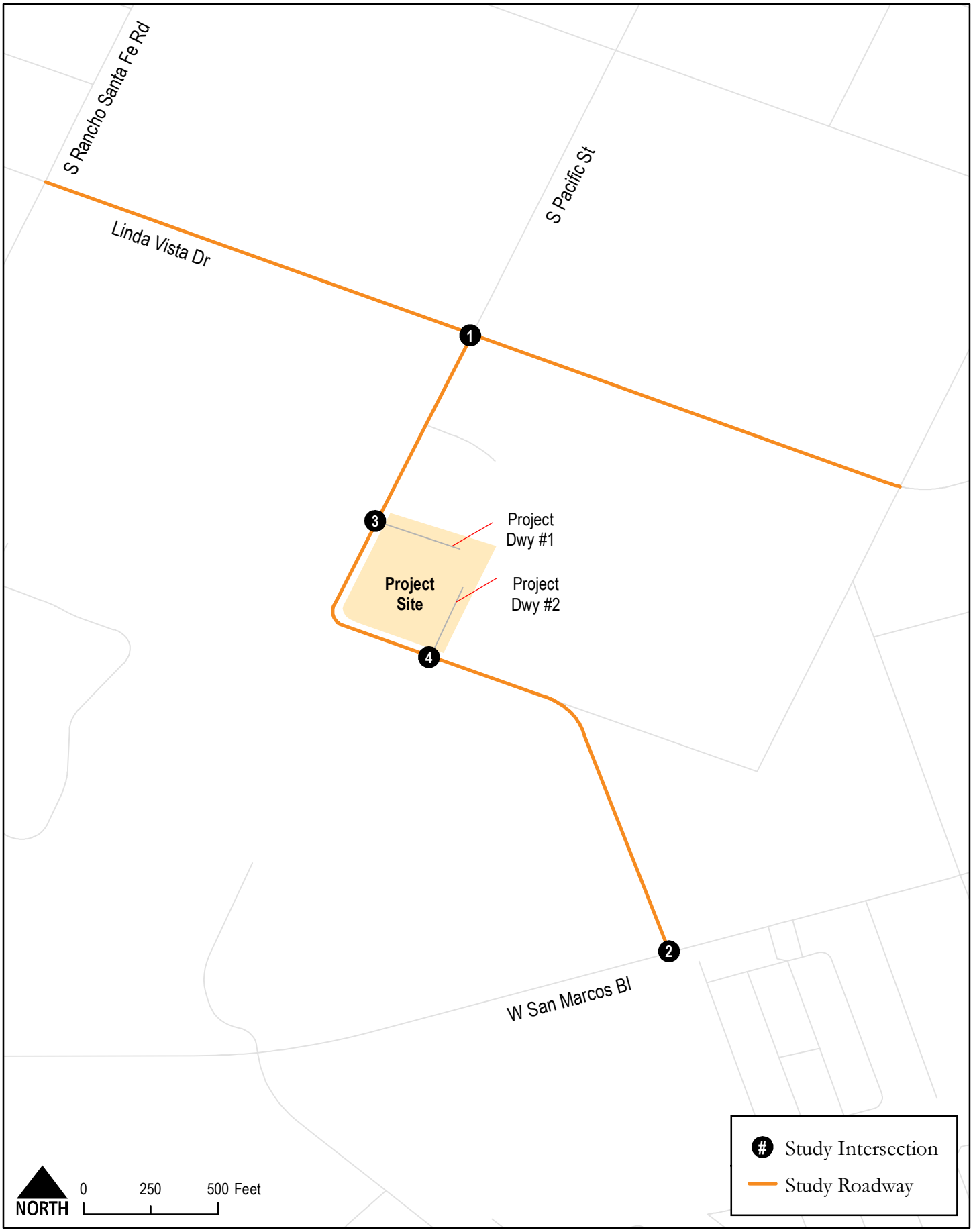
Roadway Segments

- South Pacific Street, between Linda Vista Drive and West San Marcos Boulevard
- Linda Vista Drive, between South Rancho Santa Fe Road and South Pacific Street
- Linda Vista Drive, between South Pacific Street and South Las Posas Road

Intersections

1. South Pacific Street & Linda Vista Drive
2. South Pacific Street & West San Marcos Boulevard
3. South Pacific Street & Project Driveway #1
4. Project Driveway #2 & South Pacific Street

Figure 3.3 displays the overall project study area.



Hughes Circuits
Transportation Impact Analysis

Figure 3.3
Project Study Area

4.0 Active Transportation Evaluation

This section discusses the Project's active transportation modes.

4.1 Transit Access

The project site is within one half mile of the transit lines serviced by North County Transit District (NCTD) described below:

- Bus Route 304 – This bus route is serviced along West Mission Road in the eastbound/westbound direction within the project study area. This bus route connects the Palomar College Transit Center to the Encinitas Transit Station. Operations begin at 4:53 AM and end at 8:23 PM between Monday and Friday with 30-minute intervals. On Saturdays, operations begin at 6:53 AM and end at 9:05 PM with 60-minute intervals. This route does not operate on Sundays.
- Bus Route 347 – This bus route is serviced along West Mission Road and North Las Posas Road within the project study area. This bus route connects the Palomar College Transit Center to the CSU San Marcos SPRINTER Station. Operations begin at 5:31 AM and end at 7:21 PM between Monday and Friday with 30-minute intervals. On Saturdays, operations begin at 7:22 AM and end at 7:08 PM with 60-minute intervals. This route does not operate on Sundays.
- Bus Route 445 – This bus route is serviced along West Mission Road and North Las Posas Road within the project study area. This bus route connects the Palomar College Transit Center to the Carlsbad Poinsettia Station (COASTER Connection). Between Monday and Friday, operations begin at 6:34 AM and end at 10:19 AM with 30-minute intervals for the morning period. Similarly, between Monday and Friday, operations begin at 3:36 PM and end at 7:19 PM with 30-minutes intervals for the afternoon period. This route does not operate on Saturdays or Sundays.
- SPRINTER – This light rail line runs between Oceanside Transit Center and Escondido Transit Center (eastbound and westbound direction). The nearest stop to the project site is the Palomar College Transit Center. Operation begin at 4:17 AM and end at 9:10 PM between Monday and Sunday with 30-minute intervals.

Based on the preliminary review of the project site plan, the Project would not conflict with existing or planned transit facilities and would not result in any impacts to transit facilities.

4.2 Bicycle

Under Existing conditions, there are no bicycle facilities along project frontage. The Project will implement Class II bicycle facilities along South Pacific Street between Linda Vista Drive and West San Marcos Boulevard. Per the City of San Marcos Draft Active Transportation Plan[4], this segment of South Pacific Street has an ultimate classification of Class II Buffered Bike Lane. Therefore, the proposed bicycle facility will have a 1 ½-foot buffer where on-street parking is allowed and a 3-foot buffer where on-street parking is prohibited.

Other nearby planned bicycle facilities include a Class IV Bikeway along Linda Vista Drive, just north of the project site, and West San Marcos Boulevard, just south of the project site. Based on the preliminary review of the project site plan, the Project would not conflict with any existing or planned bicycle facilities and would not result in any impacts to bicycle facilities.

4.3 Pedestrian

Sidewalks are proposed along the segment of South Pacific Street fronting the Project. Sidewalks are also proposed throughout the internal roadways providing direct access to the proposed building.

Based on the preliminary review of the project site plan, the following recommendation is provided:

- Construct curb ramps located along project driveways to include detectable surface warning tactiles (yellow truncated domes) and meet all ADA requirements.

Implementation of the recommendation above would enhance the walkability and safety of the overall pedestrian environment and would not result in any impacts to pedestrian facilities.

[4] San Marcos Active Transportation Plan

5.0 Existing Conditions

This chapter provides a qualitative description of the transportation facilities located in the project study area. A LOS analysis of the existing operations of the local transportation network facilities is also provided for study roadway segments and intersections.

5.1 Existing Transportation Network

Access to the Project from the regional transportation network will be provided via California State Route 78 (SR-78) freeway, South Rancho Santa Fe Road, Linda Vista Drive, South Pacific Street, South Las Posas Road, and West San Marcos Boulevard. These facilities will either provide a direct connection to the Project, via a project driveway, or will provide a critical link between the Project and the regional transportation network. **Table 5.1** summarizes the existing physical characteristics of roadway segments within the study area. **Figure 5.1** displays the functional classifications for study roadway segments and intersection geometrics for study intersections under Existing conditions.

5.2 Existing Intersection Volumes

Traffic counts for study roadway segments and intersections were conducted on June 23, 2022, by Elite Traffic Dynamics, LLC. A count validation was conducted to ensure that recently collected counts reflect traffic conditions prior to the COVID-19 restrictions.

Historical counts along study roadway segments and intersections were not available to provide a comparison with counts conducted in June 2022. Instead, the count validation was conducted on historical counts along Via Vera Cruz, which is located in the vicinity of the Project and would likely reflect a similar change in traffic levels since COVID-19 restrictions. Counts along Via Vera Cruz from May 2022 were greater than those from November 2017 and May 2018. Therefore, study area traffic counts from June 2022 were not adjusted for the purpose of reflecting pre-pandemic conditions.

Additionally, since study area traffic counts were not conducted during typical conditions (when schools are in session and youth sports are most active), another count validation was conducted. This validation compared counts along Via Vera Cruz from May 2022 with counts from June 2022 (also along Via Vera Cruz) and it was determined that May 2022 counts were higher. This is likely due to Via Vera Cruz being part of the regional network and providing direct connections to SR-78, making it more likely to receive a significant amount of school and/or regional trips. This results in a significant change in travel patterns when comparing counts conducted during typical and non-typical conditions. In contrast, the study area roadway segments and intersections are not likely to receive a similar share of school and regional trips and would need less of an adjustment to reflect typical conditions. However, as a conservative approach, study area traffic counts were adjusted based on the differences observed along Via Vera Cruz and as shown below:

- Daily traffic volumes (roadway segments) – 5% overall increase; and
- AM/PM peak hour turning movements (intersections) – 13% overall increase

Table 5.1 - Existing Transportation Network Characteristics

Roadway	Segment	Number of Lanes	Median Type	Posted Speed Limit	Sidewalk?	Bike lanes?	Transit Route
Linda Vista Drive	South Rancho Santa Fe Road to South Pacific Street	1 EB/1 WB	CLTL	35	North Side: Intermittently Contiguous South Side: Contiguous	North Side: Class II South Side: None	None
Linda Vista Drive	South Pacific Street to South Las Posas Road	2 EB/2WB	CLTL	35	North Side: None South Side: Intermittently Contiguous	None	None
South Pacific Street	Linda Vista Drive to West San Marcos Boulevard	1 NB/1 SB	None	35	Intermittently Contiguous	None	None

Source: CR Associates (2023)

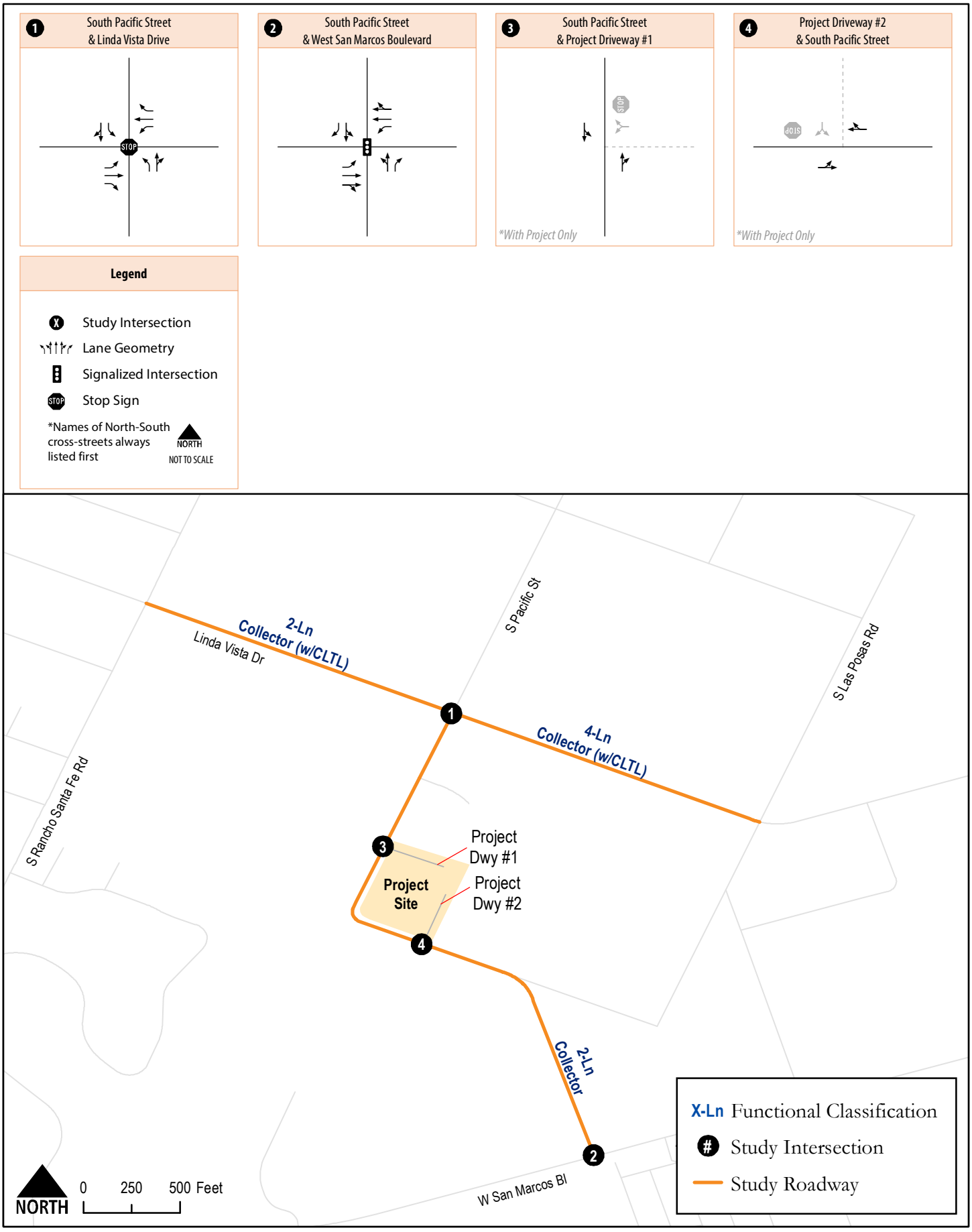


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Figure 5.1
Functional Classifications and Intersection Geometrics
Existing Conditions

Traffic count worksheets, including study area counts, historical counts, and other recently collected counts, are provided in Appendix C. **Figure 5.2** displays existing daily traffic volumes for study roadway segments and AM/PM peak hour turning movements for study intersections.

5.3 Existing Traffic Conditions

LOS analyses under Existing conditions were conducted using the methodologies described in Chapter 2. Roadway segment and intersection LOS analysis results are discussed below.

5.3.1 Roadway Segment Analysis

Table 5.2 displays roadway segment and LOS analysis results for study roadway segments under Existing conditions.

As shown, all study roadway segments currently operate at acceptable LOS D or better under Existing conditions.

5.3.2 Intersection Analysis

Table 5.3 displays intersection LOS and average vehicle delay results for the study intersections under Existing conditions. LOS calculation worksheets for Existing conditions are provided in **Appendix E**.

As shown, the intersection of South Pacific Street & Linda Vista Drive currently operates at unacceptable LOS F during the PM peak hour.

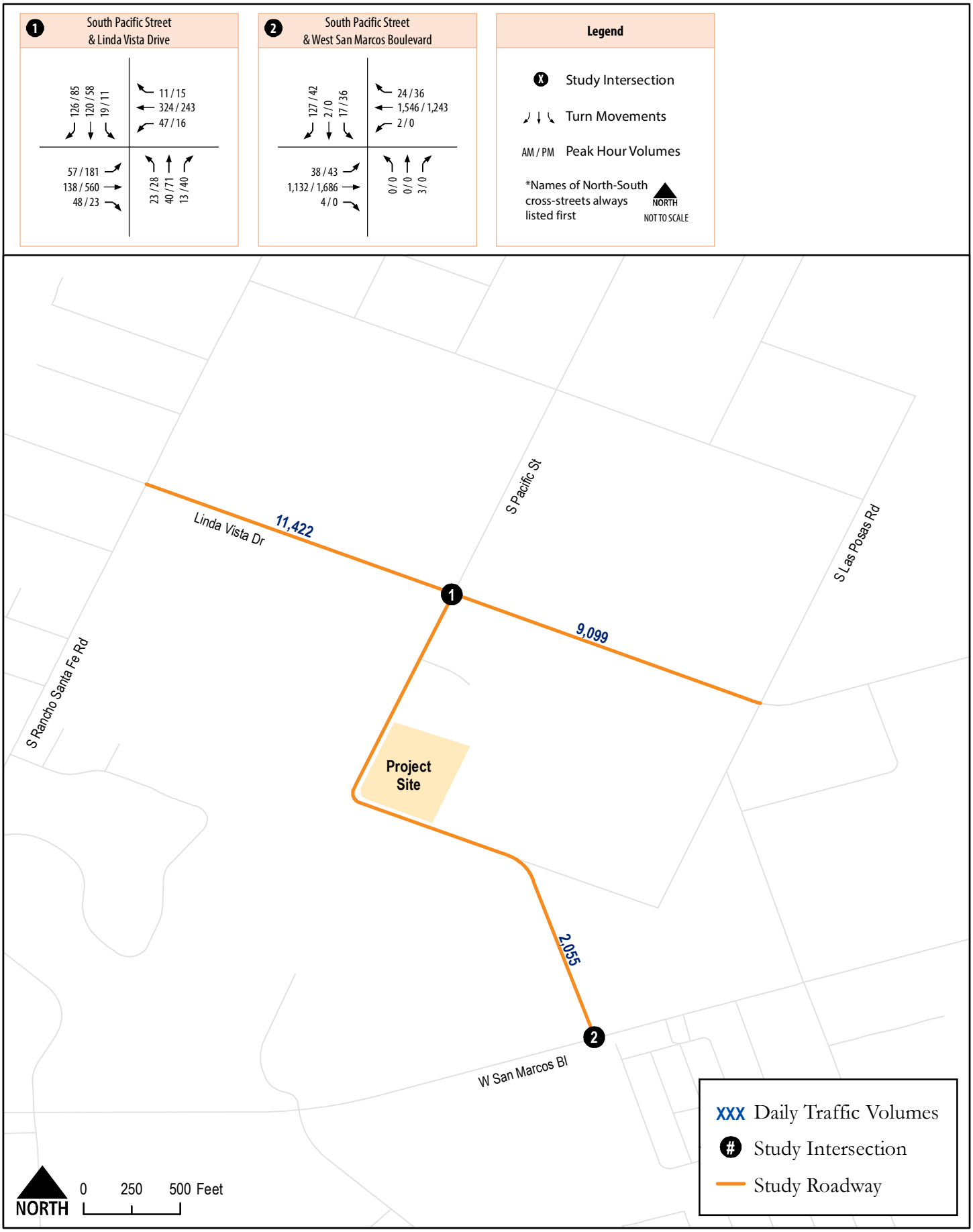

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Figure 5.2
Traffic Volumes
Existing Conditions

Table 5.2 - Functional Classifications and Intersection Geometrics – Existing Conditions

Roadway	Segment	Functional Classification	Roadway Capacity	Daily Volume	V/C	LOS
Linda Vista Drive	South Rancho Santa Fe Road to South Pacific Street	2-Lane Collector (w/CLTL)	15,000	11,422	0.761	D
Linda Vista Drive	South Pacific Street to South Las Posas Road	4-Lane Secondary Arterial/Collector (w/CLTL)	30,000	9,099	0.303	A
South Pacific Street	Linda Vista Drive to West San Marcos Boulevard	2-Lane Collector (w/Commercial Fronting)	8,000	2,055	0.257	A

Source: CR Associates (2023)

Table 5.3 - Functional Classifications and Intersection Geometrics – Existing Conditions

#	Intersection	Control Type	Peak Hour	Avg. Delay (sec.)	LOS
1	South Pacific Street & Linda Vista Drive	AWSC	AM	17.1	C
			PM	59.4	**F**
2	South Pacific Street & West San Marcos Boulevard	Signal	AM	17.3	B
			PM	8.0	A

Source: CR Associates (2023)

Notes:
Bold indicates LOS E or F.
AWSC = All-Way Stop-Controlled. For AWSC intersections, the delay shown is the overall average delay experienced by all of the approaches.

6.0 Near-Term Year 2024 Conditions

This section provides an analysis of Near-Term Year 2024 Base traffic conditions both with and without the Project. The scenarios analyzed in this section include:

- Near-Term Year 2024 Base
- Near-Term Year 2024 Base with Project

6.1 Cumulative Project Traffic

The following eleven (11) projects were identified by City staff as cumulative projects, since they are anticipated to contribute traffic near the project study area by the Project's opening year:

1. Pacific Commercial – This project is located at the northeast corner of the Grand Avenue and Pacific Street intersection. This project proposes to construct a 122-room hotel.
2. San Marcos Highlands – This project is located at the north end of Las Posas Road. This project proposes to construct 187 single-family residential dwelling units as well as a 21.68-acre passive park.
3. El Dorado II Specific Plan – This project is located at the southwest corner of the Richmar Avenue and Pleasant Way intersection. This project proposes to construct 72 multi-family dwelling units as well as 2,000 square feet of specialty retail.
4. Villa Serena – This project is located at the northwest corner of the Richmar Avenue and Marcos Street intersection. This project proposes to construct 12 multi-family dwelling units.
5. Mariposa (Phase 1) – This project is located at the northeast corner of the Richmar Avenue and Los Olivos Drive intersection. This project proposes to develop 60 multi-family dwelling units.
6. Murai Subdivision – This project is located at the north end of Las Posas Road. This project proposes to construct 89 single-family residential dwelling units.
7. Pacifica San Marcos – This project is located at the southeast corner of the Rancho Santa Fe Road and 9th Street intersection. This project proposes to construct 31 multi-family dwelling units as well as 4,375 square feet of commercial use.
8. Karl Strauss Brewery – This project is located at the southeast corner of the North Las Posas Road and Armorlite Drive intersection. This project proposes to construct 10,528 square feet of uses that include a tasting room, commercial kitchen, and entertainment room.
9. Gran Vista Multi-Family – This project is located 250 feet northwest of the West Mission Road & North Las Posas Road intersection. This project proposes to construct 120 multi-family dwelling units.
10. Artist's Village – This project is located at the northwest corner of Linda Vista Drive and Grand Avenue. This project proposes to construct 102 multi-family dwelling units, 15,086 SF of office space, and 49,266 SF of specialty retail space.
11. Upham/Pacific – This project is located at the northwest corner of the Linda Vista Drive and Las Posas Road intersection. This project proposes to construct 449 residential units. Based on discussions with City of San Marcos staff, this project will signalize the intersection of Linda Vista Drive & South Pacific Street as part of project frontage improvements. However, due to the uncertainty of the Upham/Pacific opening year, the intersection was assumed to remain unsignalized under Near-Term Year 2024 Base conditions.

Figure 6.1 displays the location of the cumulative projects previously identified.

The traffic generated from the projects previously listed are not likely to result in trips along study roadway segments and study intersections. This includes the Upham/Pacific project since it is not anticipated to be completed prior to the Project's opening year (2024). Therefore, since there are no cumulative project trips anticipated to occur within the project study area, an ambient growth rate for project study area was determined by comparing traffic volumes from SANDAG's Transportation Forecast Information Center (TFIC) Series 14 ABM2+/2021 RP Forecast Year 2025 Model (scenario ID#462) with those in the Series 14 Forecast Year 2050 Model (scenario ID#459). An annual growth rate of 0.16% was observed over the twenty-five (25) year period.

6.2 Near-Term Year 2024 Base Roadway Network and Traffic Volumes

Based on discussions with City staff, the adjacent Upham/Pacific project will install a traffic signal at the study intersection of South Pacific Street & Linda Vista Drive, as well as convert Linda Vista Drive, east of South Pacific Street to a 3-lane roadway with a 12-foot urban trail (shared use path). However, due to the uncertainty of the opening year for the Upham/Pacific project, these roadway and intersection modifications were not assumed under Near-Term Year 2024 Base conditions. Roadway segment functional classifications and intersection geometrics under Near-Term Year 2024 Base conditions were assumed to be identical to Existing conditions (Figure 5.1).

Near-Term Year 2024 Base conditions traffic volumes were developed by using the formula below from the Institute of Transportation Engineers (ITE) Manual of Transportation Engineering Studies, 2nd Edition.

$$V_{future} = V_{current} (1+g)^n$$

where

V_{future} = future year projected traffic volume (veh/hr)
$V_{current}$ = current year traffic volume (veh/hr)
g = average yearly growth factor, expressed as decimal
n = number of years projected out in the future (years)

For the Near-Term Year 2024 Base scenario, a conservative annual growth factor of 0.50% (greater than the model-projected growth factor of 0.16%) was utilized over the two (2) years between Existing Year 2022 and Near-Term Year 2024. **Figure 6.2** displays projected daily traffic volumes for study roadway segments and AM/PM peak hour turning movements for study intersections under Near-Term Year 2024 Base conditions. Traffic volume growth calculations are provided in **Appendix F**.

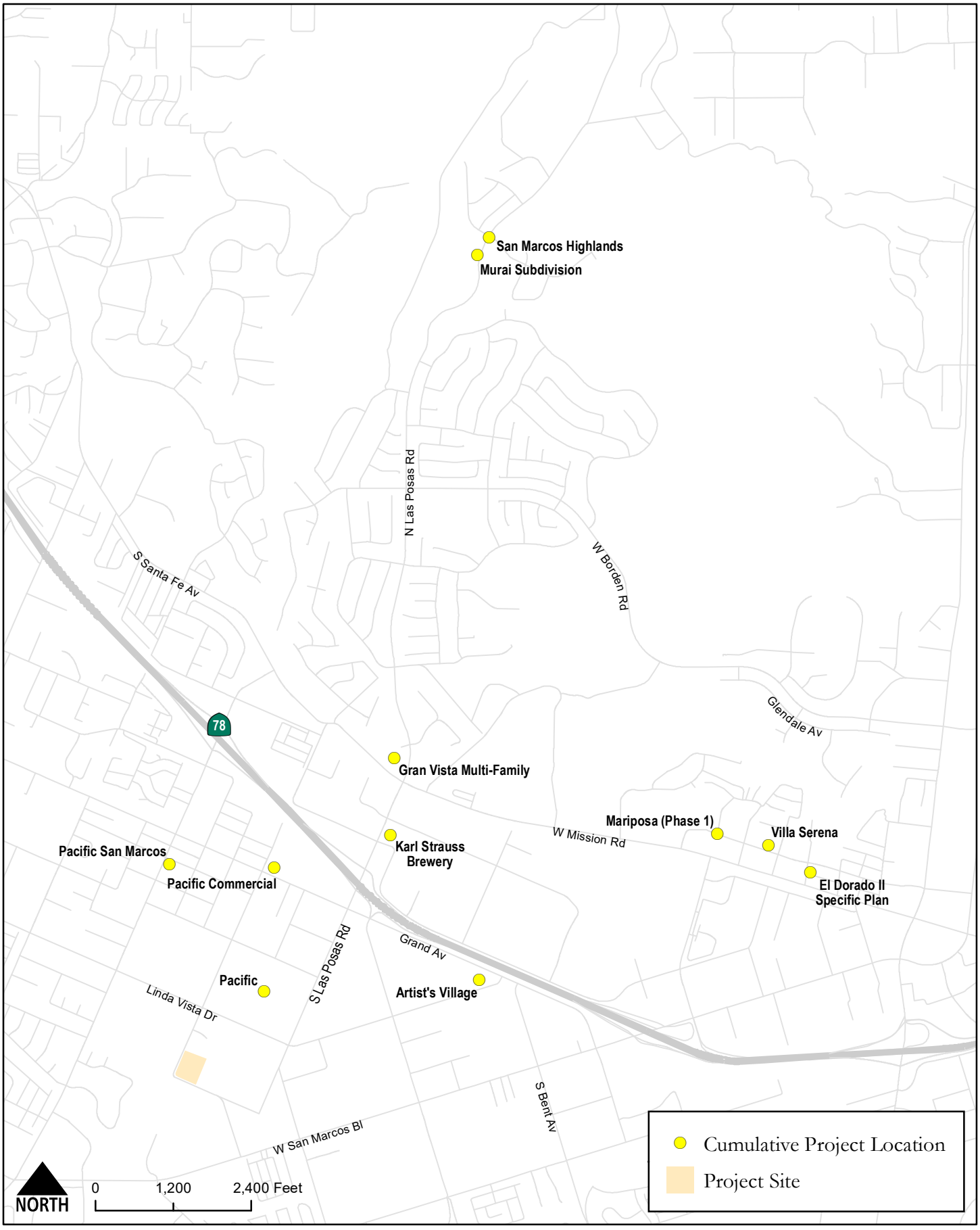

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Figure 6.1
Cumulative Project Locations

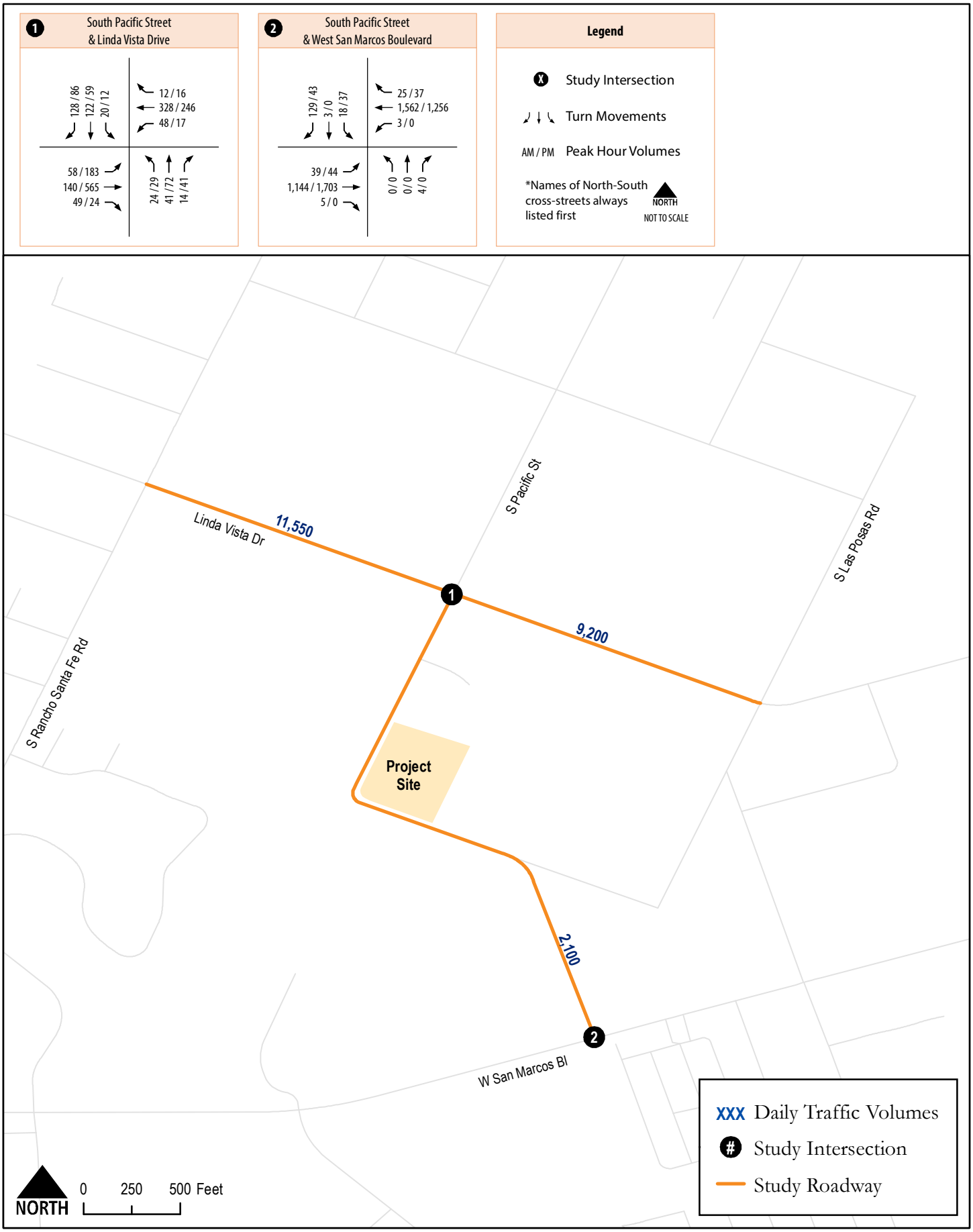

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Figure 6.2
Traffic Volumes
Near-Term Year 2024 Base Conditions

6.3 Near-Term Year 2024 Base Traffic Conditions

LOS analyses under Near-Term Year 2024 Base conditions were conducted using the methodologies described in Chapter 2. Roadway segment and intersection LOS analysis results are discussed below.

6.3.1 Roadway Segment Analysis

Table 6.1 displays roadway segment LOS analysis results for study roadway segments under Near-Term Year 2024 Base conditions.

As shown, all study roadway segments are projected to operate at acceptable LOS D or better under Near-Term Year 2024 Base conditions.

6.3.2 Intersection Analysis

Table 6.2 displays intersection LOS and average vehicle delay results for the study intersections under Near-Term Year 2024 Base conditions. LOS calculation worksheets for Near-Term Year 2024 Base conditions are provided in **Appendix G**.

As shown, the intersection of South Pacific Street & Linda Vista Drive is projected to operate at unacceptable LOS F during the PM peak hour.

Table 6.1 - Roadway Segment LOS Results – Near-Term Year 2024 Base Conditions

Roadway	Segment	Functional Classification	Roadway Capacity	Daily Volume	V/C	LOS
Linda Vista Drive	South Rancho Santa Fe Road to South Pacific Street	2-Lane Collector (w/CLTL)	15,000	11,550	0.770	D
Linda Vista Drive	South Pacific Street to South Las Posas Road	4-Lane Secondary Arterial/Collector (w/CLTL)	30,000	9,200	0.307	A
South Pacific Street	Linda Vista Drive to West San Marcos Boulevard	2-Lane Collector (w/Commercial Fronting)	8,000	2,100	0.263	A

Source: CR Associates (2023)

Table 6.2 - Peak Hour Intersection LOS Results – Near-Term Year 2024 Base Conditions

#	Intersection	Control Type	Peak Hour	Avg. Delay (sec.)	LOS
1	South Pacific Street & Linda Vista Drive	AWSC	AM	17.5	C
			PM	62.5	**F**
2	South Pacific Street & West San Marcos Boulevard	Signal	AM	17.8	B
			PM	8.1	A

Source: CR Associates (2023)

Notes:
Bold indicates LOS E or F.
AWSC = All-Way Stop-Controlled. For AWSC intersections, the delay shown is the overall average delay experienced by all of the approaches.

6.4 Near-Term Year 2024 Base with Project Roadway Network and Traffic Volumes

Roadway segment functional classifications and intersection geometrics under Near-Term Year 2024 Base with Project conditions were assumed to be identical to Near-Term Year 2024 Base conditions, with the exception of the two (2) proposed project driveways along South Pacific Street. These new driveways will operate as side-street stop-controlled intersections, with the South Pacific Street approaches as uncontrolled and the project driveways as stop-controlled.

Traffic volumes for Near-Term Year 2024 Base with Project conditions were derived by combining the project trips (Figure 3.2) to the Near-Term Year 2024 Base traffic volumes (Figure 6.2). **Figure 6.3** displays the projected daily traffic volumes for study roadway segments and projected AM/PM peak hour turning movements for study intersections under Near-Term Year 2024 Base with Project conditions.

6.5 Near-Term Year 2024 Base with Project Traffic Conditions

LOS analyses under Near-Term Year 2024 Base with Project conditions were conducted using the methodologies described in Chapter 2. Roadway segment and intersection LOS analysis results are discussed below.

6.5.1 Roadway Segment Analysis

Table 6.3 displays roadway segment LOS analysis results for study roadway segments under Near-Term Year 2024 Base with Project conditions.

As shown, all study roadway segments are projected to operate at acceptable LOS D or better under Near-Term Year 2024 Base with Project conditions.

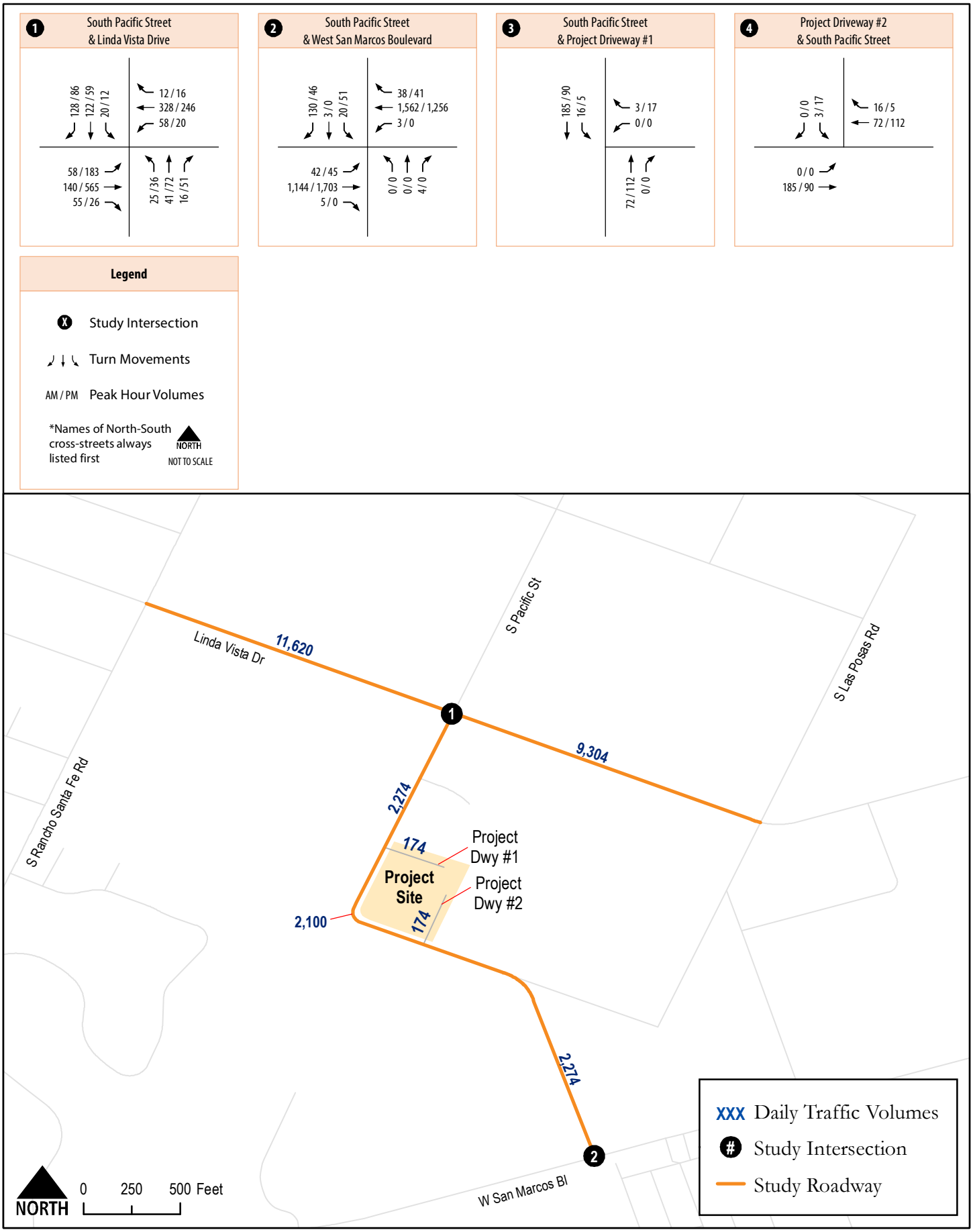

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Figure 6.3
Traffic Volumes
Near-Term Year 2024 Base with Project Conditions

Table 6.3 - Roadway Segment LOS Results – Near-Term Year 2024 Base with Project Conditions

Roadway	Segment	Functional Classification	Roadway Capacity	Near-Term Year 2024 with Project			Near-Term Year 2024 without Project			Δ V/C
				Daily Volume	V/C	LOS	Daily Volume	V/C	LOS	
Linda Vista Drive	South Rancho Santa Fe Road to South Pacific Street	2-Lane Collector (w/CLTL)	15,000	11,620	0.775	D	11,550	0.770	D	0.005
Linda Vista Drive	South Pacific Street to South Las Posas Road	4-Lane Secondary Arterial/Collector (w/CLTL)	30,000	9,304	0.310	A	9,200	0.307	A	0.003
South Pacific Street	Linda Vista Drive to Project Driveway #1	2-Lane Collector (w/Commercial Fronting)	8,000	2,274	0.284	A	2,100	0.263	A	0.022
South Pacific Street	Project Driveway #1 to Project Driveway #2	2-Lane Collector (w/Commercial Fronting)	8,000	2,100	0.263	A	2,100	0.263	A	0.000
South Pacific Street	Project Driveway #2 to West San Marcos Boulevard	2-Lane Collector (w/Commercial Fronting)	8,000	2,274	0.284	A	2,100	0.263	A	0.022

Source: CR Associates (2023)

6.5.2 Intersection Analysis

Table 6.4 displays intersection LOS and average vehicle delay results for study area intersections under Near-Term Year 2024 Base with Project Conditions. LOS calculation worksheets for Near-Term Year 2024 Base with Project conditions are provided in **Appendix H**.

As shown, all study intersections are projected to operate at acceptable LOS C or better under Near-Term Year 2024 Base with Project conditions, with the exception of the following:

- South Pacific Street & Linda Vista Drive – LOS F during the PM peak hour.

This intersection is projected to operate at unacceptable LOS F prior to the implementation of the Project. Project traffic would increase the overall average delay at this intersection by more than 2.0 seconds. Therefore, this study intersection is anticipated to degrade in LOS to unacceptable levels with implementation of the Project and improvements will be required.

Table 6.4 - Peak Hour Intersection LOS Results – Near-Term Year 2024 Base with Project Condition

#	Intersection	Control Type	Peak Hour	Near-Term Year 2024 with Project		Near-Term Year 2024 without Project		Δ Delay
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	
1	South Pacific Street & Linda Vista Drive	AWSC	AM	17.6	C	17.5	C	0.1
			PM	64.7	**F**	62.5	**F**	2.2
2	South Pacific Street & West San Marcos Boulevard	Signal	AM	18.2	B	17.8	B	0.4
			PM	8.5	A	8.1	A	0.4
3	South Pacific Street & Project Driveway #1	SSSC	AM	8.8	A	N/A	N/A	8.8
			PM	9.1	A	N/A	N/A	9.1
4	Project Driveway #2 & South Pacific Street	SSSC	AM	10.2	B	N/A	N/A	10.2
			PM	9.8	A	N/A	N/A	9.8

Source: CR Associates (2023)

Notes:
Bold indicates LOS E or F.
AWSC = All-Way Stop-Controlled. For AWSC intersections, the delay shown is the overall average delay experienced by all of the approaches.
SSSC = Side-Street Stop-Controlled. For SSSC intersections, the delay shown is the worst delay experienced by any of the approaches.
N/A = Not Applicable.

7.0 Horizon Year 2050 Conditions

This section provides an analysis of Horizon Year 2050 traffic conditions both with and without the Proposed Project. The scenarios analyzed in this section include:

- Horizon Year 2050
- Horizon Year 2050 with Project

7.1 Horizon Year 2050 Roadway Network and Traffic Volumes

Horizon Year 2050 ADT forecasts were obtained from the SANDAG Series 14 ABM2+/2021 RP Forecast Year 2050 Model (scenario ID#459). It is important to note that the model represents a conservative scenario where the study segments of Linda Vista Drive and South Pacific Street are assumed to be four-lane roadways. As a result, the model's traffic volumes at these segments are significantly higher than under Existing and Near-Term Year 2024 Base conditions.

The General Plan identifies Linda Vista Drive as a 4-Lane Arterial Roadway, but it does not identify South Pacific Street as a 4-lane roadway or circulation element road. However, the Forecast Year 2050 Model identifies both Linda Vista Drive and South Pacific Street as 4-Lane roadways. While the Forecast Year 2050 Model is consistent with the City's General Plan for the segment of Linda Vista Drive west of South Pacific Street, the current right-of-way (ROW) is already being used to provide needed parking for Bradley Park along the south side and a Class II bike lane along the north side. Converting or widening Linda Vista Drive or South Pacific Street to four-lane roadways would require additional ROW, which would need to be acquired via eminent domain or by removing existing parking and/or active transportation facilities. This approach would be inconsistent with Mobility Element Policy M-1.6 and M-1.7, as well as potentially cause an environmental impact due to the induced growth associated with a roadway widening. Linda Vista Drive and South Pacific Street have the potential to act as cut-through roadways and adding through capacity may encourage additional vehicular trips and increase VMT.

Based on the discussion above, roadway segment functional classifications and intersection geometrics under Horizon Year 2050 conditions will be based on the project improvements conditioned by the Upham/Pacific project. As a conservative approach, Forecast Year 2050 Model traffic volumes were utilized as-is for the roadway segment LOS analysis. Intersection turning movement traffic volumes were estimated by utilizing the National Cooperative Highway Research Program (NCHRP) Report 255 methodology, which uses growth factors to determine future intersection turning movement volumes. Manual adjustments were also made to ensure that traffic volumes were reasonably balanced and greater than Existing and Near-Term Year 2024 conditions. Traffic volume calculations are included in **Appendix I.**

Figure 7.1 displays the projected daily traffic volumes for study roadway segments and the projected AM/PM peak hour turning movements for study intersections under Horizon Year 2050 conditions.

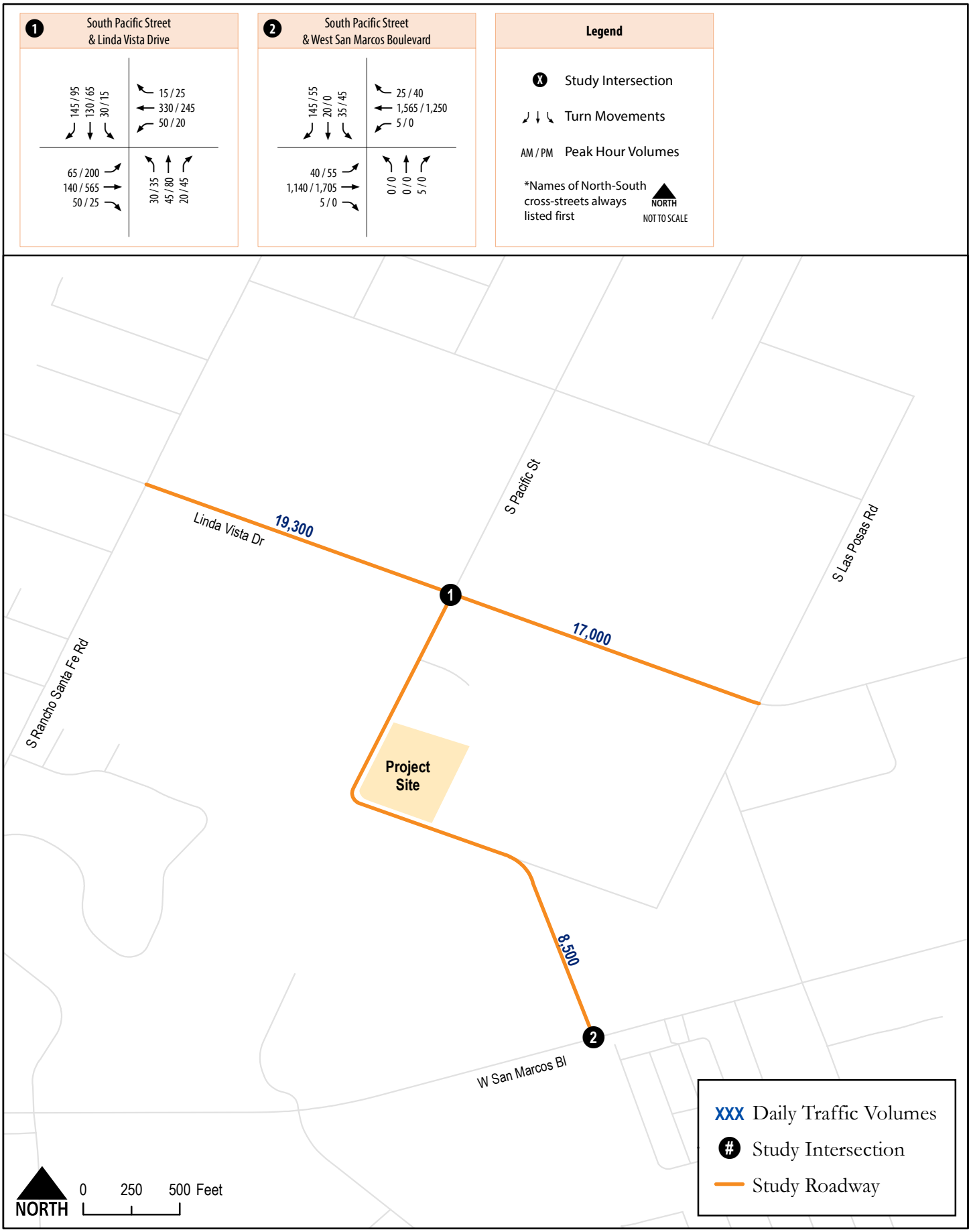

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Figure 7.1
Traffic Volumes
Horizon Year 2050 Conditions

7.2 Horizon Year 2050 Traffic Conditions

LOS analyses under Horizon Year 2050 Conditions were conducted using the methodologies described in Chapter 2. Study roadway segment and intersection LOS analysis results are discussed below.

7.2.1 Roadway Segment Analysis

Table 7.1 displays roadway segment LOS analysis results for study roadway segments under Horizon Year 2050 conditions.

As shown, the following study roadway segments are projected to operate at unacceptable LOS F under Horizon Year 2050 conditions:

- Linda Vista Drive, between South Rancho Santa Fe Road and South Pacific Street
- South Pacific Street, between Linda Vista Drive and West San Marcos Boulevard

7.2.2 Intersection Analysis

Table 7.2 displays intersection LOS and average vehicle delay results for study area intersections under Horizon Year 2050 conditions. LOS calculation worksheets for Horizon Year 2050 conditions are provided in **Appendix J**.

As shown, the intersection of South Pacific Street & Linda Vista Drive is projected to operate at unacceptable LOS F during the PM peak hour under Horizon Year 2050 conditions.

Table 7.1 - Roadway Segment LOS Results – Horizon Year 2050 Conditions

Roadway	Segment	Functional Classification	Roadway Capacity	Daily Volume	V/C	LOS
Linda Vista Drive	South Rancho Santa Fe Road to South Pacific Street	2-Lane Collector (w/CLTL)	15,000	19,300	1.287	**F**
Linda Vista Drive	South Pacific Street to South Las Posas Road	3-Lane Secondary Arterial/Collector (w/CLTL)	22,500[1]	17,000	0.756	D
South Pacific Street	Linda Vista Drive to West San Marcos Boulevard	2-Lane Collector (w/Commercial Fronting)	8,000	8,500	1.063	**F**

Source: CR Associates (2023)

Note:
[1] Based on the capacity of a 4-Lane Secondary Arterial/Collector, reduced to exclude a lane. (3/4*30,000 = 22,500).

Table 7.2 - Peak Hour Intersection LOS Results – Horizon Year 2050 Conditions

#	Intersection	Control Type	Peak Hour	Avg. Delay (sec.)	LOS
1	South Pacific Street & Linda Vista Drive	AWSC	AM	16.3	C
			PM	63.8	**F**
2	South Pacific Street & West San Marcos Boulevard	Signal	AM	19.4	B
			PM	9.2	A

Source: CR Associates (2023)

Notes:
AWSC = All-Way Stop-Controlled. For AWSC intersections, the delay shown is the overall average delay experienced by all of the approaches.

7.3 Horizon Year 2050 with Project Roadway Network and Traffic Volumes

Roadway segment functional classifications and intersection geometrics under Horizon Year 2050 with Project conditions were assumed to be identical to Horizon Year 2050 conditions, with the exception of the proposed project driveways along South Pacific Street, as discussed previously in Section 6.4.

Traffic volumes for the Horizon Year 2050 with Project Conditions were derived by combining the project trips (Figure 3.3) to the Horizon Year 2050 traffic volumes (Figure 7.1). **Figure 7.2** displays the projected daily traffic volumes for study roadway segments and the projected AM/PM peak hour turning movements for study intersections under Horizon Year 2050 with Project conditions.

7.4 Horizon Year 2050 with Project Traffic Conditions

LOS analyses under Horizon Year 2050 with Project conditions were conducted using the methodologies described in Chapter 2. Study roadway segment and intersection LOS analysis results are discussed below.

7.4.1 Roadway Segment Analysis

Table 7.3 displays roadway segment LOS analysis results for study roadway segments under Horizon Year 2050 with Project conditions.

As shown, the following study roadway segments are projected to operate at unacceptable LOS F under Horizon Year 2050 conditions:

- Linda Vista Drive, between South Rancho Santa Fe Road and South Pacific Street
- South Pacific Street, between Linda Vista Drive and Project Driveway #1
- South Pacific Street, between Project Driveway #1 and Project Driveway #2
- South Pacific Street, between Project Driveway #2 and West San Marcos Boulevard

The roadway segments of Linda Vista Drive, between South Rancho Santa Fe Road and South Pacific Street, and South Pacific Street, between Project Driveway #1 and Project Driveway #2, are projected to continue operating unacceptable LOS F. However, since the increase in vehicle-to-capacity (V/C) ratio does not exceed 0.02, these study roadway segments would not experience a decrease in performance by the implementation of the Project.

As for the remaining two segments projected to operate at LOS F, the Project would result in an increase in V/C ratio exceeding 0.02. Therefore, the Project would require improvements to increase performance to acceptable or pre-project conditions.

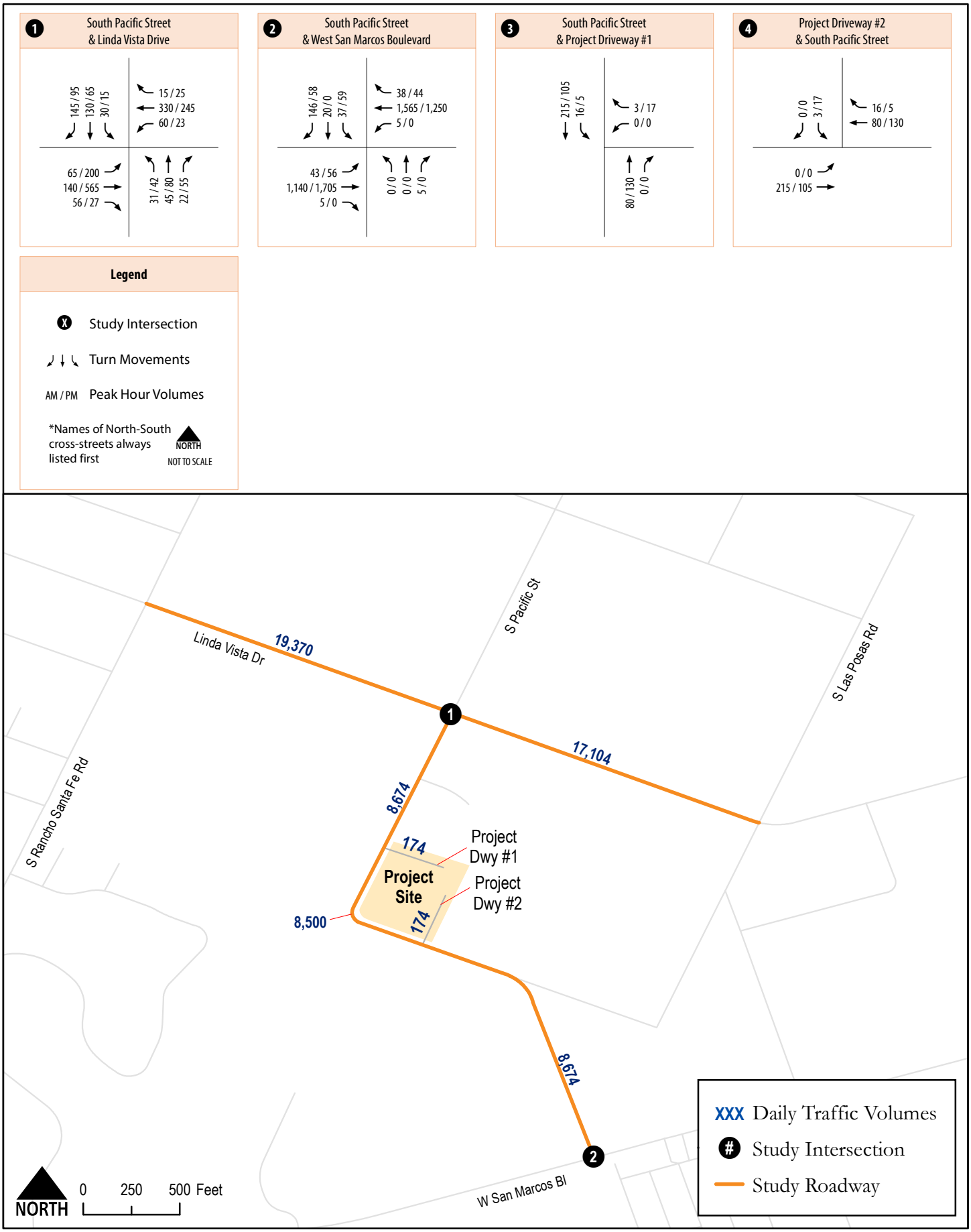

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Figure 7.2
Traffic Volumes
Horizon Year 2050 with Project Conditions

Table 7.3 - Roadway Segment LOS Results – Horizon Year 2050 with Project Conditions

Roadway	Segment	Functional Classification	Roadway Capacity	Horizon Year 2050 with Project			Horizon Year 2050 without Project			Δ V/C
				Daily Volume	V/C	LOS	Daily Volume	V/C	LOS	
Linda Vista Drive	South Rancho Santa Fe Road to South Pacific Street	2-Lane Collector (w/CLTL)	15,000	19,370	1.291	F	19,300	1.287	F	0.004
Linda Vista Drive	South Pacific Street to South Las Posas Road	3-Lane Secondary Arterial/Collector (w/CLTL)	22,500[1]	17,104	0.760	D	17,000	0.756	D	0.004
South Pacific Street	Linda Vista Drive to Project Driveway #1	2-Lane Collector (w/Commercial Fronting)	8,000	8,674	1.084	F	8,500	1.063	F	0.021
South Pacific Street	Project Driveway #1 to Project Driveway #2	2-Lane Collector (w/Commercial Fronting)	8,000	8,500	1.063	F	8,500	1.063	F	0.000
South Pacific Street	Project Driveway #2 to West San Marcos Boulevard	2-Lane Collector (w/Commercial Fronting)	8,000	8,674	1.084	F	8,500	1.063	F	0.021

Source: CR Associates (2023)

Note:
[1] Based on the capacity of a 4-Lane Secondary Arterial/Collector, reduced to exclude a lane. (3/4*30,000 = 22,500).

7.4.2 Intersection Analysis

Table 7.4 displays intersection LOS and average vehicle delay results for the study intersections under Horizon Year 2050 with Project conditions. LOS calculation worksheets for Horizon Year 2050 with Project Conditions are provided in **Appendix K**.

As shown, the intersection of South Pacific Street & Linda Vista Drive is projected to operate at unacceptable LOS F during the PM peak hour under Horizon Year 2050 with Project conditions. Since the Project would add more than 2.0 seconds of delay to this intersection already operating at LOS F, implementation of the Project would degrade performance at this intersection and would require improvements to increase performance to acceptable or pre-project conditions.

Table 7.4 - Peak Hour Intersection LOS Results – Horizon Year 2050 with Project Conditions

#	Intersection	Control Type	Peak Hour	Horizon Year 2050 with Project		Horizon Year 2050 without Project		Δ Delay
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	
1	South Pacific Street & Linda Vista Drive	Signal	AM	16.5	B	16.3	C	0.1
			PM	66.3	**F**	63.8	**F**	2.5
2	South Pacific Street & West San Marcos Boulevard	Signal	AM	19.8	B	19.4	B	0.4
			PM	9.6	A	9.2	A	0.4
3	South Pacific Street & Project Driveway #1	SSSC	AM	8.7	A	N/A	N/A	8.7
			PM	9.1	A	N/A	N/A	9.1
4	Project Driveway #2 & South Pacific Street	SSSC	AM	10.4	B	N/A	N/A	10.4
			PM	10.1	B	N/A	N/A	10.1

Source: CR Associates (2023)

Notes:
AWSC = All-Way Stop-Controlled. For AWSC intersections, the delay shown is the overall average delay experienced by all of the approaches.
SSSC = Side-Street Stop-Controlled. For SSSC intersections, the delay shown is the worst delay experienced by any of the approaches.
N/A = Not Applicable.

8.0 LOS Deficiencies and Improvement Requirements

This provides improvements requirements needed to increase LOS to acceptable or pre-project conditions for any roadway segments or intersections found to operate unacceptably with implementation of the Proposed Project.

8.1 Determination of the Need for Off-Site Improvements to Accommodate Project Traffic – Near-Term Year 2024 with Project Conditions

This section identifies required improvements for any study roadway segments or intersections that are associated with the Project under Near-Term Year 2024 Base with Project conditions.

Roadway Segment Analysis

No improvements required.

Intersection Analysis

Based upon the LOS analysis results presented in Chapter 6 and the significance criteria presented in Section 2.5, the implementation of the Project would have an adverse effect on traffic operations at the following study intersection:

- *South Pacific Street & Linda Vista Drive* – Implementation of the Project would add more than 2.0 seconds of delay to this intersection already operating at LOS F during the PM peak hour. To improve traffic conditions, the Project shall pay a fair share contribution towards the construction of a traffic signal at this intersection.

To determine if signalizing the intersection of South Pacific Street & Linda Vista Drive is warranted, a signal warrant analysis was conducted in accordance with the California Manual on Uniform Traffic Control Devices (CA MUTCD). Utilizing the traffic volumes projected under Near-Term Year 2024, this intersection would not meet the requirements for the installation of a traffic signal. Therefore, it is not recommended to construct this traffic signal under Near-Term Year 2024 conditions. However, the traffic signal may be warranted under Horizon Year 2050 with the addition traffic associated with other developments in the area, such as Upham/Pacific. Traffic signal warrant analysis results can be found in **Appendix L**.

8.2 Determination of the Need for Off-Site Improvements to Accommodate Project Traffic – Horizon Year 2050 with Project Conditions

This section identifies required improvements for any study roadway segments or intersections that are associated with the Project under Horizon Year 2050 with Project conditions.

Roadway Segment Analysis

Based upon the LOS analysis results presented in Chapter 6 and the significance criteria presented in Section 2.5, the implementation of the Project would have an adverse effect on traffic operations at the following study roadway segments:

- South Pacific Street, between Linda Vista Drive and Project Driveway #1
- South Pacific Street, between Project Driveway #2 and West San Marcos Boulevard

However, as noted in Section 2.2, daily roadway LOS is typically used only at the planning level and does not necessarily indicate true roadway operations. Therefore, to determine if the identified roadway segments operate at acceptable levels during peak times (worst case), peak hour arterial analyses were conducted to better understand the actual travel flow along the roadways. Roadway segments in which the peak hour arterial LOS, as well as the intersection LOS at either end of the segment are projected to operate at acceptable LOS D or better would not require improvements since the actual travel flow along the segment is considered to be acceptable. Peak hour arterial analysis worksheets under Horizon Year 2050 with Project conditions are provided in **Appendix M**.

- South Pacific Street, between Linda Vista Drive and Project Driveway #1 (LOS F). The Proposed Project would add 174 average daily trips resulting in an increase of 0.021 in V/C ratio, which is above the allowable 0.02 increase in V/C ratio. Therefore, the following additional analyses were conducted to determine if the roadway segment would still require improvements as a result of the Proposed Project:
  - The arterial LOS analysis identifies this roadway segment to operate as LOS D or better in the NB and SB directions during both the AM and PM peak hours.[5]
  - The intersection of South Pacific Street & Linda Vista Drive and South Pacific Street & Project Driveway #1 are projected to operate at LOS B or better during both the AM and PM peak hours.[6]
  - Therefore, the roadway segment **would not require improvements** as a result of the Proposed Project.
- South Pacific Street, between Project Driveway #2 and West San Marcos Boulevard (LOS F). The Proposed Project would add 174 average daily trips resulting in an increase of 0.021 in V/C ratio, which is above the allowable 0.02 increase in V/C ratio. Therefore, the following additional analyses were conducted to determine if the roadway segment would still require improvements as a result of the Proposed Project:
  - The arterial LOS analysis identifies this roadway segment to operate as LOS D or better in the NB and SB directions during both the AM and PM peak hours.
  - The intersection of South Pacific Street & Project Driveway #2 and South Pacific Street & West San Marcos Boulevard are projected to operate at LOS B or better during both the AM and PM peak hours.
  - Therefore, the roadway segment **would not require improvements** as a result of the Proposed Project.

[5] Due to limitations in Synchro software, and only for the purpose of arterial analysis, the intersection of South Pacific Street was input as a traffic signal but modeled to mimic the behavior of an all-way stop-controlled intersection.

[6] The Project will pay a fair share contribution towards the signalization of South Pacific Street & Linda Vista Road by Horizon Year 2050 with Improvements conditions.

Therefore, since these study roadway segments are projected to operate efficiently during peak hours, implementation of the Project would not result in adverse effects on traffic operations and no improvements are required.

Intersection Analysis

Based upon the LOS analysis results presented in Chapter 6 and the significance criteria presented in Section 2.5, the implementation of the Project would have an adverse effect on traffic operations at the following study intersection:

- *South Pacific Street & Linda Vista Drive* – Implementation of the Project would add more than 2.0 seconds of delay to this intersection already operating at LOS F during the PM peak hour. To improve traffic conditions, the Project shall pay a fair share contribution towards the construction of a traffic signal at this intersection. This would reduce the overall delay from 63.8 seconds (LOS F) to 14.4 seconds (LOS B). The improvement would enhance traffic operations during the PM peak hour to better than pre-project conditions. Thus, upon implementation of this improvement, the Project would no longer have an adverse effect on traffic operations at this intersection.

  The total number of vehicle trips passing through this intersection during the PM peak hour is 1,415, of which 22 (1.6% of the total volume) are vehicle trips generated by the Project. The Project shall pay a 1.6% fair share contribution towards the installation of a traffic signal at this intersection.

  It should be noted that based on discussions with City of San Marcos staff, the Upham/Pacific project will signalize this intersection as part of project frontage improvements. However, due to the uncertainty of the Upham/Pacific opening year, the intersection was assumed to remain unsignalized under Horizon Year 2050 conditions, resulting in the above adverse effect.

Table 8.1 displays intersection LOS and average vehicle delay results under Horizon Year 2050 with Project with Improvements conditions. LOS calculation worksheets and signal timing inputs are provided in **Appendix N**.

Table 8.1 - Peak Hour Intersection LOS Results – Horizon Year 2050 with Project and Improvement Conditions

#	Intersection	Control Type	Peak Hour	Horizon Year 2050 with Project and Improvements		Horizon Year 2050 without Project or Improvements		Δ Delay
				Avg. Delay (sec.)	LOS	Avg. Delay (sec.)	LOS	
1	South Pacific Street & Linda Vista Drive	Signal	AM	15.0	B	16.3	C	-1.3
			PM	14.4	B	63.8	**F**	-49.4

Source: CR Associates (2023)

As shown, the recommended traffic signal would improve traffic operations during the PM peak hour to better than pre-project conditions.
To determine if signalizing the intersection of South Pacific Street & Linda Vista Drive is warranted, a signal warrant analysis was conducted in accordance with the California Manual on Uniform Traffic Control Devices (CA MUTCD). Utilizing the traffic volumes projected under Horizon Year 2050

conditions, this intersection would meet the requirements for the installation of a traffic signal. Therefore, it is recommended that the Project pay a 1.6% fair share contribution towards the installation of a traffic signal. Traffic signal warrant analysis results can be found in Appendix L.

9.0 Site Access and Circulation

This chapter addresses access to the project site and discusses the functionality of the project's internal circulation.

9.1 Driveway Access

Project site access will be provided via the following four new project driveways:

- Project Driveway #1 – This new, full-access driveway will be located along the east side of South Pacific Street to the west of the project site. This driveway will be a new side-street stop-controlled intersection with South Pacific Street as the uncontrolled approach and the project driveway as the stop-controlled approach. This driveway is projected to operate at LOS A or under all "with Project" scenarios.
- Project Driveway #2 – This new, full-access driveway will be located along the north side of South Pacific Street to the south of the project site. This driveway will be a new side-street stop-controlled intersection with South Pacific Street as the uncontrolled approach and the project driveway as the stop-controlled approach. This driveway is projected to operate at LOS B or better under all "with Project" scenarios.

A 95th percentile queue analysis was conducted to determine the extent of queueing at the project driveway intersections under Near-Term Year 2024 Base with Project conditions and Horizon Year 2050 with Project conditions. The queue analysis was conducted for the proposed project driveways and the movements along South Pacific Street. **Table 9.1** displays the 95th percentile queue analysis results for project driveway intersections under both analysis scenarios. Intersection queueing reports are provided in **Appendix O.**

As shown, the 95th percentile queues at project driveways are projected to fit within the available storage and would not impede traffic at the driveways or adjacent roadway system.

Based on preliminary review of the project site plan, the following recommendations are provided:

- Driveways are recommended to be constructed in accordance with City standards; and
- Install stop signs (R1-1) at project driveways.

9.2 Internal Circulation

The internal roadway on the project site allows for two-way flow of vehicle traffic. Based upon review of the project site plan, the following recommendations are provided:

- Signage to warn drivers of pedestrian foot traffic

Table 9.1 - Project Driveway Queue Analysis Results

#	Intersection	Control Type	Turning Movement	Peak Hour	Available Storage[1] (ft)	Near-Term Year 2024 with Project Conditions		Horizon Year 2050 with Project Conditions	
						95th Percentile Queue (ft)	Excess Queue (ft)	95th Percentile Queue (ft)	Excess Queue (ft)
3	South Pacific Street & Project Driveway #1	SSSC	NBR	AM	270	<25	<25	<25	<25
				PM		<25	<25	<25	<25
			SBL	AM	780	<25	<25	<25	<25
				PM		<25	<25	<25	<25
			WBLR	AM	100	<25	<25	<25	<25
				PM		<25	<25	<25	<25
4	Project Driveway #2 & South Pacific Street	SSSC	EBL	AM	320	<25	<25	<25	<25
				PM		<25	<25	<25	<25
			WBR	AM	1,370	<25	<25	<25	<25
				PM		<25	<25	<25	<25
			SBLR	AM	100	<25	<25	<25	<25
				PM		<25	<25	<25	<25

Source: CR Associates (2023)

Notes:
[1] Measured from project driveway to upstream intersection.
SSSC = Side-Street Stop-Controlled
NBR = Northbound Right
SBL = Southbound Left
WBLR = Westbound Left/Right
EBL = Eastbound Left
WBR = Westbound Right
SBLR = Southbound Left/Right

Appendix A
Scoping Agreement

TO:	Jonathan Quezada, Assistant Engineer; City of San Marcos
	Chris Garcia, Associate Planner; City of San Marcos
FROM:	Jonathan Sanchez, PE, TE, PTOE; CR Associates
	Joseph Perez, EIT; CR Associates
DATE:	June 9, 2022
RE:	Hughes Circuits Project – Memorandum of Approach (MOA)

This memorandum serves to document the assumptions that will be used to conduct both a Transportation Impact Analysis (TIA) and a Local Transportation Analysis (LTA), for the Hughes Circuits project (the "Project"). These analyses will be conducted in accordance with the *City of San Marcos Transportation Impact Analysis Guidelines*, *November 2020* (TIA Guidelines).

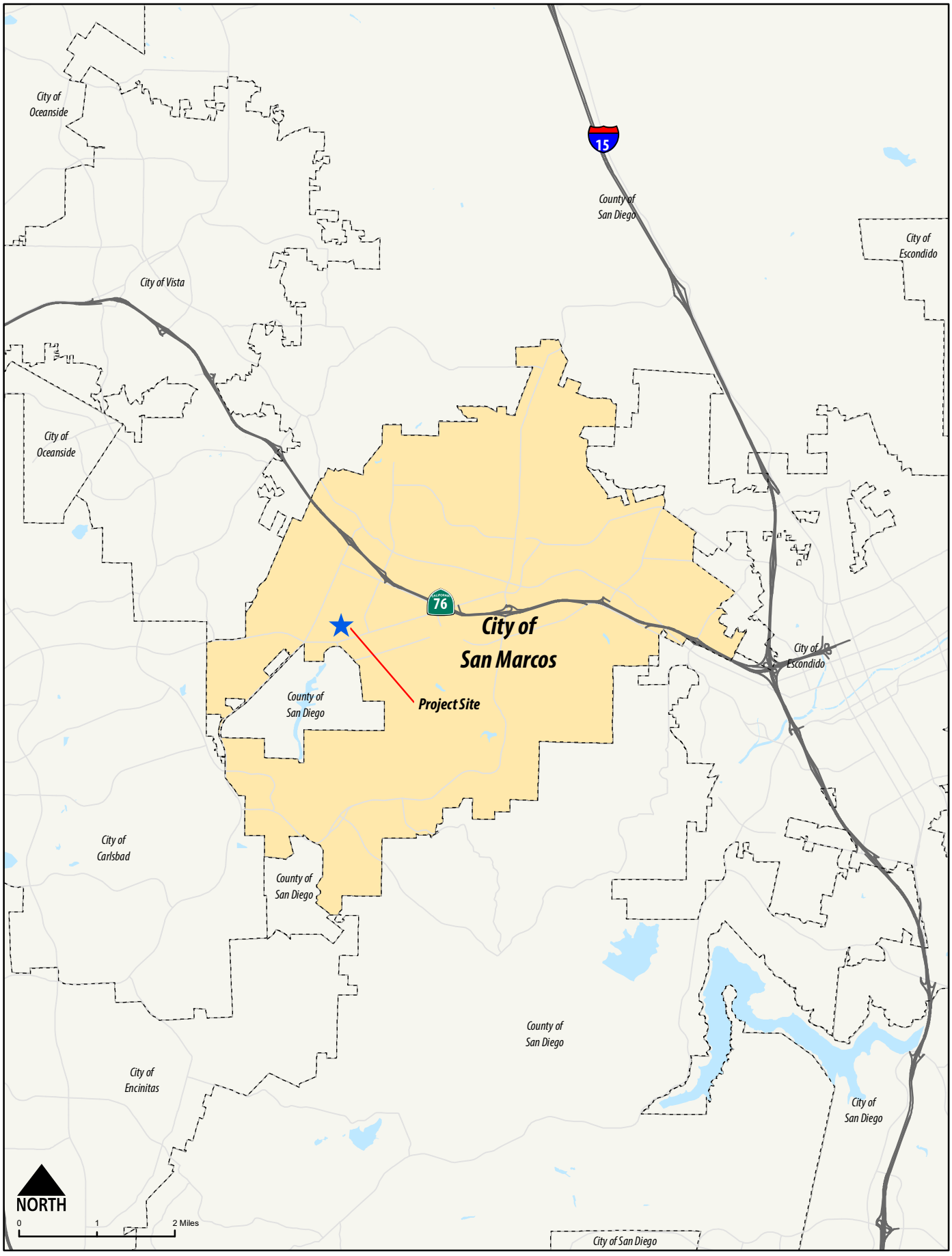
Project Description

The Hughes Circuits project (the "Proposed Project") proposes to construct a building with 8,000 square feet of offices, 44,410 square feet of warehouse, and 15,000 square feet of manufacturing. The Proposed Project is along South Pacific Street, approximately 650 feet south of the South Pacific Street and Linda Vista Drive intersection, in the City of San Marcos (APN#: 2192232000). The project site is currently vacant and designated as light industrial use within the San Marcos General Plan. Access to the Proposed Project will be provided via two separate driveways with one located along South Pacific Street to the west of the project site and the other along South Pacific Street to the south of the project site. **Figure 1** displays the Project's regional location. **Figure 2** displays the project site plan.

TIA - VMT Analysis

According to the *City of San Marcos TIA Guidelines*, a VMT analysis will be conducted if the following criteria for screening projects are not met: (1) small project screening, (2) affordable housing screening, (3) local-serving retail or public facility screening, (4) High Quality Transit Area (HQTA) screening, or (5) low VMT area screening.

Since the Proposed Project does not fall under any of the VMT screening criteria, the Project would have to conduct a detailed VMT analysis and document it in a TIA. The TIA will include discussions of VMT results, identify impacts, and make mitigation recommendations, as needed.



Hughes Circuits
Memorandum of Approach

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Figure 1
Project Regional Location

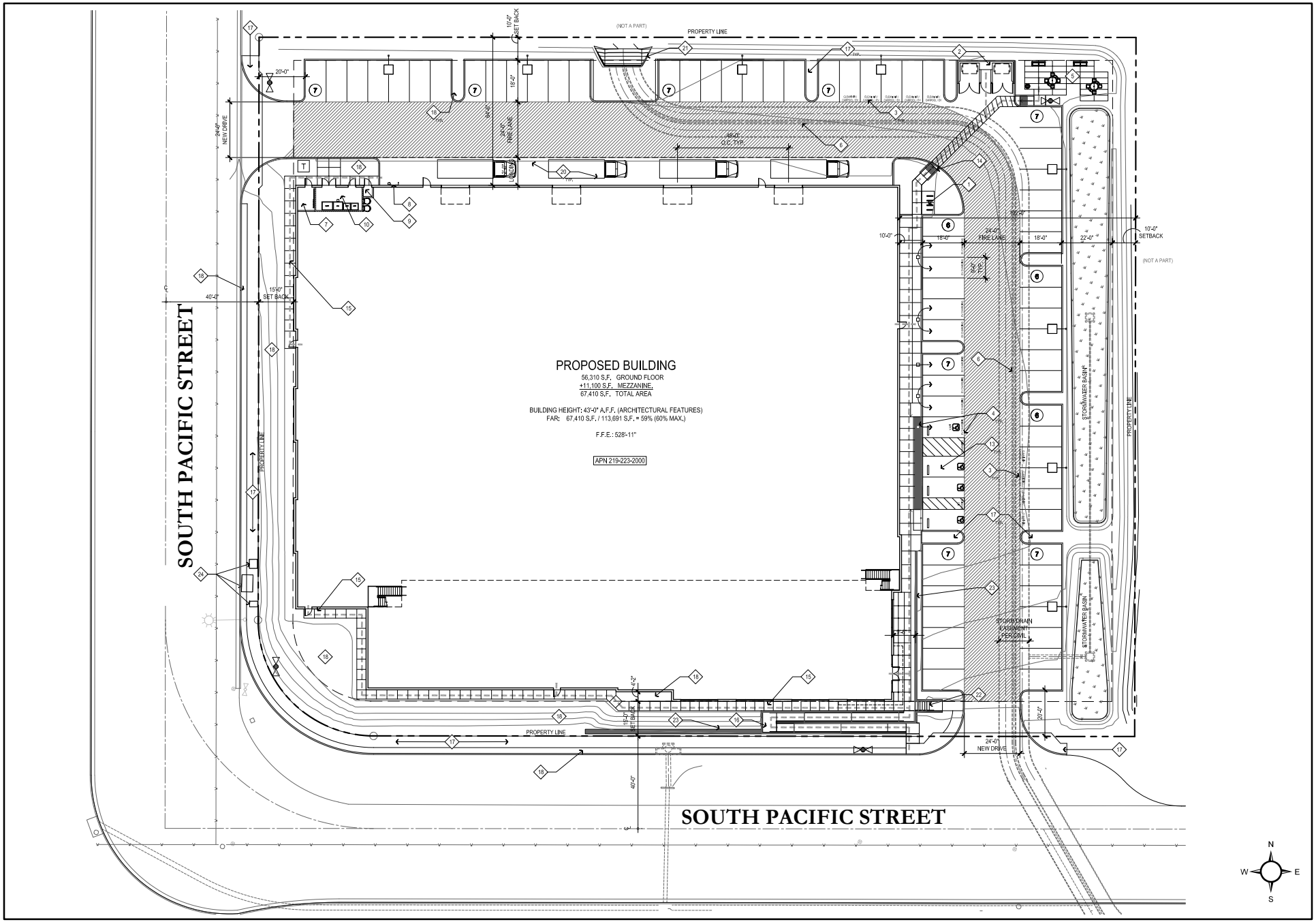

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Figure 2
Project Site Plan

LTA – LOS Analysis

The purpose of the LTA is to evaluate how the Project will affect the surrounding local transportation network, as well as to determine if additional transportation improvements will be needed. The LOS analysis will evaluate the following five (5) scenarios:

1. Existing Conditions (2022) - This scenario is utilized to establish the existing baseline of traffic operations within the study area.

2. Near-Term 2023 Base Conditions – This scenario establishes a near-term baseline against which traffic generated by the Proposed Project can be compared to at the project opening day, anticipated to be Year 2023. Ambient growth rates or addition of cumulative projects' traffic will be used to develop the Opening Year 2023 Base Conditions.

3. Near-Term 2023 Base with Project Conditions – This scenario represents the Opening Year traffic conditions with the addition of traffic generated by the Proposed Project.

4. Horizon Year 2050 Base Conditions – This scenario represents projected long-range baseline traffic conditions for Year 2050.

5. Horizon Year 2050 Base with Project Conditions – This scenario represents Year 2050 base traffic conditions with the addition of traffic generated by the Proposed Project.

Trip Generation

Per City TIA Guidelines, project trip generation estimates are to be derived utilizing *SANDAG's (not so) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (SANDAG, April 2002). However, the proposed project is acting as an "expansion" of the existing Hughes Circuits facility located across the street from the proposed site, with similar operations except the new facility (proposed project) will operate with two shifts instead of three (two 8-hour shifts, 5 days a week). Therefore, a trip generation study was conducted at the existing Hughes Circuits facility. Driveway counts were collected over a three-day period (Tuesday, March 1, Wednesday, March 2, and Thursday, March 3) to determine daily traffic and peak hour trip generation rates for the Proposed Project.

Table 1 displays daily, as well as AM and PM peak hour project trip generation. Driveway counts and project trip generation calculations are provided in **Attachment 1**.

Table 1 Project Trip Generation

		AM Peak Hour			PM Peak Hour		
Land Use	ADT	Trips	In	Out	Trips	In	Out
Hughes Circuits	348	38	32	6	43	9	34

Source: CR Associates (2022)

As shown in the table, the Project is anticipated to generate a total of 348 daily trips, including 38 (32-in / 6-out) trips during the AM peak hour and 43 trips (9-in / 34-out) during the PM peak hour. It should be noted that at this time the number of employees and shift start/end times is unknown. For which the final project trip generation may differ slightly from Table 1. However, when this information becomes available the Project's trip generation will be revised accordingly and reflected in the LTA.

Project Trip Distribution

The trip distribution, displayed in **Figure 3**, for the Proposed Project was developed based on the geographical location of the Project, as well as the characteristics of the proposed and surrounding land uses.

Project Trip Assignment

Based upon the Proposed Project trip generation (Table 1) and distribution (Figure 3), AM/PM peak hour and daily project trips were assigned to the adjacent roadway network, as displayed in **Figure 4**.

Project Study Area

Per City TIA Guidelines, at minimum, the study area must include project driveways, signalized and unsignalized intersections adjacent to the project site, and any classified (non-residential) roadways segments that are linked to project study intersections. The following roadway segments and intersections will be included within the project study area:

Roadway Segments

- South Pacific Street, between Linda Vista Drive and West San Marcos Boulevard
- Linda Vista Drive, between South Rancho Santa Fe Road and South Pacific Street
- Linda Vista Drive, between South Pacific Street and South Las Posas Road

Intersections

1. South Pacific Street & Linda Vista Drive
2. South Pacific Street & West San Marcos Boulevard
3. South Pacific Street & Project Driveway #1
4. Project Driveway #2 & South Pacific Street

The LTA will include a section regarding operational characteristics of the project driveways. **Figure 5** displays the project study area.

Traffic Volume Development

Traffic counts will be conducted along the study roadway segments and intersections listed above. To ensure that current travel patterns reflect traffic conditions prior to the COVID-19 restrictions, a count validation will be conducted. Historical counts will be compared against existing counts. If current travel patterns are observed to be similar (less than 5% variations) to pre-COVID-19 conditions, existing counts will be deemed appropriate to utilize for this TIA. Otherwise, existing traffic counts will be adjusted to account for reduced traffic conditions.

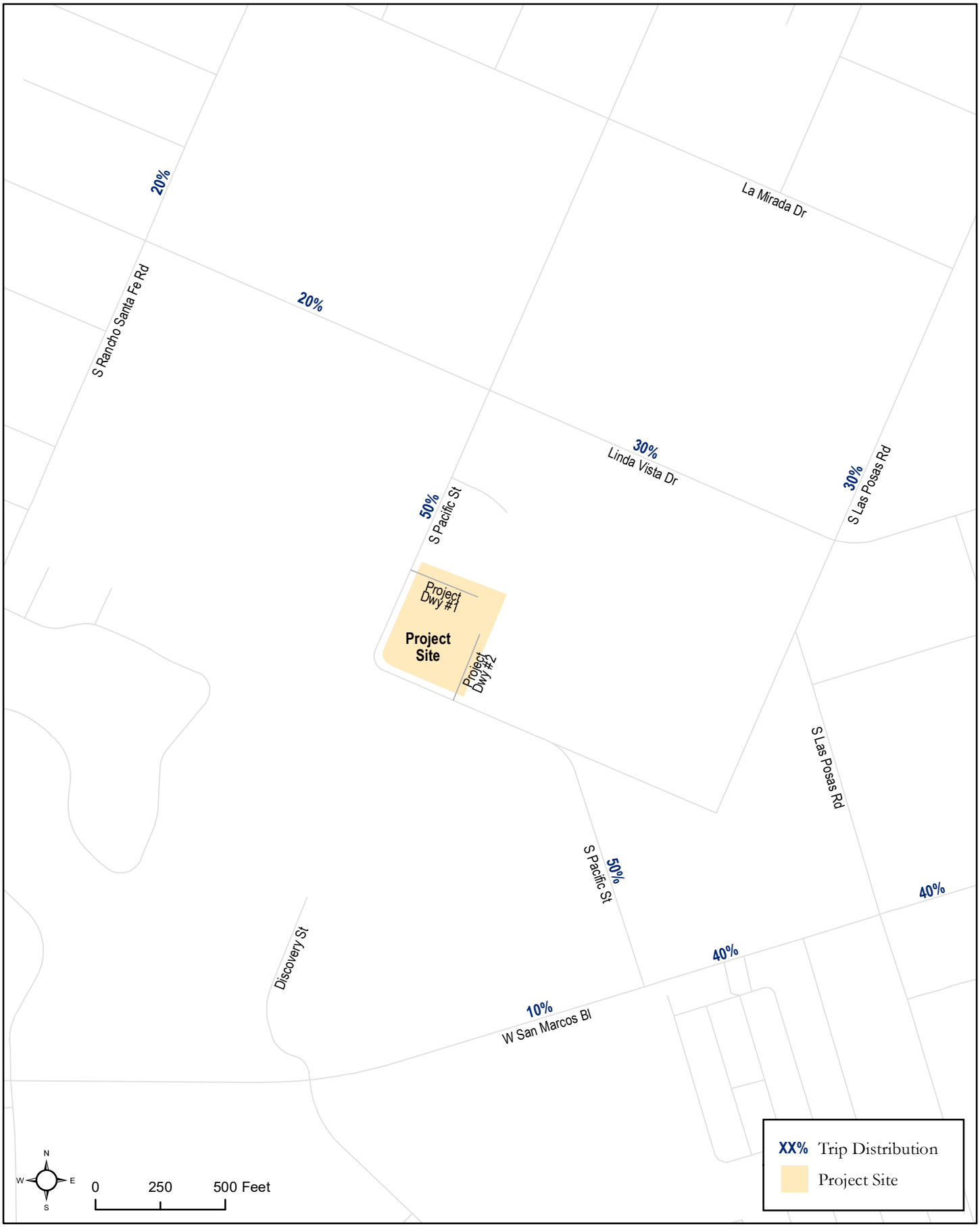

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Figure 3
Project Trip Distribution

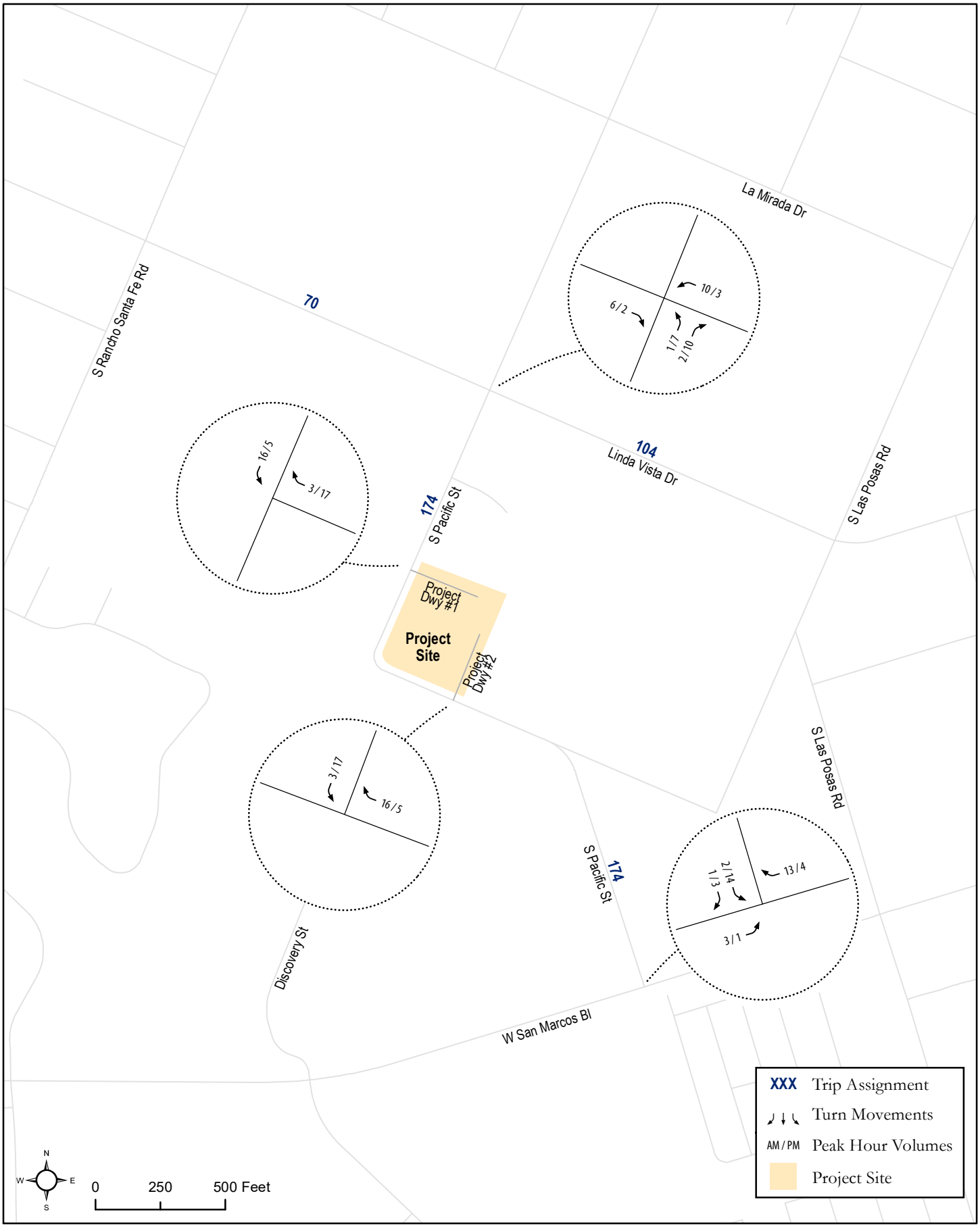

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Figure 4
Project Trip Assignment

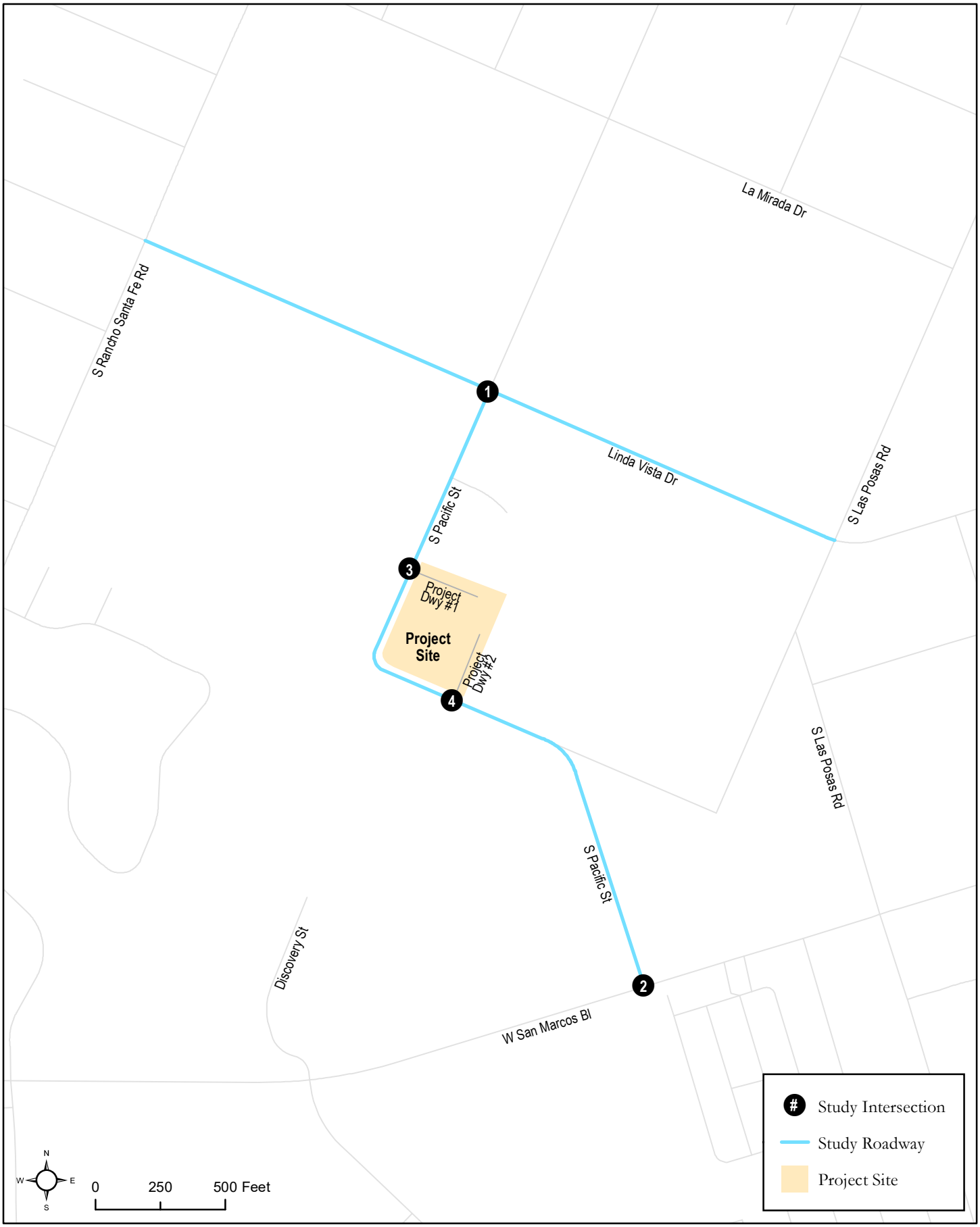

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Figure 5
Project Study Area

Appendix B
Signal Timing

INTELIGHT

City of San Marcos

San Marcos @ Pacific

Phase Timing and Options

Unit Information

Controller Number	51
Software	Intelight MAXTIME 2.X
Main Street	San Marcos
Side Street	Pacific
IP Address	

Unit Parameters

Extended Mode	Enable
Startup Flash	0
Auto Ped Clear	Enable
Red Revert	6.0
Backup Time	600
Startup All Red	6
Man. Control Seq.	1
MCE Enable	Enable
Start Yel. Override	0.0
Start Red Override	0.0
Free Sequence	1
All Red Flash Exit	6
Local CVM Fash	Disable
All Red Flash Sns	Disable
All Dark Flash Sns	Disable

Phase Timing

Phase	1	2	3	4	5	6	7	8
Description	WB Left	EB			EB Left	WB	SB	NB
Walk		5				5	5	
Ped Clear		10				17	20	
Steady Don't Walk								
Min Green	5	15			7	15	8	8
Min Green 2								
Passage	3.0	3.0			3.0	3.0	3.0	3.0
Passage 2								
Max Green 1	35	50			25	50	25	25
Max Green 2								
Yellow Change	4.5	4.5			4.5	4.5	4.0	3.5
Red Clear	2.0	2.0			2.0	2.0	2.5	3.0
Added Initial								
Maximum Initial								
Time B4 Reduction								
Cars B4 Reduction								
Time To Reduce								
Reduce By								
Minimum Gap								
Advance Walk								
Delayed Ped								

Phase Options

Phase	1	2	3	4	5	6	7	8
Enable	X	X	.	.	X	X	X	X
Auto Flash Entry	.	.	.	.	.	.	.	X
Auto Flash Exit	.	X	.	.	.	X	.	.
Non Lock Detector	X	X	.	.	X	X	X	X
Min Vehicle Recall	.	.	.	.	.	.	.	.
Max Vehicle Recall	.	.	.	.	.	.	.	.
Ped Recall	.	.	.	.	.	.	.	.
Soft Vehicle Recall	.	.	.	.	.	.	.	.
Dual Entry	.	.	.	.	.	.	.	.
Sim. Gap Disable	.	.	.	.	.	.	.	.
Actuated Rest in Walk	.	.	.	.	.	.	.	.
Conditional Svc Enable	.	.	.	.	.	.	.	.
Add Initial Calculation	.	.	.	.	.	.	.	.
Ped Clear During Yellow	.	.	.	.	.	.	.	.
Ped Clear During Red Clr	.	.	.	.	.	.	.	.
Yellow Min Override	.	.	.	.	.	.	.	.
No Startup Call	.	.	.	.	.	.	.	.
No Ped Startup Call	.	.	.	.	.	.	.	.
Min Green 2	.	.	.	.	.	.	.	.
Max Green 2	.	.	.	.	.	.	.	.
Red Rest	.	X	.	.	.	X	.	.
Ped Recycle	.	X	.	.	.	X	X	.

Phase Configuration

Phase	Startup	Description
1	Phase Not On	WB Left
2	Green No Walk	EB
3	None	
4	None	
5	Phase Not On	EB Left
6	Green No Walk	WB
7	Phase Not On	SB
8	Phase Not On	NB

Global Phase Recalls

Phase	1	2	3	4	5	6	7	8
Min	.	.	.	.	.	.	.	.
Max	.	.	.	.	.	.	.	.
Ped	.	.	.	.	.	.	.	.

Notes

SAN MARCOS
DISCOVER LIFE'S POSSIBILITIES

Printed on: 3/25/2021

Sequences

Sequence 1

Ring	Sequence
1	1,2,a,b
2	5,6,a,7,8,b
3	
4	

Sequence 2

Ring	Sequence
1	2,1,a,b
2	5,6,a,7,8,b
3	
4	

Sequence 3

Ring	Sequence
1	1,2,a,4,3,b
2	5,6,a,7,8,b
3	
4	

Sequence 4

Ring	Sequence
1	2,1,a,4,3,b
2	5,6,a,7,8,b
3	
4	

Sequence 5

Ring	Sequence
1	1,2,a,b
2	5,6,a,7,8,b
3	
4	

Sequence 6

Ring	Sequence
1	1,2,a,b
2	5,6,a,7,8,b
3	
4	

Sequence 7

Ring	Sequence
1	1,2,a,4,3,b
2	6,5,a,7,8,b
3	
4	

Sequence 8

Ring	Sequence
1	2,1,a,4,3,b
2	6,5,a,7,8,b
3	
4	

Sequence 9

Ring	Sequence
1	1,2,a,3,4,b
2	5,6,a,8,7,b
3	
4	

Sequence 10

Ring	Sequence
1	2,1,a,3,4,b
2	5,6,a,8,7,b
3	
4	

Sequence 11

Ring	Sequence
1	1,2,a,4,3,b
2	5,6,a,8,7,b
3	
4	

Sequence 12

Ring	Sequence
1	2,1,a,4,3,b
2	5,6,a,8,7,b
3	
4	

Sequence 13

Ring	Sequence
1	1,2,a,3,4,b
2	6,5,a,8,7,b
3	
4	

Sequence 14

Ring	Sequence
1	2,1,a,3,4,b
2	6,5,a,8,7,b
3	
4	

Sequence 15

Ring	Sequence
1	1,2,a,4,3,b
2	6,5,a,8,7,b
3	
4	

Sequence 16

Ring	Sequence
1	2,1,a,4,3,b
2	6,5,a,8,7,b
3	
4	

Overlaps

Standard Overlaps

Overlap	1	2	3	4	5	6
Enabled	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
Description						
Type	Off	Off	Off	Off	Off	Off
Included Phs						
Modifier Phs						
Negative Phs						
Negative Ovlp						
Negative Ped						
Green Suppr						
Trail Green						
Trail Yellow						
Trail Red						
Walk						
Ped Clear						
Delay						
Startup Call	.	.	.	.	.	.
Recall	.	.	.	.	.	.
Call for Svc	.	.	.	.	.	.

Backup Prevention / No Serve Phases

Sequence 1

Backup Protection Plan

Serve Phase	Backup phase 1	2	3	4	5	6	7	8
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.
Thru Red	No							

Call Phs

Ph	Call Ph
1	
2	
3	
4	
5	
6	
7	
8	

No Serve

Ph	No Srv
1	
2	
3	
4	
5	
6	
7	
8	

Sequence 2

Backup Protection Plan

Serve Phase	Backup phase 1	2	3	4	5	6	7	8
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.
Thru Red	No							

Call Phs

Ph	Call Ph
1	
2	
3	
4	
5	
6	
7	
8	

No Serve

Ph	No Srv
1	
2	
3	
4	
5	
6	
7	
8	

Sequence 3

Backup Protection Plan

Serve Phase	Backup phase 1	2	3	4	5	6	7	8
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.
Thru Red	No							

Call Phs

Ph	Call Ph
1	
2	
3	
4	
5	
6	
7	
8	

No Serve

Ph	No Srv
1	
2	
3	
4	
5	
6	
7	
8	

Sequence 4

Backup Protection Plan

Serve Phase	Backup phase 1	2	3	4	5	6	7	8
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.
Thru Red	No							

Call Phs

Ph	Call Ph
1	
2	
3	
4	
5	
6	
7	
8	

No Serve

Ph	No Srv
1	
2	
3	
4	
5	
6	
7	
8	

Sequence 5

Backup Protection Plan

Serve Phase	Backup phase 1	2	3	4	5	6	7	8
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.
Thru Red	No							

Call Phs

Ph	Call Ph
1	
2	
3	
4	
5	
6	
7	
8	

No Serve

Ph	No Srv
1	
2	
3	
4	
5	
6	
7	
8	

Sequence 6

Backup Protection Plan

Serve Phase	Backup phase 1	2	3	4	5	6	7	8
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.
Thru Red	No							

Call Phs

Ph	Call Ph
1	
2	
3	
4	
5	
6	
7	
8	

No Serve

Ph	No Srv
1	
2	
3	
4	
5	
6	
7	
8	

Sequence 7

Backup Protection Plan

Serve Phase	Backup phase 1	2	3	4	5	6	7	8
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.
Thru Red	No							

Call Phs

Ph	Call Ph
1	
2	
3	
4	
5	
6	
7	
8	

No Serve

Ph	No Srv
1	
2	
3	
4	
5	
6	
7	
8	

Sequence 8

Backup Protection Plan

Serve Phase	Backup phase 1	2	3	4	5	6	7	8
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.
Thru Red	No							

Call Phs

Ph	Call Ph
1	
2	
3	
4	
5	
6	
7	
8	

No Serve

Ph	No Srv
1	
2	
3	
4	
5	
6	
7	
8	

Sequence 9

Backup Protection Plan

Serve Phase	Backup phase 1	2	3	4	5	6	7	8
1	.	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	.
4	.	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	.
6	.	.	.	.	.	.	.	.
7	.	.	.	.	.	.	.	.
8	.	.	.	.	.	.	.	.
Thru Red	No							

Call Phs

Ph	Call Ph
1	
2	
3	
4	
5	
6	
7	
8	

No Serve

Ph	No Srv
1	
2	
3	
4	
5	
6	
7	
8	

Detector Configuration

Vehicle Detectors

Detector	Slot	C1 Pin Number	Call Phas	Call O/L	Addtnl Call PH	Switch Phase	Delay	Extend	Queue Limit	No Activity	Max Pres.	Erratic Count	Fail Time	Failed Recall	Description
1	I-1	C1-56	1											None	
2	I-2U	C1-39	2											None	
3	I-2L	C1-43	2											None	
4	I-3U	C1-63	2											None	
5	I-3L	C1-76	2											None	
6	I-4	C1-47	2						20					None	
7	I-5	C1-58	3											None	
8	I-6U	C1-41	4											None	
9	I-6L	C1-45	4											None	
10	I-7U	C1-65	4											None	
11	I-7L	C1-78	4											None	
12	I-8	C1-49	4											None	
13	I-9U	C1-60	1											None	
14	I-9L	C1-62	3											None	
15	J-1	C1-55	5											None	
16	J-2U	C1-40	6											None	
17	J-2L	C1-44	6											None	
18	J-3U	C1-64	6											None	
19	J-3L	C1-77	6											None	
20	J-4	C1-48	6						20					None	
21	J-5	C1-57	7											None	
22	J-6U	C1-42	8											None	
23	J-6L	C1-46	8											None	
24	J-7U	C1-66	8											None	
25	J-7L	C1-79	8											None	
26	J-8	C1-50	8											None	
27	J-9U	C1-59	5											None	
28	J-9L	C1-61	7											None	

Pedestrian Detectors

Detector	Slot	C1 Pin Number	Call PH	Call O/L	Addtnl Call PH	No Act	Max Pres	Erratic Count
1	-------	-------						
2	I-12U	C1-67	2					
3	-------	-------						
4	I-12L	C1-69						
5	-------	-------						
6	I-13U	C1-68	6					
7	-------	-------						
8	I-13L	C1-70	8					

Global Vehicle Detector Parameters

Global No Activity	
Global Max Presence	60
Global Erratic Count	45
Global Failed Recall	Max Recall
Detector Reset Enable	Enabled

Global Ped Detector Parameters

Global No Activity	
Global Max Pres.	5
Global Erratic Ct	

Vehicle Detection Options

Detector	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Volume	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Occupancy	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Yellow Lock Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Red Lock Call	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Extend	X	X	X	X	X	**X**	X	X	X	X	X	**X**	X	X	X	X	X	X	X	**X**	X	X	X	X	X	**X**	X	X
Added Initial	X	X	X	X	X	.	X	X	X	X	X	.	X	X	X	X	X	X	X	.	X	X	X	X	X	.	X	X
Queue	.	.	.	.	.	**.**	.	.	.	.	.	**.**	.	.	.	.	.	.	.	**.**	.	.	.	.	.	**.**	.	.
Call	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Min Green 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Passage 2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Coordination Configuration

Coordination Parameters

Operational Mode	Automatic
Coord Mode	Full Permissive
Maximum Mode	Per Pattern
Force Mode	Per Pattern
Correction Mode	Shortway (Auto)
Max Cyc Limit %	25
Min Cyc Limit %	25
Max Dwell	0
Trans. Cover Ped	Pattern

Patterns

Patt.	Cycle	Offset 1	Split	Seq	Reference	Coord Mode	FO Mode	Max Mode	Phs Pln	Det Pln	Ped Pln	OL Pln	Description
1			1	2	Yellow	Auto Permissive	Fixed	Max Inhibit	1	1	1	1	
2	130	59	2	1	Yellow	Auto Permissive	Fixed	Max Inhibit	1	1	1	1	
3			3	2	Yellow	Auto Permissive	Fixed	Max Inhibit	1	1	1	1	
4	150	81	4	5	Yellow	Full Permissive	Fixed	Max Inhibit	1	1	1	1	
5	150	93	5	1	Yellow	Auto Permissive	Fixed	Max Inhibit	1	1	1	1	
6					Yellow	Auto Permissive	Fixed	Max Inhibit	1	1	1	1	
7					Yellow	Auto Permissive	Fixed	Max Inhibit	1	1	1	1	
8					Yellow	Auto Permissive	Fixed	Max Inhibit	1	1	1	1	
9					Yellow	Auto Permissive	Fixed	Max Inhibit	1	1	1	1	

Split Parameters

Split 1

PH.	Time	Min	Max	Coord Phase	Ref Phase	FO Mode	Mode
1				.	.	Fixed	None
2				.	.	Fixed	None
3				.	.	Fixed	None
4				.	.	Fixed	None
5				.	.	Fixed	None
6				.	.	Fixed	None
7				.	.	Fixed	None
8				.	.	Fixed	None

Split 2

PH.	Time	Min	Max	Coord Phase	Ref Phase	FO Mode	Mode
1	25			.	.	Fixed	None
2	45			X	X	Fixed	None
3				.	.	Fixed	None
4				.	.	Fixed	None
5	25			.	.	Fixed	None
6	45			X	X	Fixed	None
7	33			.	.	Fixed	None
8	27			.	.	Fixed	None

Split 3

PH.	Time	Min	Max	Coord Phase	Ref Phase	FO Mode	Mode
1				.	.	Fixed	None
2				.	.	Fixed	None
3				.	.	Fixed	None
4				.	.	Fixed	None
5				.	.	Fixed	None
6				.	.	Fixed	None
7				.	.	Fixed	None
8				.	.	Fixed	None

Split 4

PH.	Time	Min	Max	Coord Phase	Ref Phase	FO Mode	Mode
1	25			.	.	Fixed	None
2	49			X	X	Fixed	None
3				.	.	Fixed	None
4				.	.	Fixed	None
5	25			.	.	Fixed	None
6	74			X	.	Fixed	None
7	31			.	.	Fixed	None
8	20			.	.	Fixed	None

Split 5

PH.	Time	Min	Max	Coord Phase	Ref Phase	FO Mode	Mode
1	25			.	.	Fixed	None
2	74			X	X	Fixed	None
3				.	.	Fixed	None
4				.	.	Fixed	None
5	25			.	.	Fixed	None
6	74			X	X	Fixed	None
7	31			.	.	Fixed	None
8	20			.	.	Fixed	None

Split 6

PH.	Time	Min	Max	Coord Phase	Ref Phase	FO Mode	Mode
1				.	.	Fixed	None
2				.	.	Fixed	None
3				.	.	Fixed	None
4				.	.	Fixed	None
5				.	.	Fixed	None
6				.	.	Fixed	None
7				.	.	Fixed	None
8				.	.	Fixed	None

Split 7

PH.	Time	Min	Max	Coord Phase	Ref Phase	FO Mode	Mode
1				.	.	Fixed	None
2				.	.	Fixed	None
3				.	.	Fixed	None
4				.	.	Fixed	None
5				.	.	Fixed	None
6				.	.	Fixed	None
7				.	.	Fixed	None
8				.	.	Fixed	None

Split 8

PH.	Time	Min	Max	Coord Phase	Ref Phase	FO Mode	Mode
1				.	.	Fixed	None
2				.	.	Fixed	None
3				.	.	Fixed	None
4				.	.	Fixed	None
5				.	.	Fixed	None
6				.	.	Fixed	None
7				.	.	Fixed	None
8				.	.	Fixed	None

Split 9

PH.	Time	Min	Max	Coord Phase	Ref Phase	FO Mode	Mode
1				.	.	Fixed	None
2				.	.	Fixed	None
3				.	.	Fixed	None
4				.	.	Fixed	None
5				.	.	Fixed	None
6				.	.	Fixed	None
7				.	.	Fixed	None
8				.	.	Fixed	None

Advanced Coord Options

Pattern	1	2	3	4	5	6	7	8	9
Ring Plan									
Allow Split Underrun	.	.	.	X	.	.	.	.	.
Allow Split Overrun	.	.	.	.	.	.	.	.	.
Allow No Coord Phase	.	.	.	.	.	.	.	.	.
Coord Now	.	.	.	.	.	.	.	.	.

Ring Plans

Ring Plan 1

Ring	Offset	Early Gap
1		
2		
3		
4		

Ring Plan 2

Ring	Offset	Early Gap
1		
2		
3		
4		

Ring Plan 3

Ring	Offset	Early Gap
1		
2		
3		
4		

Ring Plan 4

Ring	Offset	Early Gap
1		
2		
3		
4		

Ring Plan 5

Ring	Offset	Early Gap
1		
2		
3		
4		

Ring Plan 6

Ring	Offset	Early Gap
1		
2		
3		
4		

Ring Plan 7

Ring	Offset	Early Gap
1		
2		
3		
4		

Ring Plan 8

Ring	Offset	Early Gap
1		
2		
3		
4		

Ring Plan 9

Ring	Offset	Early Gap
1		
2		
3		
4		

Scheduler Configuration

Schedule 1

Status	Enabled

Month of Year											
J	F	M	A	M	J	J	A	S	O	N	D
X	X	X	X	X	X	X	X	X	X	X	X

Description	Weekday

Days of Week						
S	M	T	W	T	F	S
.	X	X	X	X	X	.

Day Plan	1

Days of Month																														
									1												2									3
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Schedule 2

Status	Enabled

Month of Year											
J	F	M	A	M	J	J	A	S	O	N	D
X	X	X	X	X	X	X	X	X	X	X	X

Description	Weekend

Days of Week						
S	M	T	W	T	F	S
X	.	.	.	.	.	X

Day Plan	2

Days of Month																														
									1												2									3
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Schedule 3

Status	Disabled

Month of Year											
J	F	M	A	M	J	J	A	S	O	N	D
.	.	.	.	.	.	.	.	.	.	.	.

Description	

Days of Week						
S	M	T	W	T	F	S
.	.	.	.	.	.	.

Day Plan	0

Days of Month																														
									1												2									3
1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

Day Plans

Day Plan 1

Event	HR	MIN	ACT	Description
1	6	30	4	
2	14		5	
3	19		2	
4	21		64	Free
5				
6				
7				
8				
9				
10				

Day Plan 2

Event	HR	MIN	ACT	Description
1	8		2	
2	19		64	Free
3				
4				
5				
6				
7				
8				
9				
10				

Day Plan 3

Event	HR	MIN	ACT	Description
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Actions

		Aux			Special Functions						
Action	Pattern	1	2	3	1	2	3	4	5	6	7	8
1	Pattern 1	.	.	.	.	.	.	.	.	.	.	.
2	Pattern 2	.	.	.	.	.	.	.	.	.	.	.
3	Pattern 3	.	.	.	.	.	.	.	.	.	.	.
4	Pattern 4	.	.	.	.	.	.	.	.	.	.	.
5	Pattern 5	.	.	.	.	.	.	.	.	.	.	.
6	Pattern 6	.	.	.	.	.	.	.	.	.	.	.
7	Pattern 7	.	.	.	.	.	.	.	.	.	.	.
8	Pattern 8	.	.	.	.	.	.	.	.	.	.	.
9	Pattern 9	.	.	.	.	.	.	.	.	.	.	.
10	Pattern 10	.	.	.	.	.	.	.	.	.	.	.
11	None	.	.	.	.	.	.	.	.	.	.	.
12	None	.	.	.	.	.	.	.	.	.	.	.
13	None	.	.	.	.	.	.	.	.	.	.	.
14	None	.	.	.	.	.	.	.	.	.	.	.
15	None	.	.	.	.	.	.	.	.	.	.	.
16	None	.	.	.	.	.	.	.	.	.	.	.
17	None	.	.	.	.	.	.	.	.	.	.	.
18	None	.	.	.	.	.	.	.	.	.	.	.
19	None	.	.	.	.	.	.	.	.	.	.	.
20	None	.	.	.	.	.	.	.	.	.	.	.
64	Free	.	.	.	.	.	.	.	.	.	.	.

Action Commands

Action	Command	Index
1	None	
2	None	
3	None	
4	None	
5	None	

Action	Command	Index
6	None	
7	None	
8	None	
9	None	
10	None	

Action	Command	Index
11	None	
12	None	
13	None	
14	None	
15	None	

Action	Command	Index
16	None	
17	None	
18	None	
19	None	
20	None	

Preempt Configuration

Preemption Configuration

Preempt	1	2	3	4	5	6
Enabled	Enabled	Disabled	Enabled	Enabled	Enabled	Enabled
Type	Rail Road	Rail Road	Emergency Veh	Emergency Veh	Emergency Veh	Emergency Veh
Description	BBS Flash					
Track Phase						
Track 2 Phases						
Track Overlap						
Track 2 Overlap						
Dwell Phase			2,5	7	1,6	8
Dwell Ped						
Dwell Overlap						
Cycling Phase						
Cycling Ped						
Cycling Overlap						
Exit Phase	2,6		2,6	7	2,6	8
Exit Overlaps						
Recovery Exit Omit						

Preemption Options

Preempt	1	2	3	4	5	6
Non Lock Mem	.	.	.	.	.	.
Not Overide Flash	.	.	.	.	.	.
Not Overide Next Preempt	.	.	.	.	.	.
Flash Dwell	.	.	.	.	.	.
Ped Recycle in Dwell Cycle	.	.	.	.	.	.
Immediate Ped Clear	.	.	.	.	.	.
Dwell Only Status Output	.	.	.	.	.	.
All Red Flash Dwell	X	.	.	.	.	.
Allow All Overlaps	.	.	.	.	.	.
Require All Red Entry	.	.	.	.	.	.
Require Gate Down Track Exit	.	.	.	.	.	.
Require Gate Up Dwell Exit	.	.	.	.	.	.
Use Normal On/Normal Off Input	.	.	.	.	.	.

Preemption Parameters

Preempt	1	2	3	4	5	6
Link						
Delay						
Min Duration						
Min Presence						
Max Presence			255	255	255	255
Max Presence Action	Terminate	Terminate	Terminate	Terminate	Terminate	Terminate
Enter Min Green						
Enter Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Enter Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Enter Min Walk						
Enter Ped Clear			255	255	255	255
Track Green						
Track Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Track Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Track 2 Green						
Track 2 Yellow	25.5	25.5	25.5	25.5	25.5	25.5
Track 2 Red	25.5	25.5	25.5	25.5	25.5	25.5
Track Ext. Gate Down						

Preempt Parameters

Preempt	1	2	3	4	5	6
Dwell Green			1	1	1	1
Exit Ped Clear	255	255	255	255	255	255
Exit Yellow Change	25.5	25.5	25.5	25.5	25.5	25.5
Exit Red Clear	25.5	25.5	25.5	25.5	25.5	25.5
Dwell Ext Time						
Max Exit Green						
Exit Type	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases	Exit Phases
Exit Max Mode	Disabled	Disabled	Disabled	Disabled	Disabled	Disabled
Exit Max Apply Time						
Veh Exit Calls						
Ped Exit Calls						

Advanced I/O Configuration

Channel Configuration

Ch	Control Type	Source
1	Phase Vehicle	1
2	Phase Vehicle	2
3	Phase Vehicle	3
4	Phase Vehicle	4
5	Phase Vehicle	5
6	Phase Vehicle	6
7	Phase Vehicle	7
8	Phase Vehicle	8

Ch	Control Type	Source
9	None	
10	None	
11	None	
12	None	
13	Phase Ped	2
14	Phase Ped	7
15	Phase Ped	6
16	Phase Ped	8

Concurrency Mode

Concurrency Mode
Auto

Auto Concurrency

Ch	Concurrency
1	5,6,15
2	5,6,13,15
3	
4	
5	13
6	13,15
7	14
8	16
9	
10	
11	
12	
13	15
14	
15	
16	

Channel Options

Channel	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Flash Yellow	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Flash Red	X	X	X	X	X	X	X	X	.	.	.	.	.	.	.	.
Flash Alternate Half Hertz	X	.	.	X	X	.	.	X	.	.	.	.	.	.	.	.

Cabinet Configuration

IO Modules

IO Module	Type
1	Caltrans 332

Input Points

Input	C1 Pin	Input Type	Idx
1	C1-39	Vehicle Det Call	2
2	C1-40	Vehicle Det Call	16
3	C1-41	Vehicle Det Call	8
4	C1-42	Vehicle Det Call	22
5	C1-43	Vehicle Det Call	3
6	C1-44	Vehicle Det Call	17
7	C1-45	Vehicle Det Call	9
8	C1-46	Vehicle Det Call	23
9	C1-47	Vehicle Det Call	6
10	C1-48	Vehicle Det Call	20
11	C1-49	Vehicle Det Call	12
12	C1-50	Vehicle Det Call	26
13	C1-51	Preempt Input	1
14	C1-52	Preempt Input	2
15	C1-53	Unit Manual Control Enable	1
16	C1-54	Not Active	

Input	C1 Pin	Input Type	Idx
17	C1-55	Vehicle Det Call	15
18	C1-56	Vehicle Det Call	1
19	C1-57	Vehicle Det Call	21
20	C1-58	Vehicle Det Call	7
21	C1-59	Vehicle Det Call	27
22	C1-60	Vehicle Det Call	13
23	C1-61	Vehicle Det Call	28
24	C1-62	Vehicle Det Call	14
25	C11-10	Not Active	
26	C11-11	Not Active	
27	C11-12	Not Active	
28	C11-13	Not Active	
29	C1-63	Vehicle Det Call	4
30	C1-64	Vehicle Det Call	18
31	C1-65	Vehicle Det Call	10
32	C1-66	Vehicle Det Call	24

Input	C1 Pin	Input Type	Idx
33	C1-67	Ped Det Call	2
34	C1-68	Ped Det Call	6
35	C1-69	Ped Det Call	4
36	C1-70	Ped Det Call	8
37	C1-71	Preempt Input	3
38	C1-72	Preempt Input	4
39	C1-73	Preempt Input	5
40	C1-74	Preempt Input	6
41	C1-75	Not Active	
42	C1-76	Vehicle Det Call	5
43	C1-77	Vehicle Det Call	19
44	C1-78	Vehicle Det Call	11
45	C1-79	Vehicle Det Call	25
46	C1-80	Unit Interval Advance	1
47	C1-81	Unit Local Flash Sense	1
48	C1-82	Unit Stop Time	1

Input	C1 Pin	Input Type	Idx
49	C11-15	Not Active	
50	C11-16	Not Active	
51	C11-17	Not Active	
52	C11-18	Not Active	
53	C11-19	Not Active	
54	C11-20	Not Active	
55	C11-21	Not Active	
56	C11-22	Not Active	
57	C11-23	Not Active	
58	C11-24	Not Active	
59	C11-25	Not Active	
60	C11-26	Not Active	
61	C11-27	Not Active	
62	C11-28	Not Active	
63	C11-29	Not Active	
64	C11-30	Not Active	

Cabinet Configuration

Output Points

Output	C1 Pin	Output Type	Idx
1	C1-2	Channel Red Do Not Walk Driver	14
2	C1-3	Channel Green Walk Driver	14
3	C1-4	Channel Red Do Not Walk Driver	4
4	C1-5	Channel Yellow Ped Clear Driver	4
5	C1-6	Channel Green Walk Driver	4
6	C1-7	Channel Red Do Not Walk Driver	3
7	C1-8	Channel Yellow Ped Clear Driver	3
8	C1-9	Channel Green Walk Driver	3
9	C1-10	Channel Red Do Not Walk Driver	13
10	C1-11	Channel Green Walk Driver	13
11	C1-12	Channel Red Do Not Walk Driver	2
12	C1-13	Channel Yellow Ped Clear Driver	2
13	C1-15	Channel Green Walk Driver	2
14	C1-16	Channel Red Do Not Walk Driver	1
15	C1-17	Channel Yellow Ped Clear Driver	1
16	C1-18	Channel Green Walk Driver	1
17	C1-19	Channel Red Do Not Walk Driver	16
18	C1-20	Channel Green Walk Driver	16
19	C1-21	Channel Red Do Not Walk Driver	8
20	C1-22	Channel Yellow Ped Clear Driver	8
21	C1-23	Channel Green Walk Driver	8
22	C1-24	Channel Red Do Not Walk Driver	7
23	C1-25	Channel Yellow Ped Clear Driver	7
24	C1-26	Channel Green Walk Driver	7
25	C1-27	Channel Red Do Not Walk Driver	15
26	C1-28	Channel Green Walk Driver	15
27	C1-29	Channel Red Do Not Walk Driver	6
28	C1-30	Channel Yellow Ped Clear Driver	6
29	C1-31	Channel Green Walk Driver	6
30	C1-32	Channel Red Do Not Walk Driver	5
31	C1-33	Channel Yellow Ped Clear Driver	5
32	C1-34	Channel Green Walk Driver	5

Output	C1 Pin	Output Type	Idx
33	C1-35	Channel Yellow Ped Clear Driver	13
34	C1-36	Channel Yellow Ped Clear Driver	15
35	C1-37	Channel Yellow Ped Clear Driver	14
36	C1-38	Channel Yellow Ped Clear Driver	16
37	C1-100	Channel Yellow Ped Clear Driver	18
38	C1-101	Channel Yellow Ped Clear Driver	11
39	C1-102	Detector Reset	1
40	C1-103	Watchdog	
41	C1-83	Channel Red Do Not Walk Driver	18
42	C1-84	Channel Green Walk Driver	18
43	C1-85	Channel Red Do Not Walk Driver	17
44	C1-86	Channel Yellow Ped Clear Driver	17
45	C1-87	Channel Green Walk Driver	17
46	C1-88	Channel Red Do Not Walk Driver	12
47	C1-89	Channel Yellow Ped Clear Driver	12
48	C1-90	Channel Green Walk Driver	12
49	C1-91	Channel Red Do Not Walk Driver	11
50	C1-93	Channel Green Walk Driver	11
51	C1-94	Channel Red Do Not Walk Driver	10
52	C1-95	Channel Yellow Ped Clear Driver	10
53	C1-96	Channel Green Walk Driver	10
54	C1-97	Channel Red Do Not Walk Driver	9
55	C1-98	Channel Yellow Ped Clear Driver	9
56	C1-99	Channel Green Walk Driver	9
57	C11-1	Not Active	
58	C11-2	Not Active	
59	C11-3	Not Active	
60	C11-4	Not Active	
61	C11-5	Not Active	
62	C11-6	Not Active	
63	C11-7	Not Active	
64	C11-8	Not Active	

User Programs

Program 1

Enabled

Line	Result	Idx	Operation	Parameter A	Idx	Parameter B	Idx	Dly	Ext	Description
1	Unit Stop Time	1	Result=A	Aux Switch State						Aux Switch Stop Time
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
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38										
39										
40										

Appendix C
Traffic Counts

Existing Traffic Counts

Turn Count Summary

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

Location: Grand Avenue @ Bent Avenue

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

Analysts: *LV/CD*

Weather: *Sunny*

AVC Proj No: *17-0786*

Vehicular Count

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

Location: Grand Avenue @ Bent Avenue

AM Period (7:00 AM - 9:00 AM)								
		Westbound		Northbound		Eastbound		
		Thru	Left	Right	Left	Right	Thru	TOTAL
7:00 AM		45	0	2	7	11	22	87
7:15 AM		73	1	1	11	10	33	129
7:30 AM		79	3	2	12	17	41	154
7:45 AM		73	1	3	17	14	32	140
8:00 AM		83	3	3	16	19	46	170
8:15 AM		68	3	3	18	22	54	168
8:30 AM		50	4	4	18	37	60	173
8:45 AM		78	9	4	28	32	61	212
Total		549	24	22	127	162	349	1,233

AM Intersection Peak Hour : **8:00 AM - 9:00 AM** Intersection PHF : **0.85**

		Westbound		Northbound		Eastbound		TOTAL
		Thru	Left	Right	Left	Right	Thru	
Volume		279	19	14	80	110	221	723
PHF		0.84	0.53	0.88	0.71	0.74	0.91	0.85
Movement PHF		0.86		0.73			0.85	0.85

PM Period (4:00 PM - 6:00 PM)								
		Westbound		Northbound		Eastbound		
		Thru	Left	Right	Left	Right	Thru	TOTAL
4:00 PM		84	7	15	60	62	230	458
4:15 PM		103	7	11	65	61	274	521
4:30 PM		103	11	19	60	62	206	461
4:45 PM		137	3	19	62	60	232	513
5:00 PM		108	9	18	76	53	263	527
5:15 PM		114	5	11	50	57	258	495
5:30 PM		140	3	15	57	64	213	492
5:45 PM		131	8	15	46	65	281	546
Total		920	53	123	476	484	1,957	4,013

PM Intersection Peak Hour : **5:00 PM - 6:00 PM** Intersection PHF : **0.94**

		Westbound		Northbound		Eastbound		TOTAL
		Thru	Left	Right	Left	Right	Thru	
Volume		493	25	59	229	239	1015	2060
PHF		0.88	0.694	0.819	0.753	0.919	0.903	0.94
Movement PHF		0.91		0.77			0.91	0.94

#4

Prepared by National Data & Surveying Services

Grand Ave & San Marcos Blvd

Peak Hour Turning Movement Count

ID: 18-04201-003
City: San Marcos

Day: Thursday
Date: 05/24/2018

PEAK HOURS

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

COUNT PERIODS

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

Grand Ave — SOUTHBOUND

AM	16	68	126	0	290	AM
NOON	0	0	0	0	0	NOON
PM	38	155	658	0	330	PM
	1	1	2	0		

San Marcos Blvd — EASTBOUND

AM	NOON	PM		
1339	0	1259	⇦	
14	0	20	↶	0
20	0	39	↰	1
1142	0	1408	→	3
60	0	128	↷	1
AM	NOON	PM		

CONTROL

Signalized

TEV	3319	0	4540
	AM	NOON	PM
PHF	0.93		0.98

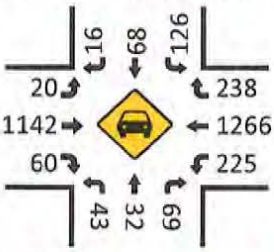
San Marcos Blvd — WESTBOUND

PM	NOON	AM		
174	0	238	↶	1
1083	0	1266	←	3
353	0	225	↰	2
0	0	0	↷	0
2315	0	1337	⇨	
PM	NOON	AM		

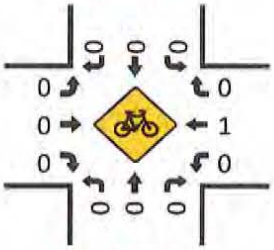
Grand Ave — NORTHBOUND

PM	636	0	118	117	249	PM
NOON	0	0	0	0	0	NOON
AM	353	0	43	32	69	AM
		0	2	1	1	

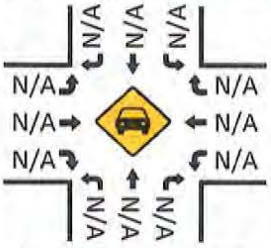
Total Vehicles (AM)



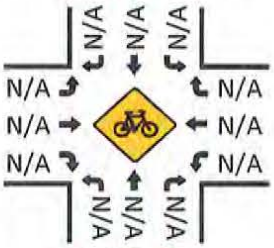
Bikes (AM)



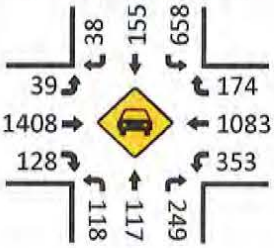
Total Vehicles (Noon)



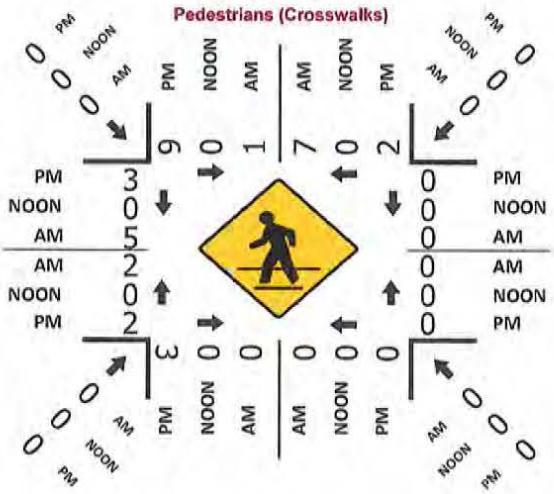
Bikes (NOON)



Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)

#2

Prepared by National Data & Surveying Services

Via Vera Cruz & San Marcos Blvd

Peak Hour Turning Movement Count

ID: 18-04201-001
City: San Marcos

Day: Thursday
Date: 05/24/2018

Via Vera Cruz — SOUTHBOUND

PEAK HOURS		Right	Thru	Left	U-Turn	Total		COUNT PERIODS
08:00 AM - 09:00 AM	AM	26	105	55	0	258	AM	07:00 AM - 09:00 AM
NONE	NOON	0	0	0	0	0	NOON	NONE
04:30 PM - 05:30 PM	PM	50	262	167	0	348	PM	04:00 PM - 06:00 PM
Lanes		0	1	2	0			

San Marcos Blvd — EASTBOUND

	AM	NOON	PM	Lanes
Total (westbound departures)	1002	0	1050	
U-Turn	0	0	10	0
Left	39	0	71	1
Thru	967	0	1144	2
Right	34	0	56	0

San Marcos Blvd — WESTBOUND

	Lanes	PM	NOON	AM
Right	0	112	0	84
Thru	2	927	0	943
Left	1	74	0	72
U-Turn	0	21	0	10
Total (eastbound departures)		1377	0	1081

CONTROL: Signalized

	AM	NOON	PM
TEV	2552	0	3167
PHF	0.96		0.98

Via Vera Cruz — NORTHBOUND

	Total	U-Turn	Left	Thru	Right	
Lanes		0	1	1.5	0.5	
PM	392	0	63	165	45	PM
NOON	0	0	0	0	0	NOON
AM	211	0	33	135	49	AM

Total Vehicles (AM)

Approach	Left	Thru	Right
Southbound	55	105	26
Eastbound	39	967	34
Westbound	72	943	84
Northbound	33	135	49

Total Vehicles (Noon)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach	Left	Thru	Right
Southbound	167	262	50
Eastbound	71	1144	56
Westbound	74	927	112
Northbound	63	165	45

Bikes (AM)

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

Bikes (NOON)

Approach	Left	Thru	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Bikes (PM)

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

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (eastbound)	0	0	2
North leg (westbound)	0	0	2
West leg (southbound)	0	0	1
West leg (northbound)	0	0	1
East leg (southbound)	0	0	1
East leg (northbound)	0	0	2
South leg (eastbound)	0	0	0
South leg (westbound)	0	0	0
NW corner (diagonal)	0	0	0
NE corner (diagonal)	0	0	0
SW corner (diagonal)	0	0	0
SE corner (diagonal)	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	SAN MARCOS	PROJECT #:	ETD22-0520-01
5/19/22	NORTH & SOUTH:	BENT AVE	LOCATION #:	6
THURSDAY	EAST & WEST:	GRAND	CONTROL:	SIGNAL

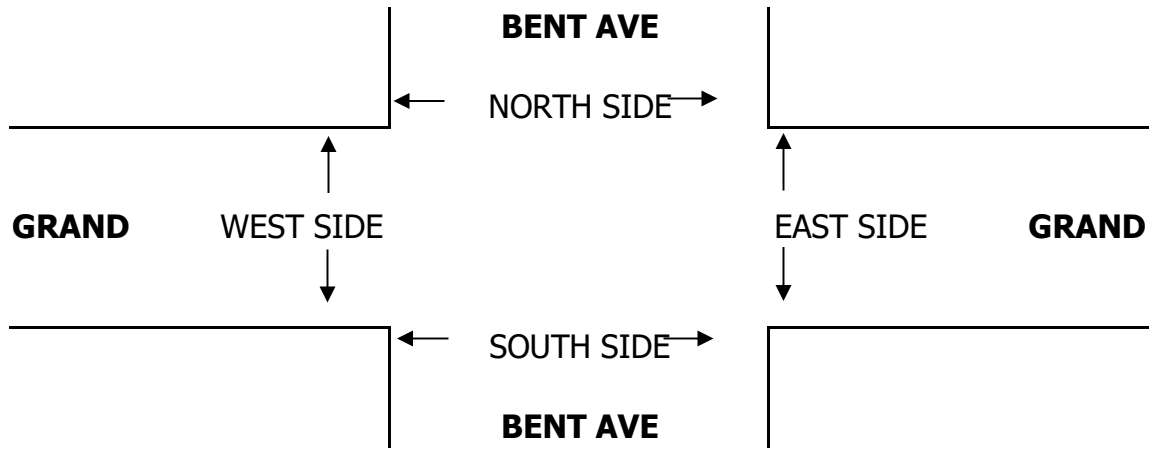
NOTES:

INCLUDES BIKE & PED

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

	NORTHBOUND BENT AVE			SOUTHBOUND BENT AVE			EASTBOUND GRAND			WESTBOUND GRAND				U-TURNS				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
7:00 AM	14		3					33	16	7	35		108					0
7:15 AM	13		5					28	15	7	45		113					0
7:30 AM	17		3					57	11	4	56		148					0
7:45 AM	20		7					64	13	1	62		167					0
8:00 AM	14		2					59	16	5	70		166					0
8:15 AM	21		5					78	20	4	53		181					0
8:30 AM	20		5					79	24	5	64		197					0
8:45 AM	37		5					55	36	7	64		204					0
AM VOLUMES	156	0	35	0	0	0	0	453	151	40	449	0	1,284	0	0	0	0	0
APPROACH %	82%	0%	18%	0%	0%	0%	0%	75%	25%	8%	92%	0%						
APP/DEPART	191	/	0	0	/	191	604	/	488	489	/	605	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	92	0	17	0	0	0	0	271	96	21	251	0	748					
APPROACH %	84%	0%	16%	0%	0%	0%	0%	74%	26%	8%	92%	0%						
PEAK HR FACTOR		0.649			0.000			0.891			0.907		0.917					
APP/DEPART	109	/	0	0	/	117	367	/	288	272	/	343	0					
4:00 PM	36		11					169	52	5	68		341					0
4:15 PM	30		20					206	53	8	60		377					0
4:30 PM	54		15					191	42	10	70		382					0
4:45 PM	45		12					185	50	9	75		376					0
5:00 PM	44		13					189	41	6	68		361					0
5:15 PM	53		19					140	31	9	100		352					0
5:30 PM	41		11					154	28	9	106		349					0
5:45 PM	42		17					162	30	5	100		356					0
PM VOLUMES	345	0	118	0	0	0	0	1,396	327	61	647	0	2,894	0	0	0	0	0
APPROACH %	75%	0%	25%	0%	0%	0%	0%	81%	19%	9%	91%	0%						
APP/DEPART	463	/	0	0	/	388	1,723	/	1,514	708	/	992	0					
BEGIN PEAK HR		4:15 PM																
VOLUMES	173	0	60	0	0	0	0	771	186	33	273	0	1,496					
APPROACH %	74%	0%	26%	0%	0%	0%	0%	81%	19%	11%	89%	0%						
PEAK HR FACTOR		0.844			0.000			0.924			0.911		0.979					
APP/DEPART	233	/	0	0	/	219	957	/	831	306	/	446	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0					0
	7:15 AM					0					0					0
	7:30 AM					0					0					0
	7:45 AM				1	1					0					0
	8:00 AM					0					0					0
	8:15 AM					0					0					0
	8:30 AM				1	1					0				1	1
	8:45 AM					0					0					0
	TOTAL	0	0	0	2	2	0	0	0	0	0	0	0	0	1	1
PM	4:00 PM					0					0					0
	4:15 PM				2	2					0					0
	4:30 PM					0					0					0
	4:45 PM					0					0					0
	5:00 PM					0					0					0
	5:15 PM					0					0					0
	5:30 PM					0					0					0
	5:45 PM					0					0					0
	TOTAL	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	SAN MARCOS	PROJECT #:	ETD22-0520-01
5/19/22	NORTH & SOUTH:	GRAND	LOCATION #:	7
THURSDAY	EAST & WEST:	SAN MARCOS BL	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM
PM
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OTHER

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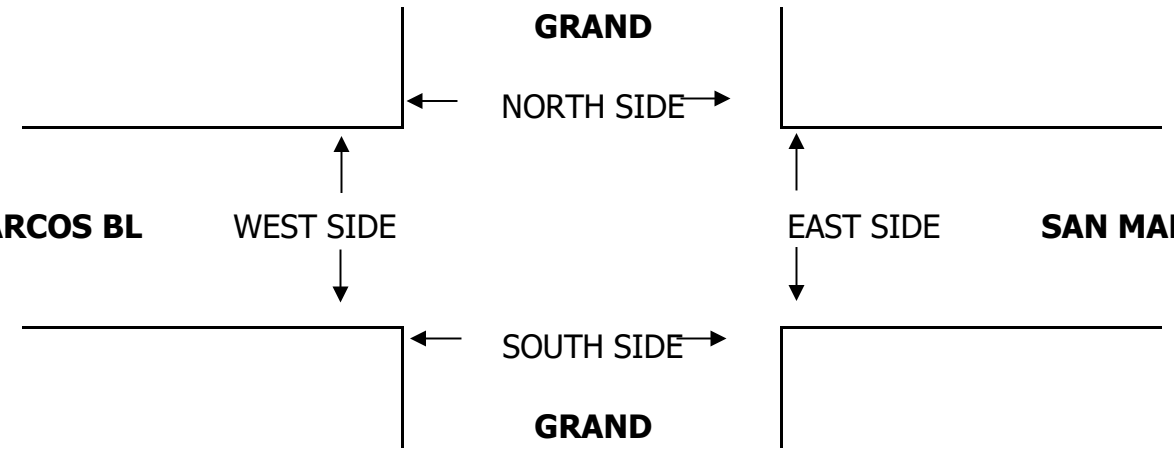
	NORTHBOUND GRAND			SOUTHBOUND GRAND			EASTBOUND SAN MARCOS BL			WESTBOUND SAN MARCOS BL				U-TURNS				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
7:00 AM	7	2	8	25	5	7	4	193	4	32	340	39	666			2		2
7:15 AM	7	6	16	24	8	3	1	188	4	24	355	38	674					0
7:30 AM	8	5	13	28	9	5	6	250	12	31	362	32	761				1	1
7:45 AM	7	10	15	44	19	9	4	240	7	38	364	53	810			4		4
8:00 AM	1	5	21	41	8	2	7	242	7	43	361	56	794			6		6
8:15 AM	9	4	6	70	14	5	6	244	11	79	271	55	774			11		11
8:30 AM	9	12	15	55	16	6	4	328	8	53	375	72	953			7	1	8
8:45 AM	18	11	12	25	12	3	4	241	19	70	357	55	827			9		9
VOLUMES	66	55	106	312	91	40	36	1,926	72	370	2,785	400	6,259	0	0	39	2	41
APPROACH %	29%	24%	47%	70%	21%	9%	2%	95%	4%	10%	78%	11%						
APP/DEPART	227	/	491	443	/	533	2,034	/	2,344	3,555	/	2,891	0					
BEGIN PEAK HR		8:00 AM																
VOLUMES	37	32	54	191	50	16	21	1,055	45	245	1,364	238	3,348					
APPROACH %	30%	26%	44%	74%	19%	6%	2%	94%	4%	13%	74%	13%						
PEAK HR FACTOR		0.750			0.722			0.824			0.924		0.878					
APP/DEPART	123	/	291	257	/	340	1,121	/	1,300	1,847	/	1,417	0					
4:00 PM	26	29	48	167	30	1	7	323	31	119	233	41	1,055			2	1	3
4:15 PM	30	28	65	171	42	10	7	326	27	87	262	29	1,084					0
4:30 PM	40	29	57	164	52	6	9	307	26	79	274	33	1,076			2		2
4:45 PM	33	32	59	149	47	10	11	362	33	105	256	36	1,133			7		7
5:00 PM	40	28	63	156	51	6	14	335	44	86	238	32	1,093			6		6
5:15 PM	34	25	53	125	40	5	16	325	27	99	274	67	1,090			4	1	5
5:30 PM	26	33	47	130	41	9	4	335	31	97	289	55	1,097			4		4
5:45 PM	38	32	42	142	55	4	4	364	32	108	302	52	1,175			3	1	4
VOLUMES	267	236	434	1,204	358	51	72	2,677	251	780	2,128	345	8,803	0	0	28	3	31
APPROACH %	28%	25%	46%	75%	22%	3%	2%	89%	8%	24%	65%	11%						
APP/DEPART	937	/	653	1,613	/	1,389	3,000	/	4,315	3,253	/	2,446	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	138	118	205	553	187	24	38	1,359	134	390	1,103	206	4,455					
APPROACH %	30%	26%	44%	72%	24%	3%	2%	89%	9%	23%	65%	12%						
PEAK HR FACTOR		0.880			0.897			0.957			0.919		0.948					
APP/DEPART	461	/	362	764	/	711	1,531	/	2,117	1,699	/	1,265	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM			2		2					0		1			1
	7:15 AM					0					0					0
	7:30 AM	1		3		4					0			1	1	2
	7:45 AM					0					0			1		1
	8:00 AM	1		1	1	3					0			1		1
	8:15 AM	3		2	1	6					0				1	1
	8:30 AM	2		2		4					0					0
	8:45 AM	3		4		7					0					0
	TOTAL	10	0	14	2	26	0	0	0	0	0	0	1	3	2	6
PM	4:00 PM	4		4	1	9					0	1		1	1	3
	4:15 PM	1		4		5					0				1	1
	4:30 PM	2		3	1	6					0					0
	4:45 PM	1		1		2					0	1		1		2
	5:00 PM			3		3					0	0		1		1
	5:15 PM			3	1	4					0				1	1
	5:30 PM			1		1					0					0
	5:45 PM			1		1					0			1		1
	TOTAL	8	0	20	3	31	0	0	0	0	0	2	0	4	3	9

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	SAN MARCOS	PROJECT #:	ETD22-0520-01
5/19/22	NORTH & SOUTH:	VIA VERA CRUZ	LOCATION #:	4
THURSDAY	EAST & WEST:	SAN MARCOS BL	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM
PM
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OTHER
OTHER

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	NORTHBOUND VIA VERA CRUZ			SOUTHBOUND VIA VERA CRUZ			EASTBOUND SAN MARCOS BL			WESTBOUND SAN MARCOS BL				U-TURNS				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM 7:00 AM	5	2	4	2	34	0	2	129	9	6	268	11	472				2	2
7:15 AM	4	0	1	9	4	12	3	168	1	5	313	15	535		1	1		2
7:30 AM	4	3	3	10	9	6	5	242	3	9	363	9	666			1	3	4
7:45 AM	13	0	3	5	11	11	2	220	1	12	306	16	600			5	4	9
8:00 AM	12	1	1	15	13	15	12	221	3	18	268	21	600				7	7
8:15 AM	10	0	4	20	14	9	9	212	4	11	211	23	527				2	2
8:30 AM	6	0	6	23	5	14	7	290	4	11	257	20	643			4	5	9
8:45 AM	6	0	4	20	3	11	15	204	6	9	261	28	567				8	8
VOLUMES	60	6	26	104	93	78	55	1,686	31	81	2,247	143	4,610	0	1	11	31	43
APPROACH %	65%	7%	28%	38%	34%	28%	3%	95%	2%	3%	91%	6%						
APP/DEPART	92	/	204	275	/	205	1,772	/	1,816	2,471	/	2,385	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	33	4	8	39	37	44	22	851	8	44	1,250	61	2,401					
APPROACH %	73%	9%	18%	33%	31%	37%	2%	97%	1%	3%	92%	5%						
PEAK HR FACTOR		0.703			0.698			0.881			0.889		0.901					
APP/DEPART	45	/	87	120	/	89	881	/	898	1,355	/	1,327	0					
PM 4:00 PM	13	4	17	47	19	14	15	284	42	21	187	43	706				11	11
4:15 PM	12	13	19	41	19	21	9	224	8	19	221	32	638				5	5
4:30 PM	15	8	11	52	19	12	13	271	8	1	251	36	697			1	10	11
4:45 PM	11	6	11	41	20	11	7	264	17	28	235	42	693				4	4
5:00 PM	14	12	20	40	24	15	9	344	0	17	281	35	811				6	6
5:15 PM	22	15	24	42	25	12	10	312	2	25	279	43	811				6	6
5:30 PM	19	19	17	44	25	6	14	312	3	28	250	36	773				7	7
5:45 PM	15	7	13	51	14	10	12	314	3	28	294	32	793				4	4
VOLUMES	121	84	132	358	165	101	89	2,325	83	167	1,998	299	5,922	0	0	1	53	54
APPROACH %	36%	25%	39%	57%	26%	16%	4%	93%	3%	7%	81%	12%						
APP/DEPART	337	/	472	624	/	415	2,497	/	2,815	2,464	/	2,220	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	70	53	74	177	88	43	45	1,282	8	98	1,104	146	3,188					
APPROACH %	36%	27%	38%	57%	29%	14%	3%	96%	1%	7%	82%	11%						
PEAK HR FACTOR		0.807			0.975			0.945			0.952		0.983					
APP/DEPART	197	/	244	308	/	194	1,335	/	1,533	1,348	/	1,217	0					

		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	2			3					0	1				1
	7:15 AM	1				1					0					0
	7:30 AM	2				2					0	2	2	1	1	6
	7:45 AM					0					0	1				1
	8:00 AM					0					0					0
	8:15 AM			1		1					0		1		1	2
	8:30 AM		3	2		5					0					0
	8:45 AM					0					0					0
	TOTAL	4	5	3	0	12	0	0	0	0	0	4	3	1	2	10
PM	4:00 PM		2			2					0	1				1
	4:15 PM	1	2			3					0					0
	4:30 PM	1				1					0					0
	4:45 PM					0					0					0
	5:00 PM				1	1					0					0
	5:15 PM		1		1	2					0		1			1
	5:30 PM		1		1	2					0					0
	5:45 PM			1		1					0					0
	TOTAL	2	6	1	3	12	0	0	0	0	0	1	1	0	0	2

Roadway Classification Counts

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE: 02/09/23 THURSDAY
JOB #: ETD23-0210-01

CITY: SAN MARCOS
LOCATION: S Pacific Street – North of Alpine Place

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:15	0	1	1	0	0	0	0	0	0	0	0	0	0	2
0:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
3:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
4:00	0	1	0	0	0	0	0	0	1	0	0	0	0	2
4:15	0	1	1	0	0	1	0	0	0	0	0	0	0	3
4:30	1	1	0	0	2	0	0	0	4	0	0	0	0	8
4:45	0	0	0	0	1	0	0	0	0	0	0	0	0	1
5:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:15	0	1	0	0	4	0	0	0	0	0	0	0	0	5
5:30	0	4	1	0	9	0	0	0	0	0	0	0	0	14
5:45	1	3	0	3	6	1	0	0	0	0	0	0	0	14
6:00	0	4	0	0	4	2	0	0	0	0	0	0	0	10
6:15	0	1	1	0	1	1	0	0	0	0	0	0	0	4
6:30	0	5	1	0	5	2	0	0	0	0	0	0	0	13
6:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
7:00	0	3	5	0	1	0	0	0	0	0	0	0	0	9
7:15	1	6	1	0	2	2	0	0	3	0	0	0	0	15
7:30	0	4	7	0	5	0	0	0	5	0	0	0	0	21
7:45	0	17	2	0	2	0	0	0	2	0	0	0	0	23
8:00	0	11	2	0	4	0	0	0	6	0	0	0	0	23
8:15	0	23	5	0	1	0	0	0	2	0	0	0	0	31
8:30	0	15	1	0	2	0	0	0	5	0	0	0	0	23
8:45	0	15	5	3	1	0	0	0	4	0	0	0	0	28
9:00	0	7	2	0	1	0	0	0	3	0	0	0	0	13
9:15	0	14	2	1	3	0	0	0	6	0	0	0	0	26
9:30	0	12	2	0	4	0	0	0	3	0	0	0	0	21
9:45	0	12	6	0	6	0	0	0	5	0	0	0	0	29
10:00	0	11	4	0	8	0	0	0	4	0	0	0	0	27
10:15	0	11	8	0	2	1	0	0	4	0	0	0	0	26
10:30	0	8	4	1	4	0	0	0	4	0	0	0	0	21
10:45	0	12	4	0	4	0	0	0	5	0	0	0	0	25
11:00	0	17	0	0	1	0	0	0	3	0	0	0	0	21
11:15	0	19	2	2	5	0	0	0	4	0	0	0	0	32
11:30	0	18	3	0	3	0	0	1	6	0	0	0	0	31
11:45	0	16	7	0	5	0	0	0	5	0	0	0	0	33
TOTAL	3	310	77	10	96	10	0	1	84	0	0	0	0	591

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	19	6	0	6	0	0	0	4	0	0	0	0	35
12:15	0	18	4	1	7	1	0	0	3	0	0	0	0	34
12:30	0	11	3	0	1	1	0	0	3	0	0	0	0	19
12:45	0	13	4	0	7	1	0	0	2	0	0	0	0	27
13:00	0	19	2	0	3	1	0	0	5	0	0	0	0	30
13:15	0	18	1	0	1	1	0	0	2	0	0	0	0	23
13:30	0	36	5	0	0	1	0	0	5	0	0	0	0	47
13:45	0	21	6	0	4	0	0	0	2	0	0	0	0	33
14:00	0	23	3	0	3	1	0	0	5	0	0	0	0	35
14:15	0	21	2	0	0	0	0	1	2	0	0	0	0	26
14:30	0	39	5	0	2	0	0	0	4	0	0	0	0	50
14:45	0	27	5	0	4	0	0	0	1	0	0	0	0	37
15:00	0	21	9	0	3	0	0	0	4	0	0	0	0	37
15:15	0	33	12	0	5	1	0	1	3	0	0	0	0	55
15:30	0	55	3	0	4	0	0	0	0	0	0	0	0	62
15:45	0	46	7	1	4	0	0	1	0	0	0	0	0	59
16:00	1	44	9	0	3	1	0	0	0	0	0	0	0	58
16:15	0	33	6	0	2	0	0	0	0	0	0	0	0	41
16:30	0	30	6	0	5	0	0	0	1	0	0	0	0	42
16:45	1	27	4	0	3	0	0	0	0	0	0	0	0	35
17:00	1	31	7	0	0	0	0	0	0	0	0	0	0	39
17:15	0	25	7	0	4	0	1	0	0	0	0	0	0	37
17:30	1	29	3	0	1	0	0	0	0	0	0	0	0	34
17:45	0	27	2	0	3	0	0	0	0	0	0	0	0	32
18:00	0	26	3	0	1	1	0	0	0	0	0	0	0	31
18:15	0	11	4	0	0	0	0	0	0	0	0	0	0	15
18:30	0	10	0	0	1	0	0	0	0	0	0	0	0	11
18:45	0	21	2	0	1	0	0	0	0	0	0	0	0	24
19:00	0	19	1	0	0	0	0	0	0	0	0	0	0	20
19:15	0	11	2	0	0	0	0	0	0	0	0	0	0	13
19:30	0	4	2	0	0	0	0	0	0	0	0	0	0	6
19:45	0	20	1	0	1	0	0	0	0	0	0	0	0	22
20:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
20:15	0	5	1	0	1	0	0	0	0	0	0	0	0	7
20:30	0	7	3	0	1	0	0	0	0	0	0	0	0	11
20:45	1	13	0	0	1	0	0	0	0	0	0	0	0	15
21:00	0	8	1	0	0	0	0	0	0	0	0	0	0	9
21:15	0	5	0	0	2	0	0	0	0	0	0	0	0	7
21:30	0	12	4	0	0	0	0	0	0	0	0	0	0	16
21:45	0	2	1	0	2	1	0	0	0	0	0	0	0	6
22:00	0	13	2	0	0	0	0	0	0	0	0	0	0	15
22:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
22:30	0	13	1	0	1	0	0	0	0	0	0	0	0	15
22:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
23:00	0	12	0	0	1	0	0	0	0	0	0	0	0	13
23:15	0	0	0	0	1	1	0	0	0	0	0	0	0	2
23:30	0	5	0	0	0	0	0	0	0	0	0	0	0	5
23:45	0	1	1	0	0	0	0	0	0	0	0	0	0	2
TOTAL	5	896	151	2	89	12	1	3	46	0	0	0	0	1,205

AM PEAK HOUR	11:00 AM
AM PEAK VOLUME	117

PM PEAK HOUR	3:15 PM
PM PEAK VOLUME	234

CLASS 1	MOTORCYCLES	**CLASS 8**	FOUR OR LESS AXLE TRAILER
CLASS 2	PASSENGER VEHICLES	**CLASS 9**	5-AXLE TRACTOR SEMITRAILER
CLASS 3	FOUR TIRE SINGLE UNIT	**CLASS 10**	6 OR MORE AXLE SINGLE TRAILER
CLASS 4	BUSSES	**CLASS 11**	5-OR MORE AXLE MULTI TRAILER
CLASS 5	TWO AXLE SIX TIRE	**CLASS 12**	6-AXLE MULTI TRAILER
CLASS 6	THREE AXLE SINGLE UNIT	**CLASS 13**	7-OR MORE AXLE MULTI TRAILER
CLASS 7	FOR OR MORE AXLE SINGLE UNIT		

TOTAL: AM+PM	8	1,206	228	12	185	22	1	4	130	0	0	0	0	1,796
% OF TOTAL	0.4%	67.1%	12.7%	0.7%	10.3%	1.2%	0.1%	0.2%	7.2%	0.0%	0.0%	0.0%	0.0%	100.0%

TOTAL: ALL	11	2,626	415	23	284	39	1	7	263	1	0	0	2	3,672
% OF TOTAL	0.6%	146.2%	23.1%	1.3%	15.8%	2.2%	0.1%	0.4%	14.6%	0.1%	0.0%	0.0%	0.1%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 02/09/23 THURSDAY
JOB #: ETD23-0210-01

CITY: SAN MARCOS
LOCATION: S Pacific Street – North of Alpine Place

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30	0	0	0	0	1	0	0	0	0	0	0	0	0	1
1:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
3:30	0	2	0	0	1	0	0	0	0	0	0	0	0	3
3:45	0	9	0	0	1	0	0	0	0	0	0	0	0	10
4:00	0	7	1	0	0	0	0	0	0	0	0	0	0	8
4:15	0	2	2	0	0	0	0	0	0	0	0	0	0	4
4:30	0	16	1	0	0	0	0	1	0	0	0	0	0	18
4:45	0	21	0	0	1	0	0	0	0	0	0	0	0	22
5:00	0	12	1	0	0	0	0	0	0	0	0	0	0	13
5:15	0	8	1	0	0	0	0	0	0	0	0	0	0	9
5:30	0	12	1	0	0	0	0	0	1	0	0	0	0	14
5:45	0	19	2	0	1	1	0	0	1	0	0	0	0	24
6:00	0	11	2	0	0	2	0	0	0	0	0	0	0	15
6:15	0	9	1	0	0	0	0	0	1	0	0	0	0	11
6:30	0	8	3	0	1	0	0	0	0	0	0	0	0	12
6:45	0	17	5	0	1	0	0	0	0	0	0	0	0	23
7:00	0	18	2	0	1	1	0	0	1	0	0	0	0	23
7:15	0	24	3	0	0	0	0	0	5	0	0	0	1	33
7:30	0	29	3	0	0	0	0	0	2	0	0	0	0	34
7:45	0	55	4	0	4	0	0	0	5	0	0	0	0	68
8:00	0	75	12	1	4	1	0	0	3	0	0	0	0	96
8:15	0	45	8	0	2	0	0	0	3	0	0	0	1	59
8:30	0	29	2	0	4	0	0	0	5	0	0	0	0	40
8:45	0	29	0	1	1	0	0	0	5	0	0	0	0	36
9:00	0	11	1	0	1	0	0	0	4	0	0	0	0	17
9:15	0	21	3	0	1	1	0	0	5	0	0	0	0	31
9:30	0	15	2	0	2	0	0	0	3	0	0	0	0	22
9:45	0	13	1	0	2	0	0	0	5	0	0	0	0	21
10:00	0	14	1	2	1	0	0	0	4	0	0	0	0	22
10:15	0	13	4	1	1	0	0	0	7	0	0	0	0	26
10:30	0	13	2	0	0	0	0	0	1	0	0	0	0	16
10:45	1	18	2	0	1	0	0	0	8	0	0	0	0	30
11:00	0	26	1	0	0	0	0	0	2	0	0	0	0	29
11:15	0	16	4	0	1	0	0	0	5	0	0	0	0	26
11:30	0	21	8	0	2	1	0	0	3	0	0	0	0	35
11:45	0	18	4	1	3	2	0	0	5	0	0	0	0	33
TOTAL	1	669	87	6	38	9	0	1	84	0	0	0	2	897

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	263

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	16	2	0	5	1	0	1	2	0	0	0	0	27
12:15	0	15	6	1	2	0	0	0	5	0	0	0	0	29
12:30	0	21	5	0	0	1	0	0	2	1	0	0	0	30
12:45	0	13	5	0	2	0	0	0	5	0	0	0	0	25
13:00	0	21	2	0	2	0	0	0	3	0	0	0	0	28
13:15	0	15	3	0	2	0	0	0	4	0	0	0	0	24
13:30	0	17	3	0	1	0	0	0	3	0	0	0	0	24
13:45	0	21	4	0	1	0	0	0	6	0	0	0	0	32
14:00	0	16	1	0	3	0	0	0	1	0	0	0	0	21
14:15	0	25	5	0	2	0	0	0	5	0	0	0	0	37
14:30	0	26	3	0	3	0	0	0	2	0	0	0	0	34
14:45	0	26	2	0	3	1	0	0	3	0	0	0	0	35
15:00	0	38	4	0	4	0	0	0	6	0	0	0	0	52
15:15	0	43	4	3	2	0	0	1	0	0	0	0	0	53
15:30	0	27	2	0	2	0	0	0	0	0	0	0	0	31
15:45	0	35	4	0	3	1	0	0	0	0	0	0	0	43
16:00	0	24	4	0	3	0	0	0	0	0	0	0	0	31
16:15	0	23	2	0	2	0	0	0	0	0	0	0	0	27
16:30	0	24	0	0	6	0	0	0	1	0	0	0	0	31
16:45	0	25	1	0	2	0	0	0	0	0	0	0	0	28
17:00	0	31	2	1	1	0	0	0	0	0	0	0	0	35
17:15	0	19	3	0	1	0	0	0	0	0	0	0	0	23
17:30	0	27	0	0	1	0	0	0	0	0	0	0	0	28
17:45	0	22	6	0	1	0	0	0	0	0	0	0	0	29
18:00	0	24	4	0	0	0	0	0	0	0	0	0	0	28
18:15	0	16	2	0	1	0	0	0	0	0	0	0	0	19
18:30	0	24	2	0	0	0	0	0	0	0	0	0	0	26
18:45	0	16	3	0	0	0	0	0	0	0	0	0	0	19
19:00	0	8	1	0	1	0	0	0	0	0	0	0	0	10
19:15	1	8	2	0	0	2	0	0	0	0	0	0	0	13
19:30	0	18	2	0	1	0	0	0	0	0	0	0	0	21
19:45	1	5	0	0	1	0	0	0	0	0	0	0	0	7
20:00	0	4	3	0	0	0	0	0	1	0	0	0	0	8
20:15	0	4	2	0	1	0	0	0	0	0	0	0	0	7
20:30	0	6	1	0	0	0	0	0	0	0	0	0	0	7
20:45	0	7	1	0	0	0	0	0	0	0	0	0	0	8
21:00	0	4	1	0	1	0	0	0	0	0	0	0	0	6
21:15	0	11	1	0	0	0	0	0	0	0	0	0	0	12
21:30	0	8	0	0	1	0	0	0	0	0	0	0	0	9
21:45	0	4	1	0	0	0	0	0	0	0	0	0	0	5
22:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
22:15	0	2	0	0	0	1	0	0	0	0	0	0	0	3
22:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
22:45	0	2	1	0	0	1	0	0	0	0	0	0	0	4
23:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
23:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
23:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	751	100	5	61	8	0	2	49	1	0	0	0	979

PM PEAK HOUR	3:00 PM
PM PEAK VOLUME	179

CLASS 1	MOTORCYCLES	**CLASS 8**	FOUR OR LESS AXLE TRAILER
CLASS 2	PASSENGER VEHICLES	**CLASS 9**	5-AXLE TRACTOR SEMITRAILER
CLASS 3	FOUR TIRE SINGLE UNIT	**CLASS 10**	6 OR MORE AXLE SINGLE TRAILER
CLASS 4	BUSSES	**CLASS 11**	5-OR MORE AXLE MULTI TRAILER
CLASS 5	TWO AXLE SIX TIRE	**CLASS 12**	6-AXLE MULTI TRAILER
CLASS 6	THREE AXLE SINGLE UNIT	**CLASS 13**	7-OR MORE AXLE MULTI TRAILER
CLASS 7	FOR OR MORE AXLE SINGLE UNIT		

TOTAL: AM+PM	3	1,420	187	11	99	17	0	3	133	1	0	0	2	1,876
% OF TOTAL	0.2%	75.7%	10.0%	0.6%	5.3%	0.9%	0.0%	0.2%	7.1%	0.1%	0.0%	0.0%	0.1%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE: 02/09/23 THURSDAY
JOB #: ETD23-0210-01

CITY: SAN MARCOS
LOCATION: S Pacific Street - North of W San Marcos Blvd

AM	NORTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0:30	0	2	1	0	0	0	0	0	0	0	0	0	0	3
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
4:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
4:30	0	7	2	0	0	0	0	0	0	0	0	0	0	9
4:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
5:15	0	4	0	0	1	0	0	0	0	0	0	0	0	5
5:30	0	7	1	0	1	0	0	0	0	0	0	0	0	9
5:45	0	8	0	0	2	0	0	0	0	0	0	0	0	10
6:00	0	4	0	0	1	0	0	0	0	0	0	0	0	5
6:15	0	0	1	0	0	0	0	0	0	0	0	0	0	1
6:30	0	5	1	0	0	0	0	0	0	0	0	0	0	6
6:45	0	4	1	0	1	0	0	0	0	0	0	0	0	6
7:00	0	6	3	0	0	0	0	0	0	0	0	0	0	9
7:15	0	4	3	0	0	0	0	1	0	0	0	0	0	8
7:30	0	8	2	0	0	0	0	0	0	0	0	0	0	10
7:45	0	11	2	0	2	0	0	0	0	0	0	0	0	15
8:00	0	11	2	0	0	0	0	0	0	0	0	0	0	13
8:15	0	18	3	0	1	0	0	0	0	0	0	0	0	22
8:30	0	10	2	0	2	0	0	0	0	0	0	0	0	14
8:45	0	13	0	0	1	0	0	0	0	0	0	0	0	14
9:00	0	4	0	0	1	0	0	0	0	0	0	0	0	5
9:15	0	4	0	1	0	0	0	0	0	0	0	0	0	5
9:30	0	4	2	0	1	0	0	0	0	0	0	0	0	7
9:45	0	4	2	0	2	0	0	0	0	0	0	0	0	8
10:00	0	7	2	0	2	0	0	0	0	0	0	0	0	11
10:15	0	3	6	0	0	0	0	0	0	0	0	0	0	9
10:30	0	7	3	0	0	0	0	0	0	0	0	0	0	10
10:45	0	6	4	0	1	1	0	0	0	0	0	0	0	12
11:00	0	10	1	0	1	0	0	0	0	0	0	0	0	12
11:15	0	10	4	1	0	0	0	0	0	0	0	0	0	15
11:30	1	13	1	0	2	1	0	0	0	0	0	0	0	18
11:45	0	11	1	0	1	0	0	0	0	0	0	0	0	13
TOTAL	1	226	50	2	23	2	0	1	0	0	0	0	0	305

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	64

PM	NORTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	9	1	0	3	0	0	0	0	0	0	0	0	13
12:15	0	13	2	0	1	0	0	0	0	0	0	0	0	16
12:30	0	5	1	0	0	0	0	0	1	0	0	0	0	7
12:45	0	6	3	0	0	0	0	0	0	0	0	0	0	9
13:00	0	18	1	0	1	0	0	0	0	0	0	0	0	20
13:15	0	6	0	0	1	0	0	0	0	0	0	0	0	7
13:30	0	11	0	0	1	0	0	0	0	0	0	0	0	12
13:45	0	11	3	0	2	0	0	0	0	0	0	0	0	16
14:00	1	6	1	0	1	0	0	0	0	0	0	0	0	9
14:15	0	5	0	0	1	0	0	1	1	0	0	0	0	8
14:30	0	12	2	0	2	0	0	0	0	0	0	0	0	16
14:45	0	18	3	0	3	0	0	0	0	0	0	0	0	24
15:00	0	16	3	0	1	0	0	0	0	0	0	0	0	20
15:15	0	21	5	0	2	0	0	1	1	0	0	0	0	30
15:30	0	29	4	0	1	0	0	0	0	0	0	0	0	34
15:45	0	32	4	1	1	0	0	0	0	0	0	0	0	38
16:00	0	26	5	0	0	0	0	0	0	0	0	0	0	31
16:15	0	22	2	0	0	0	0	0	0	0	0	0	0	24
16:30	0	20	3	0	1	0	0	0	1	0	0	0	0	25
16:45	0	12	2	0	1	0	0	0	0	0	0	0	0	15
17:00	0	12	3	0	0	0	0	0	0	0	0	0	0	15
17:15	0	14	3	0	0	0	1	0	0	0	0	0	0	18
17:30	1	20	3	0	1	0	0	0	0	0	0	0	0	25
17:45	0	14	1	0	2	0	0	0	0	0	0	0	0	17
18:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
18:15	0	10	1	0	0	0	0	0	0	0	0	0	0	11
18:30	0	7	2	0	0	0	0	0	0	0	0	0	0	9
18:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
19:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
19:15	0	5	0	0	0	0	0	0	0	0	0	0	0	5
19:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
19:45	0	5	0	0	0	0	0	0	0	0	0	0	0	5
20:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
20:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
20:30	0	8	1	0	0	0	0	0	0	0	0	0	0	9
20:45	0	2	0	0	0	0	0	0	0	0	0	0	0	2
21:00	0	0	1	0	1	0	0	0	0	0	0	0	0	2
21:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
21:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
21:45	0	1	1	0	0	0	0	0	0	0	0	0	0	2
22:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
22:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
23:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23:30	0	2	0	0	0	0	0	0	0	0	0	0	0	2
23:45	0	0	1	0	0	0	0	0	0	0	0	0	0	1
TOTAL	2	434	62	1	27	0	1	2	4	0	0	0	0	533

PM PEAK HOUR	3:15 PM
PM PEAK VOLUME	133

CLASS 1	MOTORCYCLES	**CLASS 8**	FOUR OR LESS AXLE TRAILER
CLASS 2	PASSENGER VEHICLES	**CLASS 9**	5-AXLE TRACTOR SEMITRAILER
CLASS 3	FOUR TIRE SINGLE UNIT	**CLASS 10**	6 OR MORE AXLE SINGLE TRAILER
CLASS 4	BUSSES	**CLASS 11**	5-OR MORE AXLE MULTI TRAILER
CLASS 5	TWO AXLE SIX TIRE	**CLASS 12**	6-AXLE MULTI TRAILER
CLASS 6	THREE AXLE SINGLE UNIT	**CLASS 13**	7-OR MORE AXLE MULTI TRAILER
CLASS 7	FOR OR MORE AXLE SINGLE UNIT		

	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
TOTAL: AM+PM	3	660	112	3	50	2	1	3	4	0	0	0	0	838
% OF TOTAL	0.4%	78.8%	13.4%	0.4%	6.0%	0.2%	0.1%	0.4%	0.5%	0.0%	0.0%	0.0%	0.0%	100.0%

	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
TOTAL: ALL	10	1,607	234	6	90	7	2	5	14	0	1	0	0	1,976
% OF TOTAL	1.2%	191.8%	27.9%	0.7%	10.7%	0.8%	0.2%	0.6%	1.7%	0.0%	0.1%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 02/09/23 THURSDAY
JOB #: ETD23-0210-01

CITY: SAN MARCOS
LOCATION: S Pacific Street - North of W San Marcos Blvd

AM	SOUTHBOUND													
TIME	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
0:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
0:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
0:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
1:15	0	3	0	0	0	0	0	0	0	0	0	0	0	3
1:30	0	1	0	0	1	0	0	0	0	0	0	0	0	2
1:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30	0	1	0	0	0	0	0	0	0	0	0	0	0	1
3:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
5:15	0	4	2	0	0	0	0	0	0	0	0	0	0	6
5:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5
5:45	0	3	0	0	0	0	0	0	0	0	0	0	0	3
6:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
6:15	0	5	0	0	4	0	0	0	0	0	1	0	0	10
6:30	0	9	0	0	1	0	0	0	0	0	0	0	0	10
6:45	0	10	4	0	1	0	0	0	0	0	0	0	0	15
7:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
7:15	0	11	2	0	0	0	0	0	0	0	0	0	0	13
7:30	0	19	1	0	0	0	0	0	0	0	0	0	0	20
7:45	0	30	2	0	0	0	0	0	0	0	0	0	0	32
8:00	0	54	8	2	3	0	0	0	0	0	0	0	0	67
8:15	0	30	10	0	0	0	0	0	0	0	0	0	0	40
8:30	0	26	4	0	5	0	0	0	1	0	0	0	0	36
8:45	0	8	1	0	1	0	0	0	0	0	0	0	0	10
9:00	0	3	1	0	0	1	0	0	1	0	0	0	0	6
9:15	0	12	2	0	0	0	0	0	0	0	0	0	0	14
9:30	0	9	1	0	0	0	0	0	0	0	0	0	0	10
9:45	0	8	1	0	2	1	0	0	1	0	0	0	0	13
10:00	1	14	1	0	0	0	0	0	0	0	0	0	0	16
10:15	0	5	2	0	2	0	0	0	1	0	0	0	0	10
10:30	0	10	1	0	0	0	0	0	0	0	0	0	0	11
10:45	1	9	4	0	0	0	0	0	1	0	0	0	0	15
11:00	0	17	4	0	0	0	0	0	0	0	0	0	0	21
11:15	0	17	2	0	0	0	0	0	0	0	0	0	0	19
11:30	0	13	3	0	0	0	0	0	1	0	0	0	0	17
11:45	0	12	5	0	1	0	0	0	0	0	0	0	0	18
TOTAL	2	370	62	2	22	2	0	1	6	0	1	0	0	468

AM PEAK HOUR	7:45 AM
AM PEAK VOLUME	175

PM	SOUTHBOUND													
Time	1	2	3	4	5	6	7	8	9	10	11	12	13	TOTAL
12:00	0	10	1	0	3	0	0	0	1	0	0	0	0	15
12:15	0	8	3	1	2	0	0	0	0	0	0	0	0	14
12:30	0	12	2	0	0	0	0	0	1	0	0	0	0	15
12:45	0	6	3	0	0	0	0	0	0	0	0	0	0	9
13:00	0	10	1	0	1	0	0	1	0	0	0	0	0	13
13:15	0	13	3	0	1	0	0	0	1	0	0	0	0	18
13:30	0	15	1	0	3	0	0	0	0	0	0	0	0	19
13:45	0	13	3	0	0	0	1	0	0	0	0	0	0	17
14:00	0	17	2	0	0	0	0	0	0	0	0	0	0	19
14:15	0	12	2	0	0	0	0	0	0	0	0	0	0	14
14:30	0	21	2	0	1	0	0	0	0	0	0	0	0	24
14:45	0	30	1	0	2	0	0	0	1	0	0	0	0	34
15:00	0	27	2	0	1	0	0	0	0	0	0	0	0	30
15:15	0	34	2	0	0	1	0	0	0	0	0	0	0	37
15:30	1	21	2	0	0	0	0	0	0	0	0	0	0	24
15:45	0	30	3	0	1	1	0	0	0	0	0	0	0	35
16:00	0	18	1	0	0	0	0	0	0	0	0	0	0	19
16:15	0	23	2	0	0	0	0	0	0	0	0	0	0	25
16:30	1	21	1	0	1	0	0	0	0	0	0	0	0	24
16:45	1	16	1	0	0	0	0	0	0	0	0	0	0	18
17:00	0	19	2	0	0	0	0	0	0	0	0	0	0	21
17:15	0	13	3	0	0	0	0	0	0	0	0	0	0	16
17:30	0	23	0	0	1	0	0	0	0	0	0	0	0	24
17:45	0	15	4	0	0	0	0	0	0	0	0	0	0	19
18:00	0	16	3	0	0	0	0	0	0	0	0	0	0	19
18:15	0	12	1	0	0	0	0	0	0	0	0	0	0	13
18:30	0	18	2	0	0	0	0	0	0	0	0	0	0	20
18:45	0	13	1	0	0	0	0	0	0	0	0	0	0	14
19:00	0	14	0	0	1	0	0	0	0	0	0	0	0	15
19:15	0	7	1	0	0	0	0	0	0	0	0	0	0	8
19:30	0	12	1	0	0	0	0	0	0	0	0	0	0	13
19:45	0	7	0	0	0	0	0	0	0	0	0	0	0	7
20:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5
20:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
20:30	0	3	0	0	0	0	0	0	0	0	0	0	0	3
20:45	0	6	0	0	0	0	0	0	0	0	0	0	0	6
21:00	0	3	1	0	0	1	0	0	0	0	0	0	0	5
21:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
21:30	0	6	0	0	0	0	0	0	0	0	0	0	0	6
21:45	0	4	0	0	0	0	0	0	0	0	0	0	0	4
22:00	1	5	0	0	0	0	0	0	0	0	0	0	0	6
22:15	0	4	0	0	0	0	0	0	0	0	0	0	0	4
22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
23:00	1	5	0	0	0	0	0	0	0	0	0	0	0	6
23:15	0	2	0	0	0	0	0	0	0	0	0	0	0	2
23:30	0	4	1	0	0	0	0	0	0	0	0	0	0	5
23:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1
TOTAL	5	577	60	1	18	3	1	1	4	0	0	0	0	670

PM PEAK HOUR	3:00 PM
PM PEAK VOLUME	126

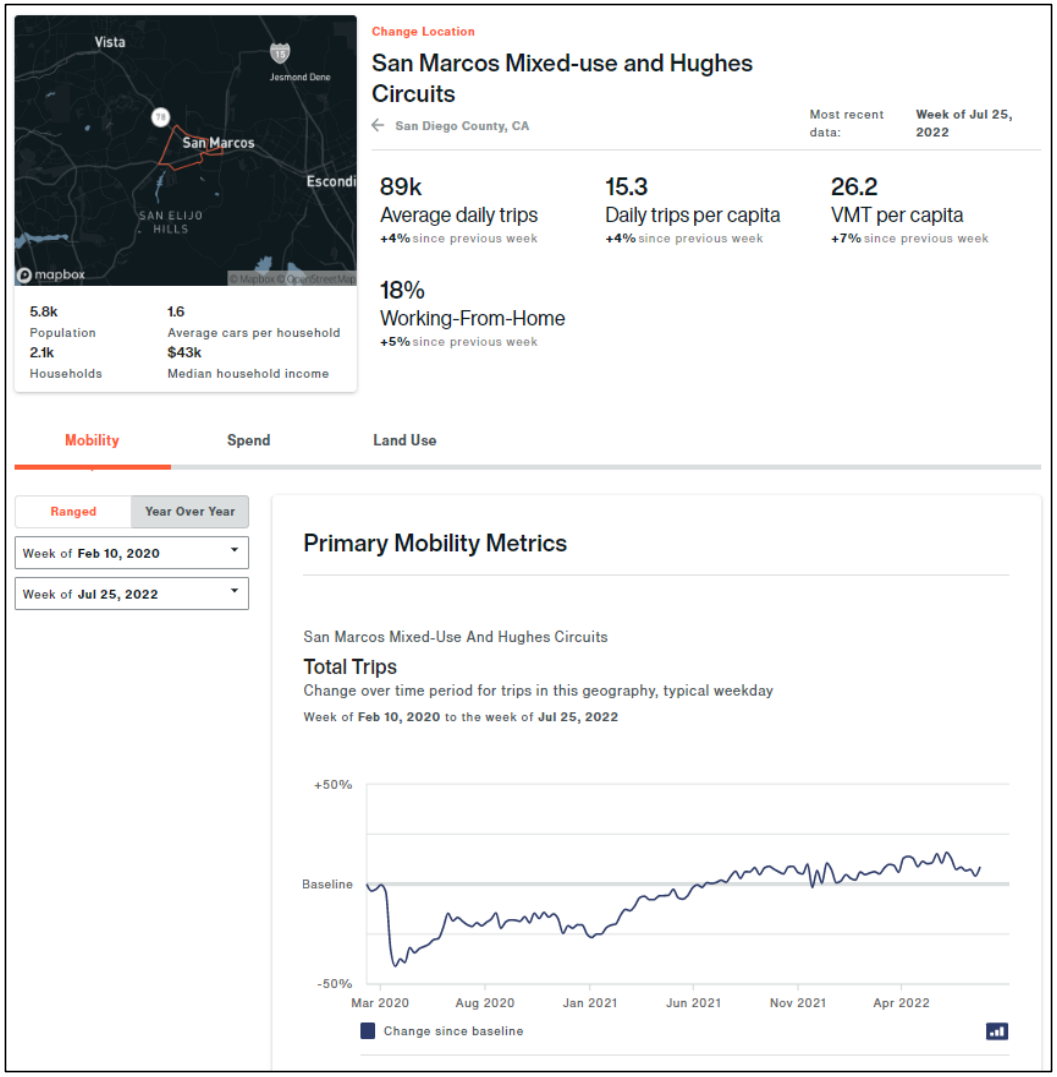
CLASS 1	MOTORCYCLES	**CLASS 8**	FOUR OR LESS AXLE TRAILER
CLASS 2	PASSENGER VEHICLES	**CLASS 9**	5-AXLE TRACTOR SEMITRAILER
CLASS 3	FOUR TIRE SINGLE UNIT	**CLASS 10**	6 OR MORE AXLE SINGLE TRAILER
CLASS 4	BUSSES	**CLASS 11**	5-OR MORE AXLE MULTI TRAILER
CLASS 5	TWO AXLE SIX TIRE	**CLASS 12**	6-AXLE MULTI TRAILER
CLASS 6	THREE AXLE SINGLE UNIT	**CLASS 13**	7-OR MORE AXLE MULTI TRAILER
CLASS 7	FOR OR MORE AXLE SINGLE UNIT		

TOTAL: AM+PM	7	947	122	3	40	5	1	2	10	0	1	0	0	1,138
% OF TOTAL	0.6%	83.2%	10.7%	0.3%	3.5%	0.4%	0.1%	0.2%	0.9%	0.0%	0.1%	0.0%	0.0%	100.0%

Count Validation
May 2022 vs June 2022

Intersection	Peak Hour	May 2022													June 2022													% Difference
		NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	Total	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	Total	
Via Vera Cruz & W San Marcos Bl	AM	33	4	8	39	37	44	22	851	8	44	1250	61	2401	13	4	2	67	8	32	34	898	6	18	1047	126	2255	-6%
	PM	70	53	74	177	88	43	45	1282	8	98	1104	146	3188	42	46	45	157	46	54	42	1101	11	47	997	122	2710	-18%
Via Vera Cruz & Linda Vista Dr	AM	21	82	8	10	242	34	19	104	33	11	130	19	713	25	101	8	8	181	31	18	51	25	9	94	22	573	-24%
	PM	35	295	38	41	303	26	72	237	77	17	84	24	1249	51	308	25	49	247	19	74	269	51	16	63	23	1195	-5%
																										Average		**-12.1%**

Roadway Segment	Daily Traffic Volumes		% Difference
	May 2022	June 2022	
Linda Vista Drive, between Via Vera Cruz and Grand Avenue	4168	4399	5.3%
Via Vera Cruz, between Linda Vista Drive and W San Marcos Boulevard	7846	7541	-4.0%
		Average	**-0.6%**



THURSDAY - JUNE 23, 2022 AREA: SAN MARCOS PROJECT: ETD22-0624-01

LINDA VISTA - VIA VERA CRUZ TO GRAND

AM	NB	SB	EB		WB			PM	NB	SB	EB		WB		
00:00			2		1			12:00			54		28		
00:15			3		2			12:15			49		33		
00:30			0		0			12:30			49		34		
00:45			0	5	0	3	8	12:45			45	197	51	146	343
01:00			2		0			13:00			48		34		
01:15			4		0			13:15			49		31		
01:30			0		2			13:30			50		35		
01:45			0	6	0	2	8	13:45			56	203	42	142	345
02:00			3		5			14:00			49		26		
02:15			1		1			14:15			45		35		
02:30			0		0			14:30			64		37		
02:45			0	4	1	7	11	14:45			68	226	26	124	350
03:00			0		0			15:00			92		32		
03:15			1		1			15:15			84		38		
03:30			3		2			15:30			100		29		
03:45			0	4	1	4	8	15:45			75	351	31	130	481
04:00			1		0			16:00			88		24		
04:15			1		3			16:15			78		28		
04:30			3		3			16:30			87		23		
04:45			5	10	9	15	25	16:45			107	360	21	96	456
05:00			1		7			17:00			84		25		
05:15			4		11			17:15			72		21		
05:30			11		20			17:30			69		28		
05:45			9	25	33	71	96	17:45			52	277	16	90	367
06:00			9		32			18:00			44		25		
06:15			9		21			18:15			29		13		
06:30			12		22			18:30			30		15		
06:45			12	42	42	117	159	18:45			24	127	14	67	194
07:00			17		46			19:00			21		9		
07:15			18		38			19:15			12		5		
07:30			28		47			19:30			14		13		
07:45			21	84	49	180	264	19:45			19	66	12	39	105
08:00			18		37			20:00			22		12		
08:15			12		33			20:15			17		7		
08:30			27		27			20:30			15		10		
08:45			11	68	37	134	202	20:45			13	67	4	33	100
09:00			37		30			21:00			12		4		
09:15			29		36			21:15			8		6		
09:30			26		17			21:30			8		2		
09:45			31	123	28	111	234	21:45			4	32	6	18	50
10:00			33		26			22:00			5		4		
10:15			33		28			22:15			4		3		
10:30			32		27			22:30			2		9		
10:45			50	148	26	107	255	22:45			8	19	1	17	36
11:00			31		33			23:00			2		0		
11:15			36		37			23:15			3		2		
11:30			40		30			23:30			2		0		
11:45			39	146	41	141	287	23:45			4	11	2	4	15
Total Vol.				665		892	**1557**					1936		906	**2842**

Daily Totals

NB	SB	EB	WB	Combined
		2601	1798	**4399**

	AM			PM		
Split %	42.7%	57.3%	**35.4%**	68.1%	31.9%	**64.6%**
Peak Hour	11:45	07:00	**11:45**	16:00	12:15	**15:00**
Volume	191	180	**327**	360	152	**481**
P.H.F.	0.88	0.92	**0.98**	0.84	0.75	**0.93**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

THURSDAY - JUNE 23, 2022 AREA: SAN MARCOS PROJECT: ETD22-0624-01

VIA VERA CRUZ - LINDA VIST TO SAN MARCOS BL

AM	NB		SB		EB	WB		PM	NB		SB		EB	WB	
00:00	3		6					12:00	92		78				
00:15	2		1					12:15	74		91				
00:30	0		2					12:30	90		79				
00:45	2	7	3	12			19	12:45	105	361	93	341			702
01:00	5		2					13:00	104		77				
01:15	3		1					13:15	105		70				
01:30	1		1					13:30	75		90				
01:45	1	10	0	4			14	13:45	69	353	60	297			650
02:00	0		1					14:00	71		74				
02:15	0		0					14:15	66		78				
02:30	1		0					14:30	92		77				
02:45	1	2	0	1			3	14:45	77	306	85	314			620
03:00	0		1					15:00	77		79				
03:15	0		0					15:15	79		88				
03:30	1		1					15:30	97		77				
03:45	0	1	2	4			5	15:45	99	352	79	323			675
04:00	2		0					16:00	104		69				
04:15	1		0					16:15	90		76				
04:30	4		1					16:30	95		75				
04:45	7	14	3	4			18	16:45	84	373	87	307			680
05:00	3		1					17:00	108		68				
05:15	4		3					17:15	75		74				
05:30	9		7					17:30	87		67				
05:45	4	20	12	23			43	17:45	62	332	75	284			616
06:00	7		8					18:00	45		66				
06:15	8		11					18:15	53		50				
06:30	9		16					18:30	53		60				
06:45	25	49	31	66			115	18:45	47	198	57	233			431
07:00	15		30					19:00	39		61				
07:15	10		29					19:15	39		39				
07:30	22		47					19:30	35		40				
07:45	28	75	80	186			261	19:45	31	144	43	183			327
08:00	29		36					20:00	30		27				
08:15	31		70					20:15	28		17				
08:30	40		54					20:30	33		27				
08:45	41	141	54	214			355	20:45	17	108	28	99			207
09:00	40		44					21:00	23		31				
09:15	42		42					21:15	28		17				
09:30	45		48					21:30	8		22				
09:45	69	196	54	188			384	21:45	17	76	29	99			175
10:00	70		54					22:00	51		17				
10:15	51		61					22:15	8		14				
10:30	56		59					22:30	11		12				
10:45	55	232	78	252			484	22:45	11	81	13	56			137
11:00	63		66					23:00	8		11				
11:15	75		59					23:15	7		4				
11:30	71		80					23:30	2		8				
11:45	58	267	100	305			572	23:45	6	23	2	25			48
Total Vol.		1014		1259			**2273**			2707		2561			**5268**

Daily Totals

NB	SB	EB	WB	**Combined**
3721	3820			**7541**

	AM			**PM**		
Split %	44.6%	55.4%	**30.1%**	51.4%	48.6%	**69.9%**
Peak Hour	11:45	11:30	**11:45**	12:30	12:00	**12:30**
Volume	314	349	**662**	404	341	**723**
P.H.F.	0.85	0.87	**0.97**	0.96	0.92	**0.91**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

THURSDAY - MAY 19, 2022 AREA: SAN MARCOS PROJECT: ETD22-0520-01

LINDA VISTA - VIA VERA CRUZ TO GRAND

AM	NB	SB	EB		WB			PM	NB	SB	EB		WB		
00:00			1		1			12:00			56		26		
00:15			0		0			12:15			57		43		
00:30			0		0			12:30			61		37		
00:45			1	2	1	2	4	12:45			44	218	35	141	359
01:00			1		0			13:00			37		27		
01:15			1		0			13:15			26		36		
01:30			2		1			13:30			47		30		
01:45			1	5	0	1	6	13:45			45	155	23	116	271
02:00			1		1			14:00			43		21		
02:15			0		0			14:15			48		30		
02:30			3		1			14:30			67		39		
02:45			0	4	0	2	6	14:45			66	224	33	123	347
03:00			1		0			15:00			43		32		
03:15			0		2			15:15			64		33		
03:30			1		2			15:30			79		31		
03:45			1	3	1	5	8	15:45			75	261	24	120	381
04:00			1		1			16:00			99		24		
04:15			1		2			16:15			83		28		
04:30			1		3			16:30			94		27		
04:45			1	4	5	11	15	16:45			97	373	32	111	484
05:00			3		5			17:00			69		23		
05:15			2		18			17:15			62		21		
05:30			9		17			17:30			58		24		
05:45			10	24	27	67	91	17:45			61	250	27	95	345
06:00			7		25			18:00			47		27		
06:15			8		18			18:15			33		26		
06:30			16		29			18:30			22		19		
06:45			18	49	38	110	159	18:45			21	123	11	83	206
07:00			12		33			19:00			18		9		
07:15			19		38			19:15			13		9		
07:30			28		35			19:30			12		8		
07:45			35	94	49	155	249	19:45			12	55	7	33	88
08:00			22		43			20:00			19		13		
08:15			41		42			20:15			7		9		
08:30			29		36			20:30			7		7		
08:45			39	131	42	163	294	20:45			18	51	9	38	89
09:00			32		23			21:00			10		4		
09:15			25		13			21:15			6		1		
09:30			25		17			21:30			6		1		
09:45			33	115	28	81	196	21:45			6	28	2	8	36
10:00			32		22			22:00			4		1		
10:15			35		20			22:15			4		1		
10:30			30		24			22:30			2		3		
10:45			25	122	29	95	217	22:45			2	12	1	6	18
11:00			40		43			23:00			3		4		
11:15			34		28			23:15			1		2		
11:30			47		35			23:30			2		0		
11:45			26	147	31	137	284	23:45			1	7	2	8	15
Total Vol.				700		829	**1529**					1757		882	**2639**

Daily Totals

NB	SB	EB	WB	Combined
		2457	1711	**4168**

	AM			PM		
Split %	45.8%	54.2%	**36.7%**	66.6%	33.4%	**63.3%**
Peak Hour	11:45	07:45	**11:45**	16:00	12:15	**16:00**
Volume	200	170	**337**	373	142	**484**
P.H.F.	0.82	0.87	**0.84**	0.94	0.83	**0.94**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

THURSDAY - MAY 19, 2022 AREA: SAN MARCOS PROJECT: ETD22-0520-01

VIA VERA CRUZ - LINDA VISTA TO SAN MARCOS BL

AM	NB		SB		EB	WB		PM	NB		SB		EB	WB	
00:00	3		5					12:00	86		77				
00:15	1		0					12:15	97		83				
00:30	1		1					12:30	76		114				
00:45	1	6	1	7			13	12:45	82	341	115	389			730
01:00	1		1					13:00	82		92				
01:15	0		0					13:15	74		79				
01:30	1		0					13:30	75		78				
01:45	0	2	0	1			3	13:45	61	292	77	326			618
02:00	0		2					14:00	76		65				
02:15	1		1					14:15	77		81				
02:30	0		0					14:30	70		76				
02:45	0	1	0	3			4	14:45	76	299	91	313			612
03:00	0		1					15:00	70		76				
03:15	0		0					15:15	75		70				
03:30	0		1					15:30	105		81				
03:45	0	0	2	4			4	15:45	92	342	111	338			680
04:00	0		3					16:00	96		85				
04:15	3		4					16:15	79		104				
04:30	6		1					16:30	92		96				
04:45	3	12	1	9			21	16:45	93	360	88	373			733
05:00	3		3					17:00	106		105				
05:15	5		3					17:15	98		79				
05:30	4		5					17:30	95		73				
05:45	6	18	10	21			39	17:45	66	365	95	352			717
06:00	6		8					18:00	60		83				
06:15	5		10					18:15	43		85				
06:30	11		23					18:30	46		67				
06:45	10	32	29	70			102	18:45	30	179	64	299			478
07:00	13		29					19:00	38		55				
07:15	15		46					19:15	34		60				
07:30	24		59					19:30	42		40				
07:45	21	73	93	227			300	19:45	27	141	45	200			341
08:00	26		52					20:00	34		42				
08:15	29		71					20:15	22		34				
08:30	38		65					20:30	22		29				
08:45	36	129	71	259			388	20:45	29	107	37	142			249
09:00	42		61					21:00	33		29				
09:15	41		48					21:15	22		20				
09:30	50		62					21:30	18		15				
09:45	55	188	59	230			418	21:45	22	95	18	82			177
10:00	54		58					22:00	51		14				
10:15	58		55					22:15	11		13				
10:30	45		69					22:30	10		10				
10:45	69	226	67	249			475	22:45	9	81	4	41			122
11:00	63		67					23:00	12		12				
11:15	74		68					23:15	6		8				
11:30	62		63					23:30	1		9				
11:45	75	274	88	286			560	23:45	10	29	4	33			62
Total Vol.		961		1366			**2327**			2631		2888			**5519**

Daily Totals

NB	SB	EB	WB	**Combined**
3592	4254			**7846**

	AM			**PM**		
Split %	41.3%	58.7%	**29.7%**	47.7%	52.3%	**70.3%**
Peak Hour	11:45	11:45	**11:45**	16:45	12:15	**16:15**
Volume	334	362	**696**	392	404	**763**
P.H.F.	0.86	0.79	**0.92**	0.93	0.88	**0.90**

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	SAN MARCOS	PROJECT #:	ETD22-0624-01
6/23/22	NORTH & SOUTH:	VIA VERA CRUZ	LOCATION #:	4
THURSDAY	EAST & WEST:	LINDA VISTA	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM
PM
MD
OTHER
OTHER

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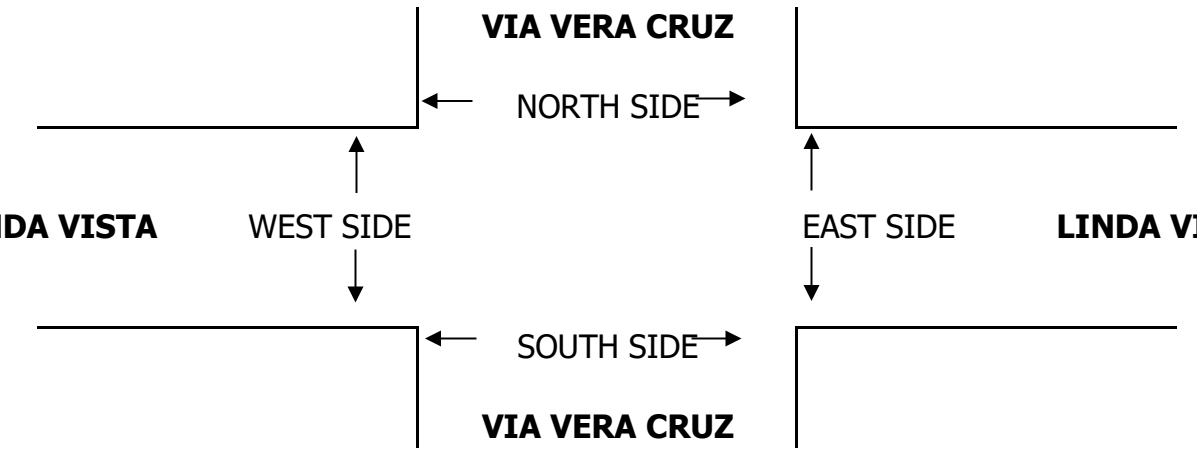
		NORTHBOUND VIA VERA CRUZ			SOUTHBOUND VIA VERA CRUZ			EASTBOUND LINDA VISTA			WESTBOUND LINDA VISTA				U-TURNS				
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	8	8	1	1	20	10	1	12	9	0	29	4	103					0
	7:15 AM	0	6	0	4	29	11	3	16	4	0	28	5	106					0
	7:30 AM	5	16	2	0	43	6	12	19	6	2	28	9	148					0
	7:45 AM	6	19	4	2	39	4	1	12	7	4	33	3	134					0
	8:00 AM	3	23	2	2	30	5	5	11	2	2	24	7	116					0
	8:15 AM	5	22	2	2	58	12	4	10	8	2	25	8	158					0
	8:30 AM	8	25	2	3	45	9	6	17	9	2	16	2	144					0
	8:45 AM	9	31	2	1	48	5	3	13	6	3	29	5	155					0
	VOLUMES	44	150	15	15	312	62	35	110	51	15	212	43	1,064	0	0	0	0	0
	APPROACH %	21%	72%	7%	4%	80%	16%	18%	56%	26%	6%	79%	16%						
	APP/DEPART	209	/	228	389	/	378	196	/	140	270	/	318	0					
	BEGIN PEAK HR		8:00 AM																
	VOLUMES	25	101	8	8	181	31	18	51	25	9	94	22	573					
	APPROACH %	19%	75%	6%	4%	82%	14%	19%	54%	27%	7%	75%	18%						
	PEAK HR FACTOR		0.798			0.764			0.734			0.845		0.907					
	APP/DEPART	134	/	141	220	/	215	94	/	67	125	/	150	0					
PM	4:00 PM	7	82	16	14	54	6	27	54	12	0	23	7	302					0
	4:15 PM	13	69	4	10	63	5	19	59	8	3	17	4	274					0
	4:30 PM	16	81	9	14	61	2	21	63	12	3	12	10	304					0
	4:45 PM	8	67	4	17	69	9	13	82	19	6	15	5	314					0
	5:00 PM	14	91	8	8	54	3	21	65	12	4	19	4	303					0
	5:15 PM	8	63	4	15	52	2	18	46	14	1	20	5	248					0
	5:30 PM	9	75	5	11	52	8	4	52	14	2	17	4	253					0
	5:45 PM	4	51	6	8	60	6	10	37	13	1	11	6	213					0
	VOLUMES	79	579	56	97	465	41	133	458	104	20	134	45	2,211	0	0	0	0	0
	APPROACH %	11%	81%	8%	16%	77%	7%	19%	66%	15%	10%	67%	23%						
	APP/DEPART	714	/	757	603	/	589	695	/	611	199	/	254	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	51	308	25	49	247	19	74	269	51	16	63	23	1,195					
	APPROACH %	13%	80%	7%	16%	78%	6%	19%	68%	13%	16%	62%	23%						
	PEAK HR FACTOR		0.850			0.829			0.864			0.944		0.951					
	APP/DEPART	384	/	405	315	/	314	394	/	343	102	/	133	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0					0
	7:15 AM					0					0				1	1
	7:30 AM	1				1					0					0
	7:45 AM					0					0					0
	8:00 AM					0					0					0
	8:15 AM					0					0				2	2
	8:30 AM					0					0					0
	8:45 AM					0					0				1	1
	TOTAL	1	0	0	0	1	0	0	0	0	0	0	0	0	4	4
PM	4:00 PM					0					0					0
	4:15 PM				1	1					0					0
	4:30 PM				1	1					0					0
	4:45 PM				2	2					0	1			1	2
	5:00 PM				1	1					0				2	2
	5:15 PM					0					0					0
	5:30 PM				2	2					0					0
	5:45 PM				1	1					0				1	1
	TOTAL	0	0	0	8	8	0	0	0	0	0	1	0	0	4	5

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	SAN MARCOS	PROJECT #:	ETD22-0624-01
6/23/22	NORTH & SOUTH:	VIA VERA CRUZ	LOCATION #:	3
THURSDAY	EAST & WEST:	SAN MARCOS BL	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM
PM
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OTHER

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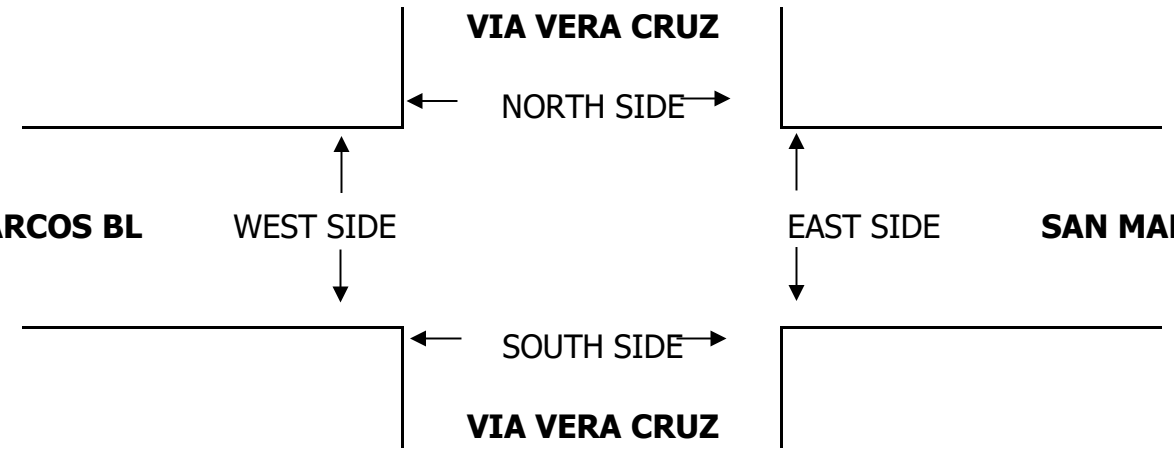
	NORTHBOUND VIA VERA CRUZ			SOUTHBOUND VIA VERA CRUZ			EASTBOUND SAN MARCOS BL			WESTBOUND SAN MARCOS BL			
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
7:00 AM	1	1	1	7	3	7	0	142	0	3	325	10	500
7:15 AM	0	0	2	6	1	6	2	149	2	4	362	9	543
7:30 AM	1	2	2	5	2	6	9	193	3	2	380	14	619
7:45 AM	2	0	1	17	1	16	9	201	3	2	257	16	525
8:00 AM	5	0	0	12	0	5	4	231	2	3	260	26	548
8:15 AM	4	3	2	17	2	8	9	206	1	6	255	36	549
8:30 AM	3	0	0	18	1	8	13	226	1	4	253	26	553
8:45 AM	1	1	0	20	5	11	8	235	2	5	279	38	605
AM VOLUMES	17	7	8	102	15	67	54	1,583	14	29	2,371	175	4,442
AM APPROACH %	53%	22%	25%	55%	8%	36%	3%	96%	1%	1%	92%	7%	
AM APP/DEPART	32	/	236	184	/	58	1,651	/	1,693	2,575	/	2,455	0
AM BEGIN PEAK HR		8:00 AM											
AM PEAK HR VOLUMES	13	4	2	67	8	32	34	898	6	18	1,047	126	2,255
AM PEAK HR APPROACH %	68%	21%	11%	63%	7%	30%	4%	96%	1%	2%	88%	11%	
AM PEAK HR FACTOR		0.528			0.743			0.957			0.925		0.932
AM APP/DEPART	19	/	164	107	/	32	938	/	967	1,191	/	1,092	0
4:00 PM	8	9	9	47	12	7	17	243	2	6	222	33	615
4:15 PM	7	6	3	41	5	12	17	317	5	8	231	26	678
4:30 PM	2	7	4	49	5	17	10	287	4	6	218	44	653
4:45 PM	9	10	14	29	12	15	14	272	4	17	243	34	673
5:00 PM	16	12	9	47	16	9	10	273	1	6	255	36	690
5:15 PM	7	7	11	52	10	11	6	280	5	9	233	31	662
5:30 PM	10	17	11	29	8	19	12	276	1	15	266	21	685
5:45 PM	3	10	4	57	3	9	10	270	7	9	240	25	647
PM VOLUMES	62	78	65	351	71	99	96	2,218	29	76	1,908	250	5,303
PM APPROACH %	30%	38%	32%	67%	14%	19%	4%	95%	1%	3%	85%	11%	
PM APP/DEPART	205	/	424	521	/	176	2,343	/	2,634	2,234	/	2,069	0
PM BEGIN PEAK HR		4:45 PM											
PM PEAK HR VOLUMES	42	46	45	157	46	54	42	1,101	11	47	997	122	2,710
PM PEAK HR APPROACH %	32%	35%	34%	61%	18%	21%	4%	95%	1%	4%	86%	10%	
PM PEAK HR FACTOR		0.875			0.880			0.991			0.965		0.982
PM APP/DEPART	133	/	210	257	/	104	1,154	/	1,303	1,166	/	1,093	0

U-TURNS

AM NB	AM SB	AM EB	AM WB	AM TTL
X	X	X	X	
				0
			1	1
			2	2
			1	1
			5	5
			3	3
			1	1
		1	1	2
0	0	1	14	15

PM NB	PM SB	PM EB	PM WB	PM TTL
			6	6
		1	8	9
			8	8
			8	8
			3	3
			5	5
			6	6
			9	9
0	0	1	53	54



PEDESTRIAN CROSSINGS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
AM 7:00 AM	1				1
AM 7:15 AM					0
AM 7:30 AM		1			1
AM 7:45 AM					0
AM 8:00 AM	1		1		2
AM 8:15 AM					0
AM 8:30 AM		1	1		2
AM 8:45 AM					0
AM TOTAL	2	2	2	0	6
PM 4:00 PM	1				1
PM 4:15 PM	1				1
PM 4:30 PM	1				1
PM 4:45 PM	2		2		4
PM 5:00 PM					0
PM 5:15 PM	1				1
PM 5:30 PM	2	1			3
PM 5:45 PM	2				2
PM TOTAL	10	1	2	0	13

PEDESTRIAN ACTIVATIONS

	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL
					0
					0
					0
					0
					0
					0
					0
					0
	0	0	0	0	0
					0
					0
					0
					0
					0
					0
					0
	0	0	0	0	0

BICYCLE CROSSINGS

	NS	SS	ES	WS	TOTAL
AM 7:00 AM		2			2
AM 7:15 AM	1				1
AM 7:30 AM					0
AM 7:45 AM					0
AM 8:00 AM					0
AM 8:15 AM					0
AM 8:30 AM					0
AM 8:45 AM					0
AM TOTAL	1	2	0	0	3
PM 4:00 PM					0
PM 4:15 PM					0
PM 4:30 PM					0
PM 4:45 PM		1		1	2
PM 5:00 PM					0
PM 5:15 PM			1		1
PM 5:30 PM					0
PM 5:45 PM					0
PM TOTAL	0	1	1	1	3

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	SAN MARCOS	PROJECT #:	ETD22-0520-01
5/19/22	NORTH & SOUTH:	VIA VERA CRUZ	LOCATION #:	3
THURSDAY	EAST & WEST:	LINDA VISTA	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM
PM
MD
OTHER
OTHER

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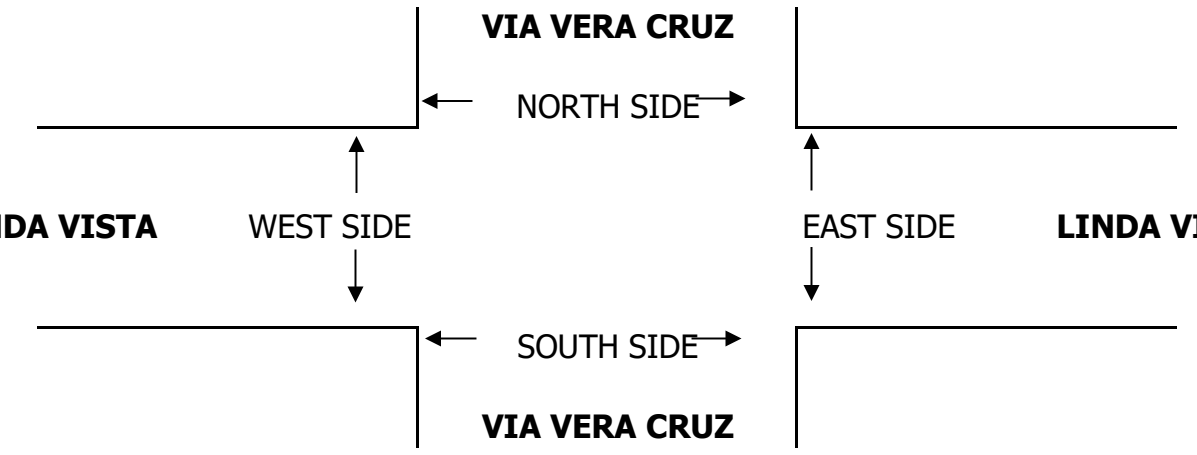
		NORTHBOUND VIA VERA CRUZ			SOUTHBOUND VIA VERA CRUZ			EASTBOUND LINDA VISTA			WESTBOUND LINDA VISTA				U-TURNS				
	LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM	7:00 AM	6	6	1	3	22	5	4	10	5	2	21	4	89					0
	7:15 AM	4	8	2	4	45	9	5	10	2	2	21	4	116					0
	7:30 AM	6	17	0	2	50	4	4	22	5	6	27	2	145					0
	7:45 AM	6	13	3	0	83	10	6	29	6	4	33	2	195		1			1
	8:00 AM	4	20	1	1	46	8	0	22	7	1	30	9	149					0
	8:15 AM	6	18	3	5	61	8	6	31	9	4	37	4	192					0
	8:30 AM	5	31	1	4	52	8	7	22	11	2	30	4	177					0
	8:45 AM	4	25	6	7	63	8	3	20	8	3	20	4	171					0
	VOLUMES	41	138	17	26	422	60	35	166	53	24	219	33	1,234	0	1	0	0	1
	APPROACH %	21%	70%	9%	5%	83%	12%	14%	65%	21%	9%	79%	12%						
	APP/DEPART	196	/	206	508	/	499	254	/	209	276	/	320	0					
	BEGIN PEAK HR		7:45 AM																
	VOLUMES	21	82	8	10	242	34	19	104	33	11	130	19	713					
	APPROACH %	19%	74%	7%	3%	85%	12%	12%	67%	21%	7%	81%	12%						
	PEAK HR FACTOR		0.750			0.769			0.848			0.889		0.914					
	APP/DEPART	111	/	120	286	/	286	156	/	122	160	/	185	0					
PM	4:00 PM	8	64	20	7	57	5	25	68	17	7	16	3	297					0
	4:15 PM	5	56	12	15	79	9	17	53	20	5	24	6	301					0
	4:30 PM	11	79	9	15	79	9	18	61	16	2	16	8	323					0
	4:45 PM	11	71	9	6	73	7	16	71	12	6	23	2	307					0
	5:00 PM	8	89	8	5	72	1	21	52	29	4	21	8	318					0
	5:15 PM	11	78	8	2	69	6	20	56	9	4	18	4	285					0
	5:30 PM	10	80	7	7	58	8	11	43	15	2	22	4	267					0
	5:45 PM	3	60	3	8	83	9	10	54	12	7	17	4	270					0
	VOLUMES	67	577	76	65	570	54	138	458	130	37	157	39	2,368	0	0	0	0	0
	APPROACH %	9%	80%	11%	9%	83%	8%	19%	63%	18%	16%	67%	17%						
	APP/DEPART	720	/	754	689	/	737	726	/	599	233	/	278	0					
	BEGIN PEAK HR		4:15 PM																
	VOLUMES	35	295	38	41	303	26	72	237	77	17	84	24	1,249					
	APPROACH %	10%	80%	10%	11%	82%	7%	19%	61%	20%	14%	67%	19%						
	PEAK HR FACTOR		0.876			0.898			0.946			0.893		0.967					
	APP/DEPART	368	/	391	370	/	397	386	/	316	125	/	145	0					



		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM					0					0					0
	7:15 AM					0					0					0
	7:30 AM					0					0				1	1
	7:45 AM				1	1					0				1	1
	8:00 AM					0					0					0
	8:15 AM					0					0				1	1
	8:30 AM					0					0		1			1
	8:45 AM				1	1					0					0
	TOTAL	0	0	0	2	2	0	0	0	0	0	0	1	0	3	4
PM	4:00 PM				8	8					0					0
	4:15 PM				1	1					0					0
	4:30 PM	1			1	2					0				2	2
	4:45 PM	1	1		11	13					0					0
	5:00 PM				1	1					0					0
	5:15 PM					0					0					0
	5:30 PM					0					0		2			2
	5:45 PM					0					0					0
	TOTAL	2	1	0	22	25	0	0	0	0	0	0	2	0	2	4

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: ELITE TRAFFIC DYNAMICS, LLC

DATE:	LOCATION:	SAN MARCOS	PROJECT #:	ETD22-0520-01
5/19/22	NORTH & SOUTH:	VIA VERA CRUZ	LOCATION #:	4
THURSDAY	EAST & WEST:	SAN MARCOS BL	CONTROL:	SIGNAL

NOTES:

INCLUDES BIKE & PED

AM
PM
MD
OTHER
OTHER

▲ N
◄ W
E ►
S ▼

	NORTHBOUND VIA VERA CRUZ			SOUTHBOUND VIA VERA CRUZ			EASTBOUND SAN MARCOS BL			WESTBOUND SAN MARCOS BL				U-TURNS				
LANES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB X	SB X	EB X	WB X	TTL
AM 7:00 AM	5	2	4	2	34	0	2	129	9	6	268	11	472				2	2
7:15 AM	4	0	1	9	4	12	3	168	1	5	313	15	535		1	1		2
7:30 AM	4	3	3	10	9	6	5	242	3	9	363	9	666			1	3	4
7:45 AM	13	0	3	5	11	11	2	220	1	12	306	16	600			5	4	9
8:00 AM	12	1	1	15	13	15	12	221	3	18	268	21	600				7	7
8:15 AM	10	0	4	20	14	9	9	212	4	11	211	23	527				2	2
8:30 AM	6	0	6	23	5	14	7	290	4	11	257	20	643			4	5	9
8:45 AM	6	0	4	20	3	11	15	204	6	9	261	28	567				8	8
VOLUMES	60	6	26	104	93	78	55	1,686	31	81	2,247	143	4,610	0	1	11	31	43
APPROACH %	65%	7%	28%	38%	34%	28%	3%	95%	2%	3%	91%	6%						
APP/DEPART	92	/	204	275	/	205	1,772	/	1,816	2,471	/	2,385	0					
BEGIN PEAK HR		7:15 AM																
VOLUMES	33	4	8	39	37	44	22	851	8	44	1,250	61	2,401					
APPROACH %	73%	9%	18%	33%	31%	37%	2%	97%	1%	3%	92%	5%						
PEAK HR FACTOR		0.703			0.698			0.881			0.889		0.901					
APP/DEPART	45	/	87	120	/	89	881	/	898	1,355	/	1,327	0					
PM 4:00 PM	13	4	17	47	19	14	15	284	42	21	187	43	706				11	11
4:15 PM	12	13	19	41	19	21	9	224	8	19	221	32	638				5	5
4:30 PM	15	8	11	52	19	12	13	271	8	1	251	36	697			1	10	11
4:45 PM	11	6	11	41	20	11	7	264	17	28	235	42	693				4	4
5:00 PM	14	12	20	40	24	15	9	344	0	17	281	35	811				6	6
5:15 PM	22	15	24	42	25	12	10	312	2	25	279	43	811				6	6
5:30 PM	19	19	17	44	25	6	14	312	3	28	250	36	773				7	7
5:45 PM	15	7	13	51	14	10	12	314	3	28	294	32	793				4	4
VOLUMES	121	84	132	358	165	101	89	2,325	83	167	1,998	299	5,922	0	0	1	53	54
APPROACH %	36%	25%	39%	57%	26%	16%	4%	93%	3%	7%	81%	12%						
APP/DEPART	337	/	472	624	/	415	2,497	/	2,815	2,464	/	2,220	0					
BEGIN PEAK HR		5:00 PM																
VOLUMES	70	53	74	177	88	43	45	1,282	8	98	1,104	146	3,188					
APPROACH %	36%	27%	38%	57%	29%	14%	3%	96%	1%	7%	82%	11%						
PEAK HR FACTOR		0.807			0.975			0.945			0.952		0.983					
APP/DEPART	197	/	244	308	/	194	1,335	/	1,533	1,348	/	1,217	0					

		PEDESTRIAN CROSSINGS					PEDESTRIAN ACTIVATIONS					BICYCLE CROSSINGS				
		N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	N SIDE	S SIDE	E SIDE	W SIDE	TOTAL	NS	SS	ES	WS	TOTAL
AM	7:00 AM	1	2			3					0	1				1
	7:15 AM	1				1					0					0
	7:30 AM	2				2					0	2	2	1	1	6
	7:45 AM					0					0	1				1
	8:00 AM					0					0					0
	8:15 AM			1		1					0		1		1	2
	8:30 AM		3	2		5					0					0
	8:45 AM					0					0					0
	TOTAL	4	5	3	0	12	0	0	0	0	0	4	3	1	2	10
PM	4:00 PM		2			2					0	1				1
	4:15 PM	1	2			3					0					0
	4:30 PM	1				1					0					0
	4:45 PM					0					0					0
	5:00 PM				1	1					0					0
	5:15 PM		1		1	2					0		1			1
	5:30 PM		1		1	2					0					0
	5:45 PM			1		1					0					0
	TOTAL	2	6	1	3	12	0	0	0	0	0	1	1	0	0	2

Appendix D
Trip Generation Memo

TO:	Jonathan Quezada, MPA, EIT; City of San Marcos
FROM:	Jonathan Sanchez, PE, TE, PTOE; CR Associates Cristian Belmudez; CR Associates
DATE:	March 8, 2023
RE:	Hughes Circuits – Trip Generation Analysis Technical Memorandum

The purpose of this technical memorandum is to document the results of a trip generation validation conducted for the Hughes Circuits project (the "Proposed Project").

Project Description

Hughes Circuits is San Diego County's largest fully integrated electronics manufacturing service (EMS) company. In order to accommodate storage needs and additional manufacturing space, Hughes Circuits proposes to construct an expansion across from the existing site located at 546 S Pacific Street in the City of San Marcos. **Figure 1** displays the existing facility. The Proposed Project will have similar operations to the existing site except it will be used mostly for upper-level electromechanical assembly, warehousing/staging components, and electronics assembly. There will be no producing of printed circuit boards in the building, which is the main activity at the existing facility. **Table 1** displays a comparison between the current site land use and the Proposed Project.

Table 1 - Existing Facility vs Proposed Project

Land Use	Existing Facility (Hughes Circuits)	Proposed Project
Office	12,500 sq.ft.	8,000 sq.ft
Warehouse	32,500 sq.ft	44,410 sq.ft
Manufacturing	30,000 sq.ft	15,000 sq.ft
Total	**75,000 sq.ft.**	**67,410 sq.ft.**

Source: CR Associates (2023)

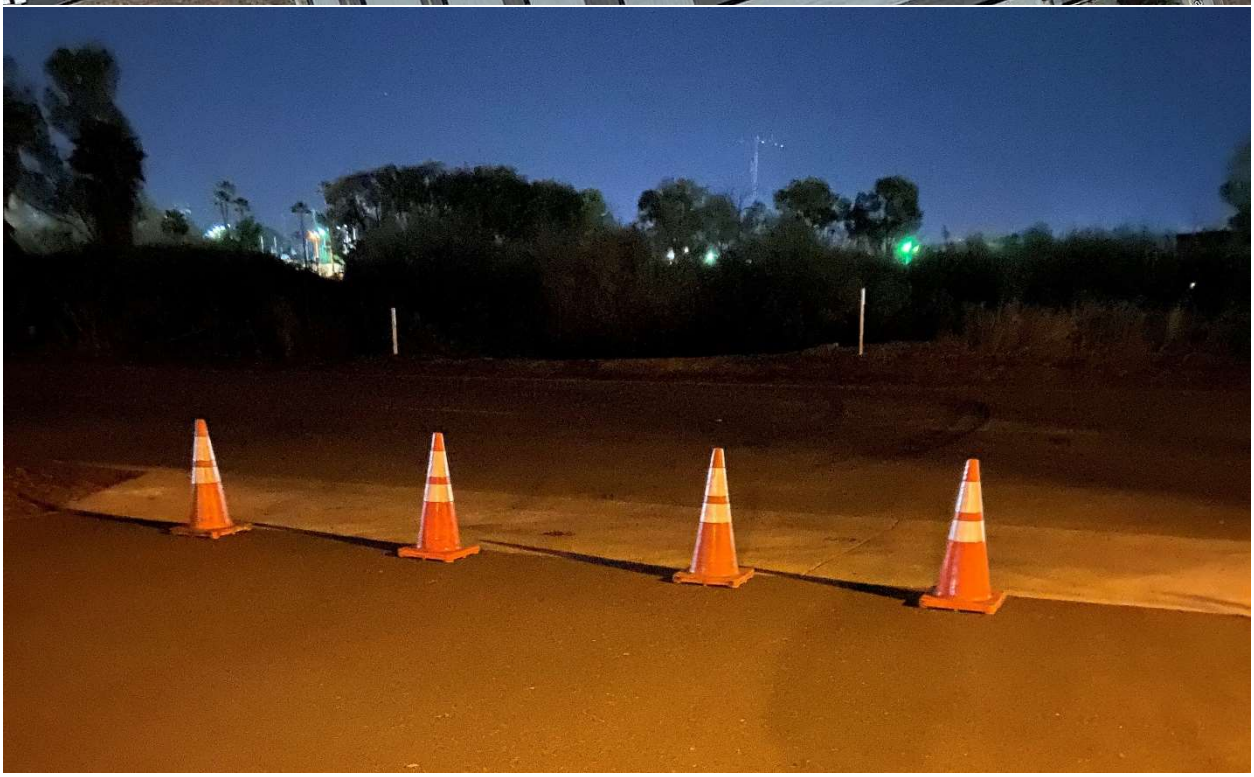
As shown, the Proposed Project will consist mostly of storage space with half the manufacturing space and approximately 60 percent of the office space. Note that unlike the existing site where the office space handles administrative duties such as HR, accounting, etc., the office space associated with the Proposed Project will be primarily used for record keeping with one onsite manager. However, for a conservative analysis the office land uses associated with the Proposed Project are considered to be active land uses (as opposed to the warehousing/storage portion which is primarily a passive land use).

Per the City's Transportation Analysis Guidelines (City's TIAG), trip generation rates should be derived from SANDAG's *(not so) Brief Guide to Vehicular Traffic Generation Rates for the San Diego Region* (April 2002). However, since the Proposed Project is acting as an "expansion" of the existing Hughes Circuits facility, mostly to provide for additional storage (a passive land use), a trip generation study was conducted at the existing Hughes Circuits facility located across the street from the Proposed Project.

The existing facility has a total of four driveways. To facilitate data collection, physical barriers were used to close off two of the four driveways prior to conducting driveway counts. **Figure 2** shows which driveways were closed and provides a sample of the closures.

Figure 1 - Existing Facility

Figure 2 - Driveway Closures



Driveway counts were collected over a three-day period (Tuesday, March 1, Wednesday, March 2, and Thursday, March 3) to determine daily traffic and peak hour trip generation rates for the Project. The total trip generation at the existing facility was 580 total daily trips, which results in a trip generation rate of 7.73 per 1,000 sq.ft. (580 ADT / 75,000 sq.ft. = 7.73).

Because the Proposed Project will have significantly less manufacturing and office space than the existing facility, the Project is expected to generate less employees and traffic. As shown above, the active land use of the Proposed Project is approximately 54% of the existing site.

Table 2 displays the trip generation calculated/observed at the existing facility as well as the reduced (by 54%) trip generation for Proposed Project.

Table 2 - Trip Generation Comparison (Existing vs Proposed)

Land Use	Sq.Ft.	ADT[1]	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Existing Facility (Hughes Circuits)								
Office	12,500	97	10	8	2	12	3	9
Warehouse	32,500	-	-	-	-	-	-	-
Manufacturing	30,000	484[2]	47	40	7	52	10	42
Total	**75,000**	**580**	**57**	**48**	**9**	**64**	**13**	**51**
Proposed Project								
Office	8,000	62	5	4	1	7	2	5
Warehouse	44,410	-	-	-	-	-	-	-
Manufacturing	15,000	242[2]	25	22	3	28	5	23
Total	**67,410**	**304**	**30**	**26**	**4**	**35**	**7**	**28**

Source: CR Associates (2023)

Notes:
[1] ADT breakdown assumed to be proportional to the respective land use square footage (e.g., Office component is 12,500 square feet which represents 17% of the total building square footage (75,000 sq.ft.). Therefore, the ADT associated with the Office was calculated as follows: 17%*580 = 97 ADT).
[2] The warehouse component is an ancillary use supporting the Manufacturing land use. Therefore, ADT associated with warehousing uses is contingent upon the size of the Manufacturing space.

Based on the ratio of the square footage, the Project would generate 304 average daily trips with 30 trips (26-in/4-out) during the AM peak hour and 35 trips (7-in/28-out) during the PM peak hour. However, for a more conservative analysis the trips generation was calculated based on the number of anticipated work shifts instead of the square footage ratio.

The Proposed Project will operate with **two shifts instead of three** (two 8-hour shifts, 5 days a week). Therefore, the trip generation rates calculated at the existing site were reduced proportionally by two-thirds (2/3s) to calculate the trip generation for the proposed site (7.73 * 2/3 = 5.15 trips per 1,000 sq.ft.). **Table 3** displays the projected daily, as well as AM and PM peak hour, project trip generation.

Table 3 - Project Trip Generation

Land Use	Sq. Ft	Trip Rate	ADT	AM Peak Hour			PM Peak Hour		
				Trips	In	Out	Trips	In	Out
Hughes Circuits (Proposed Project)	67,410	5.15/1,000 Sq. Ft.	348	38	32	6	43	9	34

Source: CR Associates (2023)

The Proposed Project proposes to generate a total of 348 daily trips, including 38 trips (32-in/6-out) during the AM peak hour and 43 (9-in/34-out) during the PM peak hour.

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 03/01/22 TUESDAY **AREA:** SAN MARCOS
JOB #: ETD22-0304-01 **LOCATION:** SOUTH PACIFIC ST AT DWY-1

AM	ENTER							EXIT							PM	ENTER							EXIT						
TIME	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1	12:00	3	0	0	0	0	0	3	2	0	0	0	0	0	2
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	5	0	0	0	0	0	5	1	1	0	0	0	0	2
0:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	12:30	4	0	0	0	0	0	4	3	0	0	0	0	0	3
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	1	1	0	0	0	0	2	2	0	0	0	0	0	2
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	2	0	0	0	0	0	2	2	1	1	0	0	0	4
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	8	0	0	0	0	0	8	9	0	0	0	0	0	9
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	2	1	0	0	0	0	3	2	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:00	4	2	0	0	0	0	6	2	1	0	0	0	0	3
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	7	0	0	0	0	0	7	4	0	0	0	0	0	4
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	5	0	0	0	0	0	5	8	0	0	0	0	0	8
2:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	14:45	1	0	0	0	0	0	1	4	0	0	0	0	0	4
3:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0	15:00	1	1	0	0	0	0	2	7	0	0	0	0	0	7
3:15	2	0	0	0	0	0	2	0	0	0	0	0	0	0	15:15	2	0	0	0	0	0	2	1	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30	1	0	0	0	0	0	1	6	0	0	0	0	0	6
3:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:45	2	0	0	0	0	0	2	2	1	0	0	0	0	3
4:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0	16:00	3	0	0	0	0	0	3	7	0	0	0	0	0	7
4:15	2	0	0	0	0	0	2	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	6	0	0	0	0	0	6
4:30	3	0	0	0	0	0	3	0	0	0	0	0	0	0	16:30	0	0	0	0	0	0	0	3	2	0	0	0	0	5
4:45	7	0	0	0	0	0	7	0	0	0	0	0	0	0	16:45	1	0	0	0	0	0	1	3	0	0	0	0	0	3
5:00	5	0	0	0	0	0	5	0	0	0	0	0	0	0	17:00	2	0	0	0	0	0	2	2	1	0	0	0	0	3
5:15	4	0	0	0	0	0	4	1	0	0	0	0	0	1	17:15	2	0	0	0	0	0	2	1	0	0	0	0	0	1
5:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	3	0	0	0	0	0	3
5:45	3	0	0	0	0	0	3	1	0	0	0	0	0	1	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	1	0	0	0	0	0	1	2	0	0	0	0	0	2	18:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
6:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	18:15	0	0	0	0	0	0	0	2	0	0	0	0	0	2
6:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	18:30	1	0	0	0	0	0	1	2	0	0	0	0	0	2
6:45	3	0	0	0	0	0	3	0	0	0	0	0	0	0	18:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1
7:00	5	0	0	0	0	0	5	0	0	0	0	0	0	0	19:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:15	3	0	0	0	0	0	3	1	0	0	0	0	0	1	19:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	5	0	0	0	0	0	5	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2
7:45	4	0	0	0	0	0	4	0	0	0	0	0	0	0	19:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:00	0	1	0	0	0	0	1	2	0	0	0	0	0	2	20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	20:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:45	0	1	0	0	0	0	1	0	0	0	0	0	0	0	20:45	4	0	0	0	0	0	4	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1	21:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0
9:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	21:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1
9:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1	21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	2	0	0	0	0	0	2	0	0	0	0	0	0	0	21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	1	1	0	0	0	0	2	3	0	0	0	0	0	3	22:00	0	0	0	0	0	0	0	7	0	0	0	0	0	7
10:15	3	1	0	0	0	0	4	2	0	0	0	0	0	2	22:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1
10:30	2	0	0	0	0	0	2	0	1	0	0	0	0	1	22:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2
10:45	2	0	0	0	0	0	2	3	0	0	0	0	0	3	22:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2
11:00	4	0	0	0	0	0	4	5	0	0	0	0	0	5	23:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2
11:15	6	0	0	0	0	0	6	3	1	0	0	0	0	4	23:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:30	1	0	0	0	0	0	1	1	1	0	0	0	0	2	23:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:45	2	1	0	0	0	0	3	3	0	0	0	0	0	3	23:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0
TOTAL	94	5	0	0	0	0	99	30	3	0	0	0	0	33	TOTAL	68	5	0	0	0	0	73	109	7	1	0	0	0	117
				AM PEAK HOUR			4:30 AM				AM PEAK HOUR			11:00 AM					PM PEAK HOUR			1:30 PM					PM PEAK HOUR		2:15 PM
				AM PEAK VOLUME			19				AM PEAK VOLUME			14					PM PEAK VOLUME			24					PM PEAK VOLUME		23

CLASS 1	**CLASS 4**
CLASS 2	**CLASS 5**
CLASS 3	**CLASS 6**

DAILY TOTAL	162	10	0	0	0	0	172	139	10	1	0	0	0	150
% OF TOTAL	94.2%	5.8%	0.0%	0.0%	0.0%	0.0%	100.0%	92.7%	6.7%	0.7%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 03/02/22 WEDNESDAY **AREA:** SAN MARCOS
JOB #: ETD22-0304-01 **LOCATION:** SOUTH PACIFIC ST AT DWY-1

AM	ENTER							EXIT							PM	ENTER							EXIT						
TIME	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:00	2	0	0	0	0	0	2	2	0	0	0	0	0	2
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	5	0	0	0	0	0	5	2	0	0	0	0	0	2
0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:30	3	0	0	0	0	0	3	3	1	0	0	0	0	4
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	3	0	0	0	0	0	3	1	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	6	0	0	0	0	0	6	2	0	0	0	0	0	2
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	4	1	0	0	0	0	5	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	3	1	0	0	0	0	4	13	0	0	0	0	0	13
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	1	0	0	0	0	0	1	3	0	0	0	0	0	3
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:00	5	0	0	0	0	0	5	2	0	0	0	0	0	2
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	5	0	0	0	0	0	5	5	1	0	0	0	0	6
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	6	0	0	0	0	0	6	10	0	0	0	0	0	10
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:45	2	1	0	0	0	0	3	7	0	0	0	0	0	7
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:00	1	0	0	0	0	0	1	5	0	0	0	0	0	5
3:15	3	0	0	0	0	0	3	0	0	0	0	0	0	0	15:15	1	1	0	0	0	0	2	1	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30	2	0	0	0	0	0	2	5	0	0	0	0	0	5
3:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:45	1	0	0	0	0	0	1	4	0	0	0	0	0	4
4:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	8	0	0	0	0	0	8
4:15	3	0	0	0	0	0	3	0	0	0	0	0	0	0	16:15	1	1	0	0	0	0	2	5	1	0	0	0	0	6
4:30	3	0	0	0	0	0	3	0	0	0	0	0	0	0	16:30	0	1	0	0	0	0	1	4	1	0	0	0	0	5
4:45	9	0	0	0	0	0	9	0	0	0	0	0	0	0	16:45	1	0	0	0	0	0	1	6	0	0	0	0	0	6
5:00	5	0	0	0	0	0	5	0	0	0	0	0	0	0	17:00	1	0	0	0	0	0	1	3	0	0	0	0	0	3
5:15	5	0	0	0	0	0	5	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	3	0	0	0	0	0	3
5:30	3	0	0	0	0	0	3	1	0	0	0	0	0	1	17:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2
5:45	6	0	0	0	0	0	6	1	0	0	0	0	0	1	17:45	0	0	0	0	0	0	0	3	0	0	0	0	0	3
6:00	3	0	0	0	0	0	3	1	0	0	0	0	0	1	18:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1
6:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	18:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
6:30	2	0	0	0	0	0	2	1	0	0	0	0	0	1	18:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1
6:45	5	0	0	0	0	0	5	0	0	0	0	0	0	0	18:45	2	0	0	0	0	0	2	2	0	0	0	0	0	2
7:00	3	0	0	0	0	0	3	0	0	0	0	0	0	0	19:00	1	0	0	0	0	0	1	1	1	0	0	0	0	2
7:15	2	0	0	0	0	0	2	1	0	0	0	0	0	1	19:15	1	0	0	0	0	0	1	4	0	0	0	0	0	4
7:30	4	0	0	0	0	0	4	0	0	0	0	0	0	0	19:30	2	0	0	0	0	0	2	1	0	0	0	0	0	1
7:45	4	1	0	0	0	0	5	1	0	0	0	0	0	1	19:45	2	0	0	0	0	0	2	0	0	0	0	0	0	0
8:00	0	0	1	0	0	0	1	1	0	0	0	0	0	1	20:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0
8:15	5	0	0	0	0	0	5	0	0	0	0	0	0	0	20:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:30	4	0	0	0	0	0	4	0	0	0	0	0	0	0	20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1	20:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1
9:00	2	0	0	0	0	0	2	1	0	0	0	0	0	1	21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	2	0	0	0	0	0	2	1	0	0	0	0	0	1	21:30	2	0	0	0	0	0	2	1	0	0	0	0	0	1
9:45	1	0	0	0	0	0	1	2	0	0	0	0	0	2	21:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:00	4	0	0	0	0	0	4	3	0	0	0	0	0	3	22:00	0	0	0	0	0	0	0	6	0	0	0	0	0	6
10:15	6	2	0	0	0	0	8	4	1	0	0	0	0	5	22:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:30	2	0	0	0	0	0	2	3	0	0	0	0	0	3	22:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
10:45	1	0	0	0	0	0	1	4	0	0	0	0	0	4	22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	2	0	0	0	0	0	2	6	0	0	0	0	0	6	23:00	1	0	0	0	0	0	1	2	0	0	0	0	0	2
11:15	6	0	0	0	0	0	6	2	0	0	0	0	0	2	23:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:30	5	1	0	0	0	0	6	1	0	0	0	0	0	1	23:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	5	0	0	0	0	0	5	23:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL	106	4	1	0	0	0	111	40	1	0	0	0	0	41	TOTAL	71	6	0	0	0	0	77	125	5	0	0	0	0	130
				AM PEAK HOUR			4:45 AM				AM PEAK HOUR			10:15 AM					PM PEAK HOUR			2:00 PM					PM PEAK HOUR		2:15 PM
				AM PEAK VOLUME			22				AM PEAK VOLUME			18					PM PEAK VOLUME			19					PM PEAK VOLUME		28

CLASS 1	CLASS 4
CLASS 2	CLASS 5
CLASS 3	CLASS 6

DAILY TOTAL	177	10	1	0	0	0	188	165	6	0	0	0	0	171
% OF TOTAL	94.1%	5.3%	0.5%	0.0%	0.0%	0.0%	100.0%	96.5%	3.5%	0.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 03/03/22 THURSDAY **AREA:** SAN MARCOS
JOB #: ETD22-0304-01 **LOCATION:** SOUTH PACIFIC ST AT DWY-1

AM	ENTER							EXIT							PM	ENTER							EXIT						
TIME	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1	12:00	4	0	0	0	0	0	4	3	0	0	0	0	0	3
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	1	1	0	0	0	0	2	2	2	0	0	0	0	4
0:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	12:30	3	0	0	0	0	0	3	5	0	2	0	0	0	7
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	4	0	0	0	0	0	4	4	0	0	0	0	0	4
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	1	0	0	0	0	0	1	2	0	0	0	0	0	2
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	3	0	0	1	0	0	4	2	0	0	0	0	0	2
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	3	0	0	0	0	0	3	19	0	0	0	0	0	19
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	4	0	0	0	0	0	4	7	0	0	0	0	2	9
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	2	0	0	0	0	0	2	3	0	0	0	0	0	3
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	6	1	0	0	0	0	7	9	2	0	0	0	0	11
2:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	11	0	0	0	0	0	11
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0	7	0	0	0	0	0	7
3:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0
3:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	5	0	0	0	0	0	5
3:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:45	1	0	0	0	0	0	1	3	0	0	0	0	0	3
4:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0	16:00	1	0	0	0	0	0	1	8	0	0	0	0	0	8
4:15	2	0	0	0	0	0	2	0	0	0	0	0	0	0	16:15	0	0	0	0	0	0	0	6	0	0	0	0	0	6
4:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	16:30	1	0	0	0	0	0	1	6	3	0	0	0	0	9
4:45	9	0	0	0	0	0	9	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	5	0	0	0	0	0	5
5:00	7	0	0	0	0	0	7	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2
5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:15	1	0	0	0	0	0	1	3	0	0	0	0	0	3
5:30	3	0	0	0	0	0	3	1	0	0	0	0	0	1	17:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5:45	6	0	0	0	0	0	6	2	0	0	0	0	0	2	17:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1
6:00	3	0	0	0	0	0	3	1	0	0	0	0	0	1	18:00	2	0	0	0	0	0	2	1	0	0	0	0	0	1
6:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	18:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1
6:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	18:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2
6:45	4	0	0	0	0	0	4	0	0	0	0	0	0	0	18:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:00	5	0	0	0	0	0	5	0	0	0	0	0	0	0	19:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1
7:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	19:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:30	6	0	0	0	0	0	6	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2
7:45	4	1	0	0	0	0	5	0	0	0	0	0	0	0	19:45	2	0	0	0	0	0	2	1	0	0	0	0	0	1
8:00	0	1	0	0	0	0	1	1	0	0	0	0	0	1	20:00	2	0	0	0	0	0	2	1	0	0	0	0	0	1
8:15	5	0	0	0	0	0	5	0	0	0	0	0	0	0	20:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0
8:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	20:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20:45	3	0	0	0	0	0	3	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0
9:15	0	1	0	0	0	0	1	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	2	0	0	0	0	0	2	2	0	0	0	0	0	2	21:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
9:45	2	0	0	0	0	0	2	1	0	0	0	0	0	1	21:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:00	5	0	0	0	0	0	5	5	0	0	0	0	0	5	22:00	0	0	0	0	0	0	0	7	0	0	0	0	0	7
10:15	5	2	0	0	0	0	7	2	1	0	0	0	0	3	22:15	0	0	0	0	0	0	0	2	0	0	0	0	0	2
10:30	1	0	0	0	0	0	1	4	0	0	0	0	0	4	22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	4	0	0	0	0	0	4	3	1	0	0	0	0	4	22:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:00	2	1	1	0	0	0	4	6	0	0	0	0	0	6	23:00	0	0	0	0	0	0	0	3	0	0	0	0	0	3
11:15	4	0	0	0	0	0	4	4	0	0	0	0	0	4	23:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:30	5	0	0	0	0	0	5	2	0	0	0	0	0	2	23:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
11:45	4	0	0	0	0	0	4	1	0	0	0	0	0	1	23:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
TOTAL	106	6	1	0	0	0	113	36	2	0	0	0	0	38	TOTAL	53	2	0	1	0	0	56	142	7	2	0	0	2	153
				AM PEAK HOUR			4:45 AM				AM PEAK HOUR			10:30 AM					PM PEAK HOUR			1:45 PM					PM PEAK HOUR		2:15 PM
				AM PEAK VOLUME			19				AM PEAK VOLUME			18					PM PEAK VOLUME			13					PM PEAK VOLUME		32

CLASS 1	**CLASS 4**
CLASS 2	**CLASS 5**
CLASS 3	**CLASS 6**

DAILY TOTAL	159	8	1	1	0	0	169	178	9	2	0	0	2	191
% OF TOTAL	94.1%	4.7%	0.6%	0.6%	0.0%	0.0%	100.0%	93.2%	4.7%	1.0%	0.0%	0.0%	1.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 03/01/22 TUESDAY **AREA:** SAN MARCOS
JOB #: ETD22-0304-01 **LOCATION:** SOUTH PACIFIC ST AT EAST DWY-4

AM	ENTER							EXIT							PM	ENTER							EXIT						
TIME	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	2	0	0	0	0	0	2	2	0	0	0	0	0	2
0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:30	1	0	0	0	0	0	1	4	0	0	0	0	0	4
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	3	0	0	0	0	0	3	1	0	0	0	0	0	1
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	3	0	0	0	0	0	3	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	2	0	0	0	0	0	2	2	0	0	0	0	0	2
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	3	0	0	0	0	0	3	7	0	0	0	0	0	7
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	1	1	0	0	0	1	3	2	0	0	0	0	0	2
2:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	14:00	1	1	0	0	0	0	2	1	1	0	0	0	0	2
2:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1	14:15	2	0	0	0	0	0	2	0	1	1	0	0	0	2
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	2	1	0	0	0	0	3	4	1	0	0	0	0	5
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2
3:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0	3	0	0	0	0	0	3
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30	1	0	0	1	0	0	2	4	0	0	0	0	0	4
3:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	4	0	0	0	0	0	4
4:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:15	4	1	0	0	0	0	5	2	0	0	0	0	0	2
4:30	3	0	0	0	0	0	3	0	0	0	0	0	0	0	16:30	0	1	0	0	0	0	1	4	1	0	0	0	0	5
4:45	6	0	0	0	0	0	6	0	0	0	0	0	0	0	16:45	2	0	0	0	0	0	2	2	0	0	0	0	0	2
5:00	3	0	0	0	0	0	3	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5:30	4	0	0	0	0	0	4	0	0	0	0	0	0	0	17:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2
5:45	4	0	0	0	0	0	4	0	0	0	0	0	0	0	17:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
6:00	5	0	0	0	0	0	5	0	0	0	0	0	0	0	18:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
6:15	7	0	0	0	0	0	7	1	0	0	0	0	0	1	18:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1
6:30	5	0	0	0	0	0	5	0	0	0	0	0	0	0	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	6	0	0	0	0	0	6	0	0	0	0	0	0	0	19:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:15	6	0	0	0	0	0	6	0	0	0	0	0	0	0	19:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	3	0	0	0	0	0	3	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:45	4	0	0	0	0	0	4	1	0	0	0	0	0	1	19:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:00	2	0	0	0	0	0	2	0	1	0	0	0	0	1	20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	1	0	0	0	0	0	1	2	0	0	0	0	0	2	20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	1	1	0	0	0	0	2	1	0	0	0	0	0	1	20:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	2	0	0	0	0	0	2	1	0	0	0	0	0	1	20:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0	21:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
9:15	3	0	0	0	0	0	3	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	21:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
9:45	1	1	0	0	0	0	2	0	0	0	0	0	0	0	21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	2	0	0	0	0	0	2	4	0	0	0	0	0	4	22:00	0	0	0	0	0	0	0	4	0	0	0	0	0	4
10:15	1	0	0	0	0	0	1	0	1	0	0	0	0	1	22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	1	0	0	0	0	0	1	2	0	0	0	0	0	2	22:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
10:45	2	0	0	0	0	0	2	1	0	0	0	0	0	1	22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	3	0	0	0	0	0	3	4	0	0	0	0	0	4	23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	2	0	0	0	0	0	2	5	0	0	0	0	0	5	23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	5	0	0	0	0	0	5	5	0	0	0	0	0	5	23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	2	0	0	0	0	0	2	2	0	0	0	0	0	2	23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	91	2	0	0	0	0	93	30	2	0	0	0	0	32	TOTAL	30	5	0	1	0	1	37	63	4	1	0	0	0	68

AM PEAK HOUR	5:45 AM	**AM PEAK HOUR**	11:00 AM
AM PEAK VOLUME	21	**AM PEAK VOLUME**	16
PM PEAK HOUR	1:00 PM	**PM PEAK HOUR**	4:00 PM
PM PEAK VOLUME	11	**PM PEAK VOLUME**	13

CLASS 1	**CLASS 4**
CLASS 2	**CLASS 5**
CLASS 3	**CLASS 6**

DAILY TOTAL	121	7	0	1	0	1	130	93	6	1	0	0	0	100
% OF TOTAL	93.1%	5.4%	0.0%	0.8%	0.0%	0.8%	100.0%	93.0%	6.0%	1.0%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 03/02/22 WEDNESDAY **AREA:** SAN MARCOS
JOB #: ETD22-0304-01 **LOCATION:** SOUTH PACIFIC ST AT EAST DWY-4

AM	ENTER							EXIT							PM	ENTER							EXIT						
TIME	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL
0:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:00	2	0	0	0	0	0	2	1	0	0	0	0	0	1
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	2	0	0	0	0	0	2	2	0	0	0	0	0	2
0:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:30	0	1	0	0	0	0	1	3	1	0	0	0	0	4
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	2	0	0	0	0	0	2	2	0	0	0	0	0	2
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	3	1	0	0	0	0	4	1	0	0	0	0	0	1
1:15	0	0	0	0	0	0	0	1	0	0	0	0	0	1	13:15	2	0	0	0	0	0	2	2	1	0	0	0	0	3
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	1	0	0	0	0	0	1	3	0	0	0	0	0	3
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:00	4	0	0	0	0	0	4	2	0	0	0	0	0	2
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	3	0	0	0	0	0	3	0	0	0	0	0	0	0
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	1	0	0	0	0	0	1	3	0	0	0	0	0	3
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:45	1	0	0	0	0	0	1	8	0	0	0	0	0	8
3:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:00	0	0	0	0	0	0	0	0	0	1	0	0	0	1
3:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:15	1	0	0	0	0	0	1	0	1	0	0	0	0	1
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30	0	0	0	0	0	0	0	7	0	0	0	0	0	7
3:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:45	0	2	0	0	0	0	2	3	1	0	0	0	0	4
4:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	4	0	0	0	0	0	4
4:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	16:15	1	0	0	0	0	0	1	2	0	0	0	0	0	2
4:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	16:30	2	0	0	0	0	0	2	5	0	0	0	0	0	5
4:45	9	0	0	0	0	0	9	0	0	0	0	0	0	0	16:45	1	2	0	0	0	0	3	1	1	0	0	0	0	2
5:00	4	0	0	0	0	0	4	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	3	0	0	0	0	0	3
5:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17:15	1	0	0	0	0	0	1	4	0	0	0	0	0	4
5:30	3	0	0	0	0	0	3	4	0	0	0	0	0	4	17:30	0	0	0	0	0	0	0	2	0	0	0	0	0	2
5:45	6	0	0	0	0	0	6	4	0	0	0	0	0	4	17:45	0	0	0	0	0	0	0	0	1	0	0	0	0	1
6:00	6	0	0	0	0	0	6	1	0	0	0	0	0	1	18:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2
6:15	2	0	0	0	0	0	2	1	0	0	0	0	0	1	18:15	0	1	0	0	0	0	1	2	0	0	0	0	0	2
6:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	4	0	0	0	0	0	4	0	0	0	0	0	0	0	18:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1
7:00	5	0	0	0	0	0	5	0	0	0	0	0	0	0	19:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0
7:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	19:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	4	0	0	0	0	0	4	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	3	0	0	0	0	0	3	0	0	0	0	0	0	0	19:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	2	0	0	0	0	0	2	0	1	1	0	0	0	2	20:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	1	0	0	0	0	0	1	1	1	0	0	0	0	2	20:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1
8:30	2	1	0	0	0	0	3	0	0	0	0	0	0	0	20:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2	20:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0
9:00	3	0	0	0	0	0	3	0	0	0	0	0	0	0	21:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1
9:15	3	0	0	0	0	0	3	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	2	0	0	0	0	0	2	1	1	1	0	0	0	3	21:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2	21:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	1	0	0	0	0	0	1	2	0	0	0	0	0	2	22:00	0	0	0	0	0	0	0	5	0	0	0	0	0	5
10:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1	22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	1	0	0	0	0	1	22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	2	0	0	0	0	0	2	1	0	0	0	0	0	1	22:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	1	0	0	0	0	0	1	4	0	0	0	0	0	4	23:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	2	0	0	0	0	0	2	4	0	0	0	0	0	4	23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	2	0	0	0	0	0	2	2	1	0	0	0	0	3	23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	78	1	0	0	0	0	79	31	5	2	0	0	0	38	TOTAL	33	7	0	0	0	0	40	72	6	1	0	0	0	79
				AM PEAK HOUR			6:45 AM				AM PEAK HOUR			11:00 AM					PM PEAK HOUR			2:00 PM					PM PEAK HOUR		3:30 PM
				AM PEAK VOLUME			17				AM PEAK VOLUME			11					PM PEAK VOLUME			9					PM PEAK VOLUME		17

CLASS 1	**CLASS 4**
CLASS 2	**CLASS 5**
CLASS 3	**CLASS 6**

DAILY TOTAL	111	8	0	0	0	0	119	103	11	3	0	0	0	117
% OF TOTAL	93.3%	6.7%	0.0%	0.0%	0.0%	0.0%	100.0%	88.0%	9.4%	2.6%	0.0%	0.0%	0.0%	100.0%

24-HOUR ROADWAY SEGMENT COUNTS (WITH CLASSIFICATION)

PREPARED BY: PACIFIC TECHNICAL DATA, LLC

DATE: 03/03/22 THURSDAY **AREA:** SAN MARCOS
JOB #: ETD22-0304-01 **LOCATION:** SOUTH PACIFIC ST AT EAST DWY-4

AM	ENTER							EXIT							PM	ENTER							EXIT						
TIME	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL	Time	1	2	3	4	5	6	TOTAL	1	2	3	4	5	6	TOTAL
0:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	12:00	2	1	0	0	0	0	3	2	0	0	0	0	0	2
0:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1
0:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1	12:30	2	1	0	0	0	0	3	1	0	0	0	0	0	1
0:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12:45	5	0	0	0	0	0	5	1	1	0	0	0	0	2
1:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:00	4	1	0	0	0	0	5	0	1	0	0	0	0	1
1:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0
1:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:30	0	0	0	1	0	0	1	6	0	0	0	0	0	6
1:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1
2:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:00	1	0	0	0	0	1	2	3	1	0	0	0	0	4
2:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:15	2	1	0	0	0	0	3	2	0	0	0	0	0	2
2:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:30	0	0	0	0	0	0	0	3	0	0	0	0	0	3
2:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2
3:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:00	2	0	0	0	0	0	2	4	0	0	0	0	0	4
3:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:15	1	0	0	0	0	0	1	1	0	0	0	0	0	1
3:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15:30	1	0	0	0	0	0	1	5	1	0	0	0	0	6
3:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0	15:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2
4:00	1	0	0	0	0	0	1	0	0	0	0	0	0	0	16:00	0	0	0	0	0	0	0	1	0	0	0	0	0	1
4:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	16:15	2	1	0	0	0	0	3	4	0	0	0	0	0	4
4:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1	16:30	2	2	0	0	0	0	4	2	0	0	0	0	0	2
4:45	7	0	0	0	0	0	7	0	0	0	0	0	0	0	16:45	0	0	0	0	0	0	0	2	0	0	0	0	0	2
5:00	3	0	0	0	0	0	3	0	0	0	0	0	0	0	17:00	0	0	0	0	0	0	0	2	0	0	0	0	0	2
5:15	1	0	0	0	0	0	1	0	0	0	0	0	0	0	17:15	0	0	0	0	0	0	0	2	0	0	0	0	0	2
5:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1	17:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
5:45	1	0	0	0	0	0	1	1	0	0	0	0	0	1	17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:00	6	0	0	0	0	0	6	2	1	0	0	0	0	3	18:00	1	0	0	0	0	0	1	3	0	0	0	0	0	3
6:15	5	0	0	0	0	0	5	2	0	0	0	0	0	2	18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1	18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	5	0	0	0	0	0	5	0	0	0	0	0	0	0	18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	4	0	0	0	0	0	4	2	0	0	0	0	0	2	19:00	0	0	0	0	0	0	0	1	1	0	0	0	0	2
7:15	5	0	0	0	0	0	5	0	0	3	0	0	0	3	19:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	2	0	0	0	0	0	2	0	0	0	0	0	0	0	19:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
7:45	3	0	0	0	0	0	3	0	0	0	0	0	0	0	19:45	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	20:00	2	0	0	0	0	0	2	0	0	0	0	0	0	0
8:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	20:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	20:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1
8:45	0	1	0	0	0	0	1	0	1	1	0	0	0	2	20:45	1	0	0	0	0	0	1	0	0	0	0	0	0	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	4	0	0	0	0	0	4	0	0	0	0	0	0	0	21:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1	21:30	1	0	0	0	0	0	1	1	0	0	0	0	0	1
9:45	0	1	0	0	0	0	1	0	0	1	0	0	0	1	21:45	1	0	0	0	0	0	1	3	0	0	0	0	0	3
10:00	2	0	0	0	0	0	2	2	1	0	0	0	0	3	22:00	0	0	0	0	0	0	0	3	0	0	0	0	0	3
10:15	0	0	0	0	0	0	0	0	1	0	0	0	0	1	22:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	2	0	0	0	0	2	22:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	2	0	0	0	0	0	2	0	1	0	0	0	0	1	22:45	0	0	0	0	0	0	0	1	0	0	0	0	0	1
11:00	1	0	0	0	0	0	1	1	0	0	0	0	0	1	23:00	1	0	0	0	0	0	1	2	0	0	0	0	0	2
11:15	3	0	0	0	0	0	3	3	0	1	0	0	0	4	23:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	7	0	0	0	0	0	7	5	0	0	0	0	0	5	23:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	4	0	0	0	0	0	4	2	1	0	0	0	0	3	23:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	79	2	0	0	0	0	81	25	8	6	0	0	0	39	TOTAL	34	7	0	1	0	1	43	64	5	0	0	0	0	69

AM PEAK HOUR	6:00 AM	**AM PEAK HOUR**	11:00 AM
AM PEAK VOLUME	17	**AM PEAK VOLUME**	13
PM PEAK HOUR	12:30 PM	**PM PEAK HOUR**	3:30 PM
PM PEAK VOLUME	14	**PM PEAK VOLUME**	13

CLASS 1	**CLASS 4**
CLASS 2	**CLASS 5**
CLASS 3	**CLASS 6**

DAILY TOTAL	113	9	0	1	0	1	124	89	13	6	0	0	0	108
% OF TOTAL	91.1%	7.3%	0.0%	0.8%	0.0%	0.8%	100.0%	82.4%	12.0%	5.6%	0.0%	0.0%	0.0%	100.0%

Class 1:	Passenger Vehicles: • All 2-axle cars, trucks, vans or motorcycles
Class 2:	2 axle trucks, inc: • Box Trucks, Flat Beds, Work Vans & Work Pick-Up Trucks • All box type of trucks including USPS, UPS & Fedex type of trucks. • Pick-up trucks with flat bed or bucket lift • Pick-up trucks or Vans that are clearly identified as work vehicles with equipment.
Class 3:	All 3 axle trucks: • Includes a 2-axle truck with a 1-axle trailer
Class 4:	All 4 or more axle trucks: • 2-axle truck with a 2 or more axle trailer • 3-axle truck with 1 or more axle trailer.
Class 5:	All RV's regardless of the number of axles.
Class 6:	All bus or extra large passage vans regardless of the number of axles.

AM Peak Hour Trips (Drwy 1)												
	Enter						Exit					
Class	1	2	3	4	5	6	1	2	3	4	5	6
Tuesday	23	2	0	0	0	0	3	0	0	0	0	0
Wednesday	22	1	1	0	0	0	4	0	0	0	0	0
Thursday	23	2	0	0	0	0	1	0	0	0	0	0
Average	**23**	**2**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**0**

AM Peak Hour Trips (Drwy 4)												
	Enter						Exit					
Class	1	2	3	4	5	6	1	2	3	4	5	6
Tuesday	25	1	0	0	0	0	5	1	0	0	0	0
Wednesday	21	1	0	0	0	0	3	2	1	0	0	0
Thursday	19	1	0	0	0	0	2	1	4	0	0	0
Average	**22**	**1**	**0**	**0**	**0**	**0**	**3**	**1**	**2**	**0**	**0**	**0**

AM Peak Hour Trips												
	Enter						Exit					
Class	1	2	3	4	5	6	1	2	3	4	5	6
Peak Hour Trips	45	3	0	0	0	0	6	1	2	0	0	0

AM Peak Hour Trips		PM Peak Hour Trips	
In	Out	In	Out
48	9	13	51

Assumes only two shifts			
AM Peak Hour Trips		PM Peak Hour Trips	
In	Out	In	Out
32	6	9	34

PM Peak Hour Trips (Drwy 1)												
	Enter						Exit					
Class	1	2	3	4	5	6	1	2	3	4	5	6
Tuesday	8	0	0	0	0	0	25	3	0	0	0	0
Wednesday	3	2	0	0	0	0	34	2	0	0	0	0
Thursday	4	0	0	0	0	0	32	3	0	0	0	0
Average	**5**	**1**	**0**	**0**	**0**	**0**	**30**	**3**	**0**	**0**	**0**	**0**

PM Peak Hour Trips (Drwy 4)												
	Enter						Exit					
Class	1	2	3	4	5	6	1	2	3	4	5	6
Tuesday	6	2	0	0	0	0	17	1	0	0	0	0
Wednesday	5	2	0	0	0	0	21	2	0	0	0	0
Thursday	4	3	0	0	0	0	14	0	0	0	0	0
Average	**5**	**2**	**0**	**0**	**0**	**0**	**17**	**1**	**0**	**0**	**0**	**0**

PM Peak Hour Trips												
	Enter						Exit					
Class	1	2	3	4	5	6	1	2	3	4	5	6
Peak Hour Trips	10	3	0	0	0	0	47	4	0	0	0	0

AM Peak Hour Trips												
	Enter						Exit					
Class	1	2	3	4	5	6	1	2	3	4	5	6
Peak Hour Trips	30	2	0	0	0	0	4	1	1	0	0	0

PM Peak Hour Trips												
	Enter						Exit					
Class	1	2	3	4	5	6	1	2	3	4	5	6
Peak Hour Trips	7	2	0	0	0	0	31	3	0	0	0	0

	AM Peak Hour Trips		PM Peak Hour Trips	
	In	Out	In	Out
Peak Hour Trips (PV and HV combined)	32	6	9	34

Passenger Vehicles
Heavy Vehicles

Vehicle Classification	Driveway 1 (Daily)			Driveway 2 (Daily)		
	Tuesday	Wednesday	Thursday	Tuesday	Wednesday	Thursday
Class 1	301	342	337	214	214	202
Class 2	20	16	17	13	19	22
Class 3	1	1	3	1	3	6
Class 4	0	0	1	1	0	1
Class 5	0	0	0	0	0	0
Class 6	0	0	2	1	0	1
Total	322	359	360	230	236	232

	Driveway 1	Driveway 2
Average Total	347	233
Average PV & 2-Axle Trucks	344	228
Average HV	3	5

Total Both Driveways	580
Total Both Driveways, PV & 2-Axle Trucks	572
Total Both Driveways, HV	8

Existing Site (Three Shifts)	Sq.ft.	Trip Gen
Office	12,500	580
Warehouse	32,500	
Manufacturing	30,000	
Total	**75000**	**580**

Trip Gen (PV)	Trip Gen (HV)
7.63/1,000 sq.ft.	0.11/1,000 sq.ft.

Trip Gen (PV)	Trip Gen (Trucks)
7.63	0.11

Proposed Site (Two Shifts)	Sq.ft.	Trip Gen
Office	8000	347.8
Warehouse	44410	
Manufacturing	15000	
Total	**67410**	**348**

Appendix E
LOS Calculation Worksheets
Existing Conditions

Intersection	
Intersection Delay, s/veh	17.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	57	138	48	47	324	11	23	40	13	19	120	126
Future Vol, veh/h	57	138	48	47	324	11	23	40	13	19	120	126
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	13	13	13	13	13	13	13	13	13	13	13	13
Mvmt Flow	65	157	55	53	368	13	26	45	15	22	136	143
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	12.7	23.7	12.2	12.9
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	37%	0%	100%	0%	0%	100%	0%	0%	14%	0%
Vol Thru, %	63%	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	63	13	57	138	48	47	324	11	139	126
LT Vol	23	0	57	0	0	47	0	0	19	0
Through Vol	40	0	0	138	0	0	324	0	120	0
RT Vol	0	13	0	0	48	0	0	11	0	126
Lane Flow Rate	72	15	65	157	55	53	368	12	158	143
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.163	0.03	0.143	0.325	0.102	0.112	0.722	0.022	0.329	0.268
Departure Headway (Hd)	8.221	7.329	7.969	7.459	6.745	7.568	7.059	6.347	7.505	6.733
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	436	488	450	483	531	476	515	567	480	534
Service Time	5.974	5.082	5.711	5.201	4.487	5.268	4.759	4.047	5.245	4.473
HCM Lane V/C Ratio	0.165	0.031	0.144	0.325	0.104	0.111	0.715	0.021	0.329	0.268
HCM Control Delay	12.6	10.3	12	13.8	10.3	11.2	26	9.2	13.9	11.9
HCM Lane LOS	B	B	B	B	B	B	D	A	B	B
HCM 95th-tile Q	0.6	0.1	0.5	1.4	0.3	0.4	5.9	0.1	1.4	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	1132	4	2	1546	24	0	0	3	17	2	127
Future Volume (veh/h)	38	1132	4	2	1546	24	0	0	3	17	2	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	41	1217	4	2	1662	24	0	0	3	18	2	110
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	68	2569	8	5	2408	35	0	12	9	168	19	156
Arrive On Green	0.04	0.71	0.71	0.00	0.68	0.68	0.00	0.00	0.01	0.10	0.10	0.10
Sat Flow, veh/h	1767	3604	12	1767	3556	51	0	1856	1511	1598	178	1490
Grp Volume(v), veh/h	41	595	626	2	823	863	0	0	3	20	0	110
Grp Sat Flow(s),veh/h/ln	1767	1763	1853	1767	1763	1844	0	1856	1511	1776	0	1490
Q Serve(g_s), s	3.4	22.0	22.0	0.2	42.4	42.6	0.0	0.0	0.3	1.5	0.0	10.7
Cycle Q Clear(g_c), s	3.4	22.0	22.0	0.2	42.4	42.6	0.0	0.0	0.3	1.5	0.0	10.7
Prop In Lane	1.00		0.01	1.00		0.03	0.00		1.00	0.90		1.00
Lane Grp Cap(c), veh/h	68	1257	1321	5	1194	1249	0	12	9	186	0	156
V/C Ratio(X)	0.61	0.47	0.47	0.42	0.69	0.69	0.00	0.00	0.32	0.11	0.00	0.70
Avail Cap(c_a), veh/h	218	1257	1321	218	1194	1249	0	167	136	290	0	243
HCM Platoon Ratio	1.00	1.00	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	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	9.3	9.3	74.7	14.6	14.7	0.0	0.0	74.2	60.8	0.0	64.9
Incr Delay (d2), s/veh	8.5	1.3	1.2	50.9	1.7	1.6	0.0	0.0	18.0	0.3	0.0	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	1.7	8.6	9.0	0.1	16.9	17.7	0.0	0.0	0.2	0.7	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.5	10.6	10.6	125.6	16.3	16.3	0.0	0.0	92.2	61.0	0.0	70.5
LnGrp LOS	E	B	B	F	B	B	A	A	F	E	A	E
Approach Vol, veh/h		1262			1688			3			130	
Approach Delay, s/veh		12.8			16.5			92.2			69.1	
Approach LOS		B			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.9	113.4		22.2	12.2	108.1		7.4				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	18.5	42.5		24.5	18.5	67.5		13.5				
Max Q Clear Time (g_c+I1), s	2.2	24.0		12.7	5.4	44.6		2.3				
Green Ext Time (p_c), s	0.0	8.2		0.3	0.0	14.0		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	17.3
HCM 6th LOS	B

Notes

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

Intersection	
Intersection Delay, s/veh	59.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	181	560	23	16	243	15	28	71	40	11	58	85
Future Vol, veh/h	181	560	23	16	243	15	28	71	40	11	58	85
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, %	11	11	11	11	11	11	11	11	11	11	11	11
Mvmt Flow	195	602	25	17	261	16	30	76	43	12	62	91
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	91.1	20.1	13.8	13
HCM LOS	F	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	28%	0%	100%	0%	0%	100%	0%	0%	16%	0%
Vol Thru, %	72%	0%	0%	100%	0%	0%	100%	0%	84%	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	40	181	560	23	16	243	15	69	85
LT Vol	28	0	181	0	0	16	0	0	11	0
Through Vol	71	0	0	560	0	0	243	0	58	0
RT Vol	0	40	0	0	23	0	0	15	0	85
Lane Flow Rate	106	43	195	602	25	17	261	16	74	91
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.254	0.093	0.405	1.167	0.043	0.04	0.568	0.032	0.175	0.196
Departure Headway (Hd)	8.948	8.095	7.484	6.976	6.264	8.716	8.204	7.488	8.851	8.061
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	403	445	479	518	567	413	442	481	408	448
Service Time	6.648	5.795	5.274	4.765	4.053	6.416	5.904	5.188	6.551	5.761
HCM Lane V/C Ratio	0.263	0.097	0.407	1.162	0.044	0.041	0.59	0.033	0.181	0.203
HCM Control Delay	14.7	11.6	15.3	118.9	9.3	11.8	21.2	10.4	13.4	12.7
HCM Lane LOS	B	B	C	F	A	B	C	B	B	B
HCM 95th-tile Q	1	0.3	1.9	21.2	0.1	0.1	3.4	0.1	0.6	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1686	0	0	1243	36	0	0	0	36	0	42
Future Volume (veh/h)	43	1686	0	0	1243	36	0	0	0	36	0	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	44	1720	0	0	1268	34	0	0	0	37	0	35
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	70	3025	0	1	2718	73	0	1	1	108	0	94
Arrive On Green	0.04	0.85	0.00	0.00	0.77	0.77	0.00	0.00	0.00	0.06	0.00	0.06
Sat Flow, veh/h	1781	3647	0	1781	3535	95	0	1870	1585	1738	0	1518
Grp Volume(v), veh/h	44	1720	0	0	637	665	0	0	0	37	0	35
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1853	0	1870	1585	1738	0	1518
Q Serve(g_s), s	3.7	20.9	0.0	0.0	19.4	19.4	0.0	0.0	0.0	3.1	0.0	3.3
Cycle Q Clear(g_c), s	3.7	20.9	0.0	0.0	19.4	19.4	0.0	0.0	0.0	3.1	0.0	3.3
Prop In Lane	1.00		0.00	1.00		0.05	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	3025	0	1	1366	1424	0	1	1	108	0	94
V/C Ratio(X)	0.63	0.57	0.00	0.00	0.47	0.47	0.00	0.00	0.00	0.34	0.00	0.37
Avail Cap(c_a), veh/h	220	3025	0	220	1366	1424	0	168	143	284	0	248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	3.2	0.0	0.0	6.3	6.3	0.0	0.0	0.0	67.4	0.0	67.5
Incr Delay (d2), s/veh	9.0	0.8	0.0	0.0	1.1	1.1	0.0	0.0	0.0	1.9	0.0	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	1.9	5.9	0.0	0.0	7.1	7.4	0.0	0.0	0.0	1.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.0	4.0	0.0	0.0	7.4	7.4	0.0	0.0	0.0	69.3	0.0	70.0
LnGrp LOS	E	A	A	A	A	A	A	A	A	E	A	E
Approach Vol, veh/h		1764			1302			0			72	
Approach Delay, s/veh		5.9			7.4			0.0			69.6	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	10.0	134.2		15.8	12.4	121.8		0.0				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	18.5	67.5		24.5	18.5	67.5		13.5				
Max Q Clear Time (g_c+I1), s	10.0	22.9		5.3	5.7	21.4		0.0				
Green Ext Time (p_c), s	0.0	21.8		0.2	0.1	12.6		0.0				

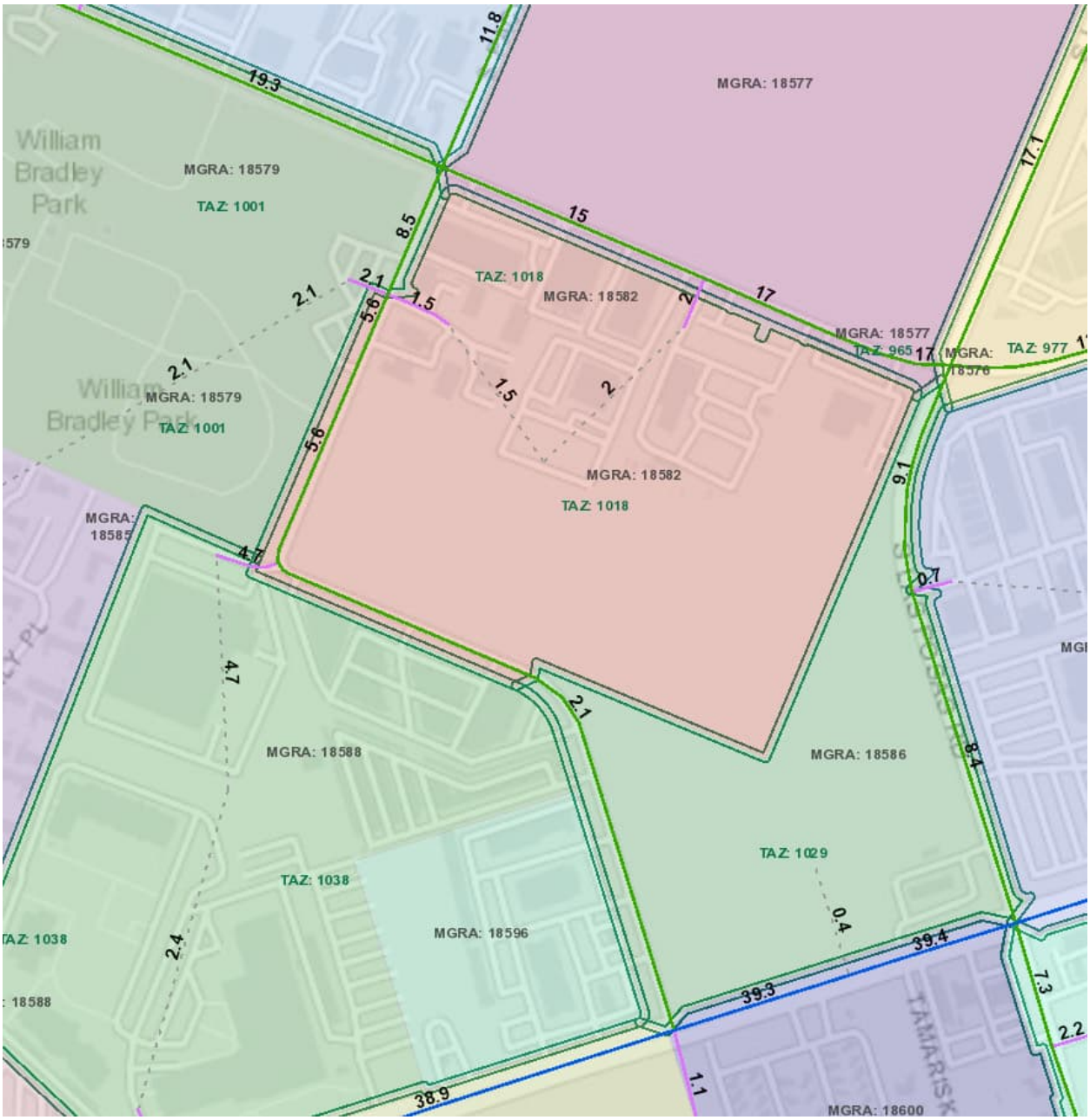
Intersection Summary	
HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Notes

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

Appendix F
Traffic Volume Growth Calculations

Year 2050


MGRA: 18577
MGRA: 18579
TAZ: 1001
TAZ: 1018
MGRA: 18582
MGRA: 18577
TAZ: 965
MGRA: 18576
TAZ: 977
MGRA: 18579
TAZ: 1001
MGRA: 18582
TAZ: 1018
MGRA: 18585
MGRA: 18588
MGRA: 18586
TAZ: 1029
TAZ: 1038
MGRA: 18596
TAZ: 1038
MGRA: 18588
MGRA: 18600
19.3
11.8
17.1
8.5
15
17
2.1
2.1
5.6
1.5
2
2.1
5.6
1.5
2
9.1
4.7
0.7
4.7
2.1
8.4
0.4
39.4
39.3
7.3
2.2
2.4
38.9
1.1

Appendix G
LOS Calculation Worksheets
Near-Term Year 2024 Base Conditions

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	58	140	49	48	328	12	24	41	14	20	122	128
Future Vol, veh/h	58	140	49	48	328	12	24	41	14	20	122	128
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	13	13	13	13	13	13	13	13	13	13	13	13
Mvmt Flow	66	159	56	55	373	14	27	47	16	23	139	145
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	12.9	24.5	12.4	13.2
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	37%	0%	100%	0%	0%	100%	0%	0%	14%	0%
Vol Thru, %	63%	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	65	14	58	140	49	48	328	12	142	128
LT Vol	24	0	58	0	0	48	0	0	20	0
Through Vol	41	0	0	140	0	0	328	0	122	0
RT Vol	0	14	0	0	49	0	0	12	0	128
Lane Flow Rate	74	16	66	159	56	55	373	14	161	145
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.17	0.033	0.147	0.333	0.105	0.115	0.734	0.024	0.339	0.275
Departure Headway (Hd)	8.3	7.405	8.04	7.53	6.815	7.599	7.09	6.378	7.57	6.795
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	432	483	446	477	526	472	511	561	476	529
Service Time	6.049	5.154	5.783	5.273	4.558	5.336	4.827	4.114	5.309	4.535
HCM Lane V/C Ratio	0.171	0.033	0.148	0.333	0.106	0.117	0.73	0.025	0.338	0.274
HCM Control Delay	12.8	10.4	12.2	14	10.4	11.3	27	9.3	14.2	12.1
HCM Lane LOS	B	B	B	B	B	B	D	A	B	B
HCM 95th-tile Q	0.6	0.1	0.5	1.4	0.3	0.4	6.1	0.1	1.5	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	1144	5	3	1562	25	0	0	4	18	3	129
Future Volume (veh/h)	39	1144	5	3	1562	25	0	0	4	18	3	129
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1230	5	3	1680	25	0	0	4	19	3	112
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	68	2551	10	7	2395	36	0	15	12	163	26	158
Arrive On Green	0.04	0.71	0.71	0.00	0.67	0.67	0.00	0.00	0.01	0.11	0.11	0.11
Sat Flow, veh/h	1767	3601	15	1767	3554	53	0	1856	1511	1536	243	1491
Grp Volume(v), veh/h	42	602	633	3	832	873	0	0	4	22	0	112
Grp Sat Flow(s),veh/h/ln	1767	1763	1852	1767	1763	1844	0	1856	1511	1779	0	1491
Q Serve(g_s), s	3.5	22.7	22.7	0.3	43.7	44.0	0.0	0.0	0.4	1.7	0.0	10.9
Cycle Q Clear(g_c), s	3.5	22.7	22.7	0.3	43.7	44.0	0.0	0.0	0.4	1.7	0.0	10.9
Prop In Lane	1.00		0.01	1.00		0.03	0.00		1.00	0.86		1.00
Lane Grp Cap(c), veh/h	68	1249	1313	7	1188	1243	0	15	12	189	0	158
V/C Ratio(X)	0.62	0.48	0.48	0.43	0.70	0.70	0.00	0.00	0.32	0.12	0.00	0.71
Avail Cap(c_a), veh/h	218	1249	1313	218	1188	1243	0	167	136	291	0	243
HCM Platoon Ratio	1.00	1.00	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	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	9.7	9.7	74.5	15.1	15.1	0.0	0.0	74.0	60.7	0.0	64.8
Incr Delay (d2), s/veh	8.7	1.3	1.3	37.5	1.8	1.8	0.0	0.0	14.4	0.3	0.0	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	1.8	8.9	9.4	0.2	17.5	18.4	0.0	0.0	0.2	0.8	0.0	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.7	11.0	10.9	112.0	16.9	16.9	0.0	0.0	88.3	61.0	0.0	70.6
LnGrp LOS	E	B	B	F	B	B	A	A	F	E	A	E
Approach Vol, veh/h		1277			1708			4			134	
Approach Delay, s/veh		13.2			17.1			88.3			69.0	
Approach LOS		B			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	112.8		22.4	12.3	107.6		7.7				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	18.5	42.5		24.5	18.5	67.5		13.5				
Max Q Clear Time (g_c+I1), s	2.3	24.7		12.9	5.5	46.0		2.4				
Green Ext Time (p_c), s	0.0	8.2		0.3	0.0	13.6		0.0				

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

Notes

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

Intersection	
Intersection Delay, s/veh	62.5
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	183	565	24	17	246	16	29	72	41	12	59	86
Future Vol, veh/h	183	565	24	17	246	16	29	72	41	12	59	86
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, %	11	11	11	11	11	11	11	11	11	11	11	11
Mvmt Flow	197	608	26	18	265	17	31	77	44	13	63	92
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	96.6	20.5	14	13.2
HCM LOS	F	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	29%	0%	100%	0%	0%	100%	0%	0%	17%	0%
Vol Thru, %	71%	0%	0%	100%	0%	0%	100%	0%	83%	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	101	41	183	565	24	17	246	16	71	86
LT Vol	29	0	183	0	0	17	0	0	12	0
Through Vol	72	0	0	565	0	0	246	0	59	0
RT Vol	0	41	0	0	24	0	0	16	0	86
Lane Flow Rate	109	44	197	608	26	18	265	17	76	92
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.26	0.095	0.412	1.187	0.045	0.043	0.579	0.034	0.181	0.199
Departure Headway (Hd)	9.021	8.166	7.542	7.033	6.321	8.779	8.268	7.552	8.925	8.131
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	401	441	474	516	562	410	439	477	405	444
Service Time	6.721	5.866	5.328	4.819	4.106	6.479	5.968	5.252	6.625	5.831
HCM Lane V/C Ratio	0.272	0.1	0.416	1.178	0.046	0.044	0.604	0.036	0.188	0.207
HCM Control Delay	14.9	11.7	15.6	126.5	9.4	11.9	21.7	10.5	13.6	12.8
HCM Lane LOS	B	B	C	F	A	B	C	B	B	B
HCM 95th-tile Q	1	0.3	2	22	0.1	0.1	3.6	0.1	0.7	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	1703	0	0	1256	37	0	0	0	37	0	43
Future Volume (veh/h)	44	1703	0	0	1256	37	0	0	0	37	0	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	45	1738	0	0	1282	35	0	0	0	38	0	36
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	70	3025	0	1	2714	74	0	1	1	108	0	94
Arrive On Green	0.04	0.85	0.00	0.00	0.77	0.77	0.00	0.00	0.00	0.06	0.00	0.06
Sat Flow, veh/h	1781	3647	0	1781	3533	96	0	1870	1585	1738	0	1518
Grp Volume(v), veh/h	45	1738	0	0	644	673	0	0	0	38	0	36
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1853	0	1870	1585	1738	0	1518
Q Serve(g_s), s	3.7	21.4	0.0	0.0	19.8	19.8	0.0	0.0	0.0	3.1	0.0	3.4
Cycle Q Clear(g_c), s	3.7	21.4	0.0	0.0	19.8	19.8	0.0	0.0	0.0	3.1	0.0	3.4
Prop In Lane	1.00		0.00	1.00		0.05	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	70	3025	0	1	1365	1423	0	1	1	108	0	94
V/C Ratio(X)	0.64	0.57	0.00	0.00	0.47	0.47	0.00	0.00	0.00	0.35	0.00	0.38
Avail Cap(c_a), veh/h	220	3025	0	220	1365	1423	0	168	143	284	0	248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	3.3	0.0	0.0	6.3	6.3	0.0	0.0	0.0	67.4	0.0	67.6
Incr Delay (d2), s/veh	9.3	0.8	0.0	0.0	1.2	1.1	0.0	0.0	0.0	1.9	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	6.0	0.0	0.0	7.3	7.6	0.0	0.0	0.0	1.5	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.3	4.1	0.0	0.0	7.5	7.5	0.0	0.0	0.0	69.4	0.0	70.1
LnGrp LOS	F	A	A	A	A	A	A	A	A	E	A	E
Approach Vol, veh/h		1783			1317			0			74	
Approach Delay, s/veh		6.0			7.5			0.0			69.7	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	134.2		15.8	12.4	121.7		0.0
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	18.5	67.5		24.5	18.5	67.5		13.5
Max Q Clear Time (g_c+I1), s	10.0	23.4		5.4	5.7	21.8		0.0
Green Ext Time (p_c), s	0.0	22.1		0.2	0.1	12.8		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.1
HCM 6th LOS	A

Notes

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

Appendix H
LOS Calculation Worksheets
Near-Term Year 2024 Base with Project Conditions

Intersection	
Intersection Delay, s/veh	17.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	58	140	55	58	328	12	25	41	16	20	122	128
Future Vol, veh/h	58	140	55	58	328	12	25	41	16	20	122	128
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles, %	13	13	13	13	13	13	13	13	13	13	13	13
Mvmt Flow	66	159	63	66	373	14	28	47	18	23	139	145
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	12.9	24.6	12.4	13.3
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	38%	0%	100%	0%	0%	100%	0%	0%	14%	0%
Vol Thru, %	62%	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	66	16	58	140	55	58	328	12	142	128
LT Vol	25	0	58	0	0	58	0	0	20	0
Through Vol	41	0	0	140	0	0	328	0	122	0
RT Vol	0	16	0	0	55	0	0	12	0	128
Lane Flow Rate	75	18	66	159	62	66	373	14	161	145
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.174	0.038	0.148	0.335	0.119	0.14	0.739	0.024	0.342	0.277
Departure Headway (Hd)	8.371	7.471	8.098	7.587	6.873	7.646	7.137	6.424	7.64	6.865
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	429	479	443	474	521	470	507	557	471	524
Service Time	6.12	5.22	5.841	5.33	4.615	5.382	4.873	4.16	5.379	4.604
HCM Lane V/C Ratio	0.175	0.038	0.149	0.335	0.119	0.14	0.736	0.025	0.342	0.277
HCM Control Delay	12.9	10.5	12.2	14.1	10.5	11.6	27.5	9.3	14.3	12.2
HCM Lane LOS	B	B	B	B	B	B	D	A	B	B
HCM 95th-tile Q	0.6	0.1	0.5	1.5	0.4	0.5	6.2	0.1	1.5	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	42	1144	5	3	1562	38	0	0	4	20	3	130
Future Volume (veh/h)	42	1144	5	3	1562	38	0	0	4	20	3	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	45	1230	5	3	1680	39	0	0	4	22	3	113
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	70	2549	10	7	2366	55	0	15	12	167	23	159
Arrive On Green	0.04	0.71	0.71	0.00	0.67	0.67	0.00	0.00	0.01	0.11	0.11	0.11
Sat Flow, veh/h	1767	3601	15	1767	3519	81	0	1856	1511	1564	213	1491
Grp Volume(v), veh/h	45	602	633	3	839	880	0	0	4	25	0	113
Grp Sat Flow(s),veh/h/ln	1767	1763	1852	1767	1763	1838	0	1856	1511	1777	0	1491
Q Serve(g_s), s	3.8	22.7	22.7	0.3	44.7	45.1	0.0	0.0	0.4	1.9	0.0	11.0
Cycle Q Clear(g_c), s	3.8	22.7	22.7	0.3	44.7	45.1	0.0	0.0	0.4	1.9	0.0	11.0
Prop In Lane	1.00		0.01	1.00		0.04	0.00		1.00	0.88		1.00
Lane Grp Cap(c), veh/h	70	1248	1311	7	1185	1236	0	15	12	189	0	159
V/C Ratio(X)	0.64	0.48	0.48	0.43	0.71	0.71	0.00	0.00	0.32	0.13	0.00	0.71
Avail Cap(c_a), veh/h	218	1248	1311	218	1185	1236	0	167	136	290	0	244
HCM Platoon Ratio	1.00	1.00	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	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	9.7	9.7	74.5	15.4	15.4	0.0	0.0	74.0	60.7	0.0	64.8
Incr Delay (d2), s/veh	9.5	1.3	1.3	37.5	2.0	1.9	0.0	0.0	14.4	0.3	0.0	5.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	9.0	9.4	0.2	17.9	18.9	0.0	0.0	0.2	0.9	0.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.5	11.1	11.0	112.0	17.3	17.4	0.0	0.0	88.3	61.0	0.0	70.5
LnGrp LOS	F	B	B	F	B	B	A	A	F	E	A	E
Approach Vol, veh/h		1280			1722			4			138	
Approach Delay, s/veh		13.5			17.5			88.3			68.8	
Approach LOS		B			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	112.7		22.5	12.4	107.4		7.7				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	18.5	42.5		24.5	18.5	67.5		13.5				
Max Q Clear Time (g_c+I1), s	2.3	24.7		13.0	5.8	47.1		2.4				
Green Ext Time (p_c), s	0.0	8.1		0.3	0.1	13.2		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

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

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	72	0	16	185
Future Vol, veh/h	0	3	72	0	16	185
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	13	13	13	13	13	13
Mvmt Flow	0	3	78	0	17	201

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	313	78	0	0	78	0
Stage 1	78	-	-	-	-	-
Stage 2	235	-	-	-	-	-
Critical Hdwy	6.53	6.33	-	-	4.23	-
Critical Hdwy Stg 1	5.53	-	-	-	-	-
Critical Hdwy Stg 2	5.53	-	-	-	-	-
Follow-up Hdwy	3.617	3.417	-	-	2.317	-
Pot Cap-1 Maneuver	657	953	-	-	1454	-
Stage 1	918	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	648	953	-	-	1454	-
Mov Cap-2 Maneuver	648	-	-	-	-	-
Stage 1	918	-	-	-	-	-
Stage 2	769	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.8	0	0.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	953	1454	-
HCM Lane V/C Ratio	-	-	0.003	0.012	-
HCM Control Delay (s)	-	-	8.8	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	185	72	16	3	0
Future Vol, veh/h	0	185	72	16	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	201	78	17	3	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	95	0	-	0	288	87
Stage 1	-	-	-	-	87	-
Stage 2	-	-	-	-	201	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1493	-	-	-	700	969
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	830	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	1493	-	-	-	700	969
Mov Cap-2 Maneuver	-	-	-	-	700	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	830	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1493	-	-	-	700
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	64.7
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	183	565	26	20	246	16	36	72	51	12	59	86
Future Vol, veh/h	183	565	26	20	246	16	36	72	51	12	59	86
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, %	11	11	11	11	11	11	11	11	11	11	11	11
Mvmt Flow	197	608	28	22	265	17	39	77	55	13	63	92
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	101.5	20.8	14.2	13.4
HCM LOS	F	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	33%	0%	100%	0%	0%	100%	0%	0%	17%	0%
Vol Thru, %	67%	0%	0%	100%	0%	0%	100%	0%	83%	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	108	51	183	565	26	20	246	16	71	86
LT Vol	36	0	183	0	0	20	0	0	12	0
Through Vol	72	0	0	565	0	0	246	0	59	0
RT Vol	0	51	0	0	26	0	0	16	0	86
Lane Flow Rate	116	55	197	608	28	22	265	17	76	92
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.28	0.119	0.418	1.204	0.05	0.051	0.585	0.035	0.183	0.202
Departure Headway (Hd)	9.102	8.223	7.645	7.136	6.423	8.903	8.39	7.673	9.05	8.254
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	397	439	468	504	553	405	434	470	399	437
Service Time	6.802	5.923	5.437	4.928	4.214	6.603	6.09	5.373	6.75	5.954
HCM Lane V/C Ratio	0.292	0.125	0.421	1.206	0.051	0.054	0.611	0.036	0.19	0.211
HCM Control Delay	15.3	12	15.9	133.4	9.6	12.1	22.2	10.7	13.8	13
HCM Lane LOS	C	B	C	F	A	B	C	B	B	B
HCM 95th-tile Q	1.1	0.4	2	22.6	0.2	0.2	3.6	0.1	0.7	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	1703	0	0	1256	41	0	0	0	51	0	46
Future Volume (veh/h)	45	1703	0	0	1256	41	0	0	0	51	0	46
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	1738	0	0	1282	39	0	0	0	52	0	39
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	71	3021	0	1	2700	82	0	1	1	110	0	96
Arrive On Green	0.04	0.85	0.00	0.00	0.77	0.77	0.00	0.00	0.00	0.06	0.00	0.06
Sat Flow, veh/h	1781	3647	0	1781	3520	107	0	1870	1585	1739	0	1519
Grp Volume(v), veh/h	46	1738	0	0	647	674	0	0	0	52	0	39
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1851	0	1870	1585	1739	0	1519
Q Serve(g_s), s	3.8	21.5	0.0	0.0	20.0	20.0	0.0	0.0	0.0	4.3	0.0	3.7
Cycle Q Clear(g_c), s	3.8	21.5	0.0	0.0	20.0	20.0	0.0	0.0	0.0	4.3	0.0	3.7
Prop In Lane	1.00		0.00	1.00		0.06	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	71	3021	0	1	1363	1419	0	1	1	110	0	96
V/C Ratio(X)	0.65	0.58	0.00	0.00	0.47	0.48	0.00	0.00	0.00	0.47	0.00	0.41
Avail Cap(c_a), veh/h	220	3021	0	220	1363	1419	0	168	143	284	0	248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	3.3	0.0	0.0	6.4	6.4	0.0	0.0	0.0	67.8	0.0	67.5
Incr Delay (d2), s/veh	9.6	0.8	0.0	0.0	1.2	1.1	0.0	0.0	0.0	3.1	0.0	2.7
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	1.9	6.1	0.0	0.0	7.4	7.7	0.0	0.0	0.0	2.0	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.5	4.1	0.0	0.0	7.6	7.6	0.0	0.0	0.0	70.9	0.0	70.3
LnGrp LOS	F	A	A	A	A	A	A	A	A	E	A	E
Approach Vol, veh/h		1784			1321			0			91	
Approach Delay, s/veh		6.1			7.6			0.0			70.7	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	134.0		16.0	12.5	121.5		0.0
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	18.5	67.5		24.5	18.5	67.5		13.5
Max Q Clear Time (g_c+I1), s	10.0	23.5		6.3	5.8	22.0		0.0
Green Ext Time (p_c), s	0.0	22.0		0.3	0.1	12.9		0.0

Intersection Summary	
HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A

Notes

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

Intersection	
Int Delay, s/veh	0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	112	0	5	90
Future Vol, veh/h	0	17	112	0	5	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	11	11	11	11	11	11
Mvmt Flow	0	18	122	0	5	98

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	230	122	0	0	122	0
Stage 1	122	-	-	-	-	-
Stage 2	108	-	-	-	-	-
Critical Hdwy	6.51	6.31	-	-	4.21	-
Critical Hdwy Stg 1	5.51	-	-	-	-	-
Critical Hdwy Stg 2	5.51	-	-	-	-	-
Follow-up Hdwy	3.599	3.399	-	-	2.299	-
Pot Cap-1 Maneuver	739	905	-	-	1411	-
Stage 1	882	-	-	-	-	-
Stage 2	894	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	736	905	-	-	1411	-
Mov Cap-2 Maneuver	736	-	-	-	-	-
Stage 1	882	-	-	-	-	-
Stage 2	890	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.4
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	905	1411	-
HCM Lane V/C Ratio	-	-	0.02	0.004	-
HCM Control Delay (s)	-	-	9.1	7.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	90	112	5	17	0
Future Vol, veh/h	0	90	112	5	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	98	122	5	18	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	127	0	-	0	223	125
Stage 1	-	-	-	-	125	-
Stage 2	-	-	-	-	98	-
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	1459	-	-	-	765	926
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	926	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1459	-	-	-	765	926
Mov Cap-2 Maneuver	-	-	-	-	765	-
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	926	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	9.8
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1459	-	-	-	765
HCM Lane V/C Ratio	-	-	-	-	0.024
HCM Control Delay (s)	0	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Appendix I
Transportation Forecast Information Center (TFIC) Volumes and Horizon Year 2050 Volume Development

AM Peak Hour Volumes		Existing Movement Volume												Directional volume				Exisitng ADT				Future ADT			
INTID	Name	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W	N Leg	S Leg	E Leg	W Leg	N Leg	S Leg	E Leg	W Leg
1	S Pacific Street & Linda Vista Drive	23	40	13	19	120	126	57	138	48	47	324	11	265	76	382	243	11700	7800	14900	19800	11800	8500	15000	19300
2	S Pacific Street & W San Marcos Boulevard	0	0	3	17	2	127	38	1132	4	2	1546	24	146	3	1572	1174	1600	1	41700	40900	2100	1	39300	38900

AM Peak Hour Volumes		Growth (%)				Leg Growth				Future Directional Volume				Future Directional Volume				Movement Growth											
INTID	Name	N Leg	S Leg	E Leg	W Leg	N Leg	S Leg	E Leg	W Leg	N	S	E	W	N	S	E	W	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	S Pacific Street & Linda Vista Drive	101%	109%	101%	**97%**	101%	109%	101%	97%	267	83	385	237	2	7	3	-6	2	2	2	1	1	1	-2	-2	1	1	1	1
2	S Pacific Street & W San Marcos Boulevard	**131%**	100%	**94%**	**95%**	131%	100%	94%	95%	192	3	1482	1117	46	0	-90	-57	0	0	0	15	16	15	-23	-17	-28	-28	-26	-36

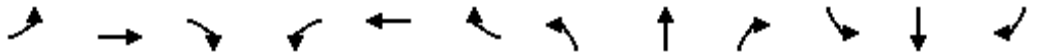
AM Peak Hour Volumes		Future Movement (Unadjusted)												Future Movement (Adjusted)											
INTID	Name	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	S Pacific Street & Linda Vista Drive	25	42	15	20	121	127	55	136	49	48	325	12	30	45	20	30	130	145	65	140	50	50	330	15
2	S Pacific Street & W San Marcos Boulevard	0	0	3	32	18	142	15	1115	-24	-26	1520	-12	0	0	5	35	20	145	40	1140	5	5	1565	25

PM Peak Hour Volumes		Existing Movement Volume												Directional volume				Exisitng ADT				Future ADT			
INTID	Name	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	N	S	E	W	N Leg	S Leg	E Leg	W Leg	N Leg	S Leg	E Leg	W Leg
1	S Pacific Street & Linda Vista Drive	28	71	40	11	58	85	181	560	23	16	243	15	154	139	274	764	11700	7800	14900	19800	11800	8500	15000	19300
2	S Pacific Street & W San Marcos Boulevard	0	0	0	36	0	42	43	1686	0	0	1243	36	78	0	1279	1729	1600	1	41700	40900	2100	1	39300	38900

PM Peak Hour Volumes		Growth (%)				Leg Growth				Future Directional Volume				Future Directional Volume				Movement Growth											
INTID	Name	N Leg	S Leg	E Leg	W Leg	N Leg	S Leg	E Leg	W Leg	N	S	E	W	N	S	E	W	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	S Pacific Street & Linda Vista Drive	101%	109%	101%	**97%**	101%	109%	101%	97%	155	151	276	745	1	12	2	-19	4	4	4	0	0	0	-6	-6	1	1	1	1
2	S Pacific Street & W San Marcos Boulevard	**131%**	100%	**94%**	**95%**	131%	100%	94%	95%	102	0	1205	1644	24	0	-74	-85	0	0	0	8	8	8	-34	-24	-23	-23	-21	-30

PM Peak Hour Volumes		Future Movement (Unadjusted)												Future Movement (Adjusted)											
INTID	Name	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	S Pacific Street & Linda Vista Drive	32	75	44	11	58	85	175	554	24	17	244	16	35	80	45	15	65	95	200	565	25	20	245	25
2	S Pacific Street & W San Marcos Boulevard	0	0	0	44	0	50	9	1662	0	0	1222	6	0	0	0	45	0	55	55	1705	0	0	1250	40

Appendix J
LOS Calculation Worksheets
Horizon Year 2050 Base Conditions



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	140	50	50	330	15	30	45	20	30	130	145
Future Volume (veh/h)	65	140	50	50	330	15	30	45	20	30	130	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		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	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707
Adj Flow Rate, veh/h	68	147	53	53	347	16	32	47	21	32	137	153
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, %	13	13	13	13	13	13	13	13	13	13	13	13
Cap, veh/h	109	538	456	92	493	23	294	469	396	497	199	223
Arrive On Green	0.07	0.32	0.32	0.06	0.30	0.30	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	1626	1707	1445	1626	1619	75	993	1707	1444	1215	726	811
Grp Volume(v), veh/h	68	147	53	53	0	363	32	47	21	32	0	290
Grp Sat Flow(s),veh/h/ln	1626	1707	1445	1626	0	1694	993	1707	1444	1215	0	1537
Q Serve(g_s), s	1.6	2.5	1.0	1.2	0.0	7.2	1.1	0.8	0.4	0.8	0.0	6.4
Cycle Q Clear(g_c), s	1.6	2.5	1.0	1.2	0.0	7.2	7.6	0.8	0.4	1.6	0.0	6.4
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	109	538	456	92	0	516	294	469	396	497	0	422
V/C Ratio(X)	0.62	0.27	0.12	0.58	0.00	0.70	0.11	0.10	0.05	0.06	0.00	0.69
Avail Cap(c_a), veh/h	490	1678	1420	362	0	1532	815	1365	1155	1135	0	1229
HCM Platoon Ratio	1.00	1.00	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	17.3	9.8	9.3	17.6	0.0	11.7	15.8	10.3	10.2	10.9	0.0	12.4
Incr Delay (d2), s/veh	5.6	0.3	0.1	5.7	0.0	1.8	0.2	0.1	0.1	0.1	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.7	0.3	0.5	0.0	2.3	0.2	0.2	0.1	0.2	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.0	10.1	9.4	23.2	0.0	13.5	15.9	10.4	10.2	11.0	0.0	14.4
LnGrp LOS	C	B	A	C	A	B	B	B	B	B	A	B
Approach Vol, veh/h		268			416			100			322	
Approach Delay, s/veh		13.2			14.8			12.1			14.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.0	6.6	16.5		15.0	7.1	16.1				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		30.5	8.5	37.5		30.5	11.5	34.5				
Max Q Clear Time (g_c+I1), s		9.6	3.2	4.5		8.4	3.6	9.2				
Green Ext Time (p_c), s		0.4	0.0	1.0		2.0	0.1	2.3				

Intersection Summary												
HCM 6th Ctrl Delay			13.9									
HCM 6th LOS			B									

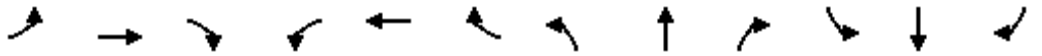
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	1140	5	5	1565	25	0	0	5	35	20	145
Future Volume (veh/h)	40	1140	5	5	1565	25	0	0	5	35	20	145
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	42	1200	5	5	1647	24	0	0	5	37	21	127
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, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	68	2506	10	11	2360	34	0	19	15	131	74	171
Arrive On Green	0.04	0.70	0.70	0.01	0.66	0.66	0.00	0.00	0.01	0.11	0.11	0.11
Sat Flow, veh/h	1767	3600	15	1767	3555	52	0	1856	1511	1147	651	1495
Grp Volume(v), veh/h	42	588	617	5	815	856	0	0	5	58	0	127
Grp Sat Flow(s),veh/h/ln	1767	1763	1852	1767	1763	1844	0	1856	1511	1798	0	1495
Q Serve(g_s), s	3.5	22.8	22.8	0.4	43.4	43.7	0.0	0.0	0.5	4.4	0.0	12.3
Cycle Q Clear(g_c), s	3.5	22.8	22.8	0.4	43.4	43.7	0.0	0.0	0.5	4.4	0.0	12.3
Prop In Lane	1.00		0.01	1.00		0.03	0.00		1.00	0.64		1.00
Lane Grp Cap(c), veh/h	68	1227	1289	11	1170	1224	0	19	15	206	0	171
V/C Ratio(X)	0.62	0.48	0.48	0.45	0.70	0.70	0.00	0.00	0.33	0.28	0.00	0.74
Avail Cap(c_a), veh/h	218	1227	1289	218	1170	1224	0	167	136	294	0	244
HCM Platoon Ratio	1.00	1.00	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	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	10.4	10.4	74.3	15.8	15.8	0.0	0.0	73.7	60.8	0.0	64.3
Incr Delay (d2), s/veh	8.7	1.3	1.3	26.1	1.8	1.8	0.0	0.0	12.2	0.7	0.0	7.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	9.1	9.5	0.3	17.5	18.4	0.0	0.0	0.2	2.1	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.7	11.7	11.7	100.4	17.6	17.6	0.0	0.0	85.9	61.5	0.0	71.4
LnGrp LOS	E	B	B	F	B	B	A	A	F	E	A	E
Approach Vol, veh/h		1247			1676			5			185	
Approach Delay, s/veh		14.0			17.8			85.9			68.3	
Approach LOS		B			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	7.4	110.9		23.6	12.3	106.1		8.0
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	18.5	42.5		24.5	18.5	67.5		13.5
Max Q Clear Time (g_c+I1), s	2.4	24.8		14.3	5.5	45.7		2.5
Green Ext Time (p_c), s	0.0	7.9		0.5	0.0	13.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	19.4
HCM 6th LOS	B

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)	200	565	25	20	245	25	35	80	45	15	65	95
Future Volume (veh/h)	200	565	25	20	245	25	35	80	45	15	65	95
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		1.00
Parking Bus, Adj	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	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737
Adj Flow Rate, veh/h	211	595	26	21	258	26	37	84	47	16	68	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
Percent Heavy Veh, %	11	11	11	11	11	11	11	11	11	11	11	11
Cap, veh/h	275	783	648	43	482	49	285	335	283	353	122	180
Arrive On Green	0.17	0.45	0.45	0.03	0.31	0.31	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1654	1737	1438	1654	1552	156	1129	1737	1468	1167	634	932
Grp Volume(v), veh/h	211	595	26	21	0	284	37	84	47	16	0	168
Grp Sat Flow(s),veh/h/ln	1654	1737	1438	1654	0	1708	1129	1737	1468	1167	0	1566
Q Serve(g_s), s	5.0	11.7	0.4	0.5	0.0	5.6	1.3	1.7	1.1	0.5	0.0	4.0
Cycle Q Clear(g_c), s	5.0	11.7	0.4	0.5	0.0	5.6	5.2	1.7	1.1	2.2	0.0	4.0
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		0.60
Lane Grp Cap(c), veh/h	275	783	648	43	0	530	285	335	283	353	0	302
V/C Ratio(X)	0.77	0.76	0.04	0.49	0.00	0.54	0.13	0.25	0.17	0.05	0.00	0.56
Avail Cap(c_a), veh/h	831	2106	1744	263	0	1485	634	872	737	714	0	787
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.3	9.4	6.3	19.6	0.0	11.6	17.3	14.0	13.7	14.9	0.0	14.9
Incr Delay (d2), s/veh	4.5	1.6	0.0	8.4	0.0	0.8	0.2	0.4	0.3	0.1	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	3.4	0.1	0.3	0.0	1.8	0.3	0.6	0.3	0.1	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.8	10.9	6.3	28.0	0.0	12.5	17.5	14.4	14.0	14.9	0.0	16.5
LnGrp LOS	C	B	A	C	A	B	B	B	B	B	A	B
Approach Vol, veh/h		832			305			168			184	
Approach Delay, s/veh		13.3			13.6			14.9			16.4	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		12.4	5.6	22.9		12.4	11.3	17.2				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	6.5	49.5		20.5	20.5	35.5				
Max Q Clear Time (g_c+I1), s		7.2	2.5	13.7		6.0	7.0	7.6				
Green Ext Time (p_c), s		0.5	0.0	4.7		0.8	0.5	1.8				

Intersection Summary												
HCM 6th Ctrl Delay			13.9									
HCM 6th LOS			B									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	1705	0	0	1250	40	0	0	0	45	0	55
Future Volume (veh/h)	55	1705	0	0	1250	40	0	0	0	45	0	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	58	1795	0	0	1316	39	0	0	0	47	0	50
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	3020	0	1	2692	80	0	1	1	111	0	97
Arrive On Green	0.04	0.85	0.00	0.00	0.76	0.76	0.00	0.00	0.00	0.06	0.00	0.06
Sat Flow, veh/h	1781	3647	0	1781	3524	104	0	1870	1585	1739	0	1519
Grp Volume(v), veh/h	58	1795	0	0	663	692	0	0	0	47	0	50
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1851	0	1870	1585	1739	0	1519
Q Serve(g_s), s	4.8	23.0	0.0	0.0	21.1	21.1	0.0	0.0	0.0	3.9	0.0	4.8
Cycle Q Clear(g_c), s	4.8	23.0	0.0	0.0	21.1	21.1	0.0	0.0	0.0	3.9	0.0	4.8
Prop In Lane	1.00		0.00	1.00		0.06	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	3020	0	1	1357	1414	0	1	1	111	0	97
V/C Ratio(X)	0.77	0.59	0.00	0.00	0.49	0.49	0.00	0.00	0.00	0.43	0.00	0.52
Avail Cap(c_a), veh/h	220	3020	0	220	1357	1414	0	168	143	284	0	248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.1	3.4	0.0	0.0	6.7	6.7	0.0	0.0	0.0	67.6	0.0	68.0
Incr Delay (d2), s/veh	14.8	0.9	0.0	0.0	1.3	1.2	0.0	0.0	0.0	2.6	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	6.5	0.0	0.0	7.8	8.2	0.0	0.0	0.0	1.8	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.8	4.3	0.0	0.0	7.9	7.9	0.0	0.0	0.0	70.2	0.0	72.2
LnGrp LOS	F	A	A	A	A	A	A	A	A	E	A	E
Approach Vol, veh/h		1853			1355			0			97	
Approach Delay, s/veh		6.8			7.9			0.0			71.2	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	134.0		16.0	12.9	121.1		0.0
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	18.5	67.5		24.5	18.5	67.5		13.5
Max Q Clear Time (g_c+I1), s	10.0	25.0		6.8	6.8	23.1		0.0
Green Ext Time (p_c), s	0.0	22.8		0.3	0.1	13.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Notes

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

Appendix K
LOS Calculation Worksheets
Horizon Year 2050 with Project Conditions

Intersection	
Intersection Delay, s/veh	16.5
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	65	140	56	60	330	15	31	45	22	30	130	145
Future Vol, veh/h	65	140	56	60	330	15	31	45	22	30	130	145
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, %	13	13	13	13	13	13	13	13	13	13	13	13
Mvmt Flow	68	147	59	63	347	16	33	47	23	32	137	153
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	12.7	22.1	12.4	13.5
HCM LOS	B	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	41%	0%	100%	0%	0%	100%	0%	0%	19%	0%
Vol Thru, %	59%	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	76	22	65	140	56	60	330	15	160	145
LT Vol	31	0	65	0	0	60	0	0	30	0
Through Vol	45	0	0	140	0	0	330	0	130	0
RT Vol	0	22	0	0	56	0	0	15	0	145
Lane Flow Rate	80	23	68	147	59	63	347	16	168	153
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.184	0.048	0.154	0.311	0.113	0.135	0.693	0.028	0.355	0.288
Departure Headway (Hd)	8.3	7.386	8.109	7.598	6.883	7.689	7.18	6.467	7.584	6.786
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	432	484	443	473	521	467	504	554	475	530
Service Time	6.05	5.136	5.854	5.343	4.627	5.427	4.918	4.205	5.323	4.525
HCM Lane V/C Ratio	0.185	0.048	0.153	0.311	0.113	0.135	0.688	0.029	0.354	0.289
HCM Control Delay	12.9	10.5	12.3	13.8	10.5	11.6	24.6	9.4	14.5	12.3
HCM Lane LOS	B	B	B	B	B	B	C	A	B	B
HCM 95th-tile Q	0.7	0.2	0.5	1.3	0.4	0.5	5.3	0.1	1.6	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	1140	5	5	1565	38	0	0	5	37	20	146
Future Volume (veh/h)	43	1140	5	5	1565	38	0	0	5	37	20	146
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.97	1.00		0.96	1.00		0.95
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	45	1200	5	5	1647	38	0	0	5	39	21	128
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	70	2504	10	11	2331	54	0	19	15	134	72	172
Arrive On Green	0.04	0.70	0.70	0.01	0.66	0.66	0.00	0.00	0.01	0.11	0.11	0.11
Sat Flow, veh/h	1767	3600	15	1767	3519	81	0	1856	1511	1168	629	1496
Grp Volume(v), veh/h	45	588	617	5	823	862	0	0	5	60	0	128
Grp Sat Flow(s),veh/h/ln	1767	1763	1852	1767	1763	1838	0	1856	1511	1797	0	1496
Q Serve(g_s), s	3.8	22.8	22.8	0.4	44.3	44.8	0.0	0.0	0.5	4.6	0.0	12.4
Cycle Q Clear(g_c), s	3.8	22.8	22.8	0.4	44.3	44.8	0.0	0.0	0.5	4.6	0.0	12.4
Prop In Lane	1.00		0.01	1.00		0.04	0.00		1.00	0.65		1.00
Lane Grp Cap(c), veh/h	70	1226	1288	11	1167	1217	0	19	15	206	0	172
V/C Ratio(X)	0.64	0.48	0.48	0.45	0.70	0.71	0.00	0.00	0.33	0.29	0.00	0.75
Avail Cap(c_a), veh/h	218	1226	1288	218	1167	1217	0	167	136	294	0	244
HCM Platoon Ratio	1.00	1.00	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	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.0	10.4	10.4	74.3	16.0	16.1	0.0	0.0	73.7	60.8	0.0	64.3
Incr Delay (d2), s/veh	9.5	1.3	1.3	26.1	1.9	1.9	0.0	0.0	12.2	0.8	0.0	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	9.1	9.5	0.3	17.9	18.8	0.0	0.0	0.2	2.2	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.5	11.8	11.7	100.4	18.0	18.0	0.0	0.0	85.9	61.6	0.0	71.6
LnGrp LOS	F	B	B	F	B	B	A	A	F	E	A	E
Approach Vol, veh/h		1250			1690			5			188	
Approach Delay, s/veh		14.2			18.3			85.9			68.4	
Approach LOS		B			B			F			E	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	110.8		23.7	12.4	105.8		8.0				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	18.5	42.5		24.5	18.5	67.5		13.5				
Max Q Clear Time (g_c+I1), s	2.4	24.8		14.4	5.8	46.8		2.5				
Green Ext Time (p_c), s	0.0	7.9		0.5	0.1	13.1		0.0				

Intersection Summary	
HCM 6th Ctrl Delay	19.8
HCM 6th LOS	B

Notes

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

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	3	80	0	16	215
Future Vol, veh/h	0	3	80	0	16	215
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	3	87	0	17	234

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	355	87	0	0	87	0
Stage 1	87	-	-	-	-	-
Stage 2	268	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	643	971	-	-	1509	-
Stage 1	936	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	635	971	-	-	1509	-
Mov Cap-2 Maneuver	635	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	767	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	8.7	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	971	1509	-
HCM Lane V/C Ratio	-	-	0.003	0.012	-
HCM Control Delay (s)	-	-	8.7	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	215	80	16	3	0
Future Vol, veh/h	0	215	80	16	3	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	234	87	17	3	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	104	0	-	0	330	96
Stage 1	-	-	-	-	96	-
Stage 2	-	-	-	-	234	-
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	1488	-	-	-	665	960
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	805	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1488	-	-	-	665	960
Mov Cap-2 Maneuver	-	-	-	-	665	-
Stage 1	-	-	-	-	928	-
Stage 2	-	-	-	-	805	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1488	-	-	-	665
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0

Intersection	
Intersection Delay, s/veh	66.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	200	565	27	23	245	25	42	80	55	15	65	95
Future Vol, veh/h	200	565	27	23	245	25	42	80	55	15	65	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
Heavy Vehicles, %	11	11	11	11	11	11	11	11	11	11	11	11
Mvmt Flow	211	595	28	24	258	26	44	84	58	16	68	100
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	106	21.2	15	13.9
HCM LOS	F	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	34%	0%	100%	0%	0%	100%	0%	0%	19%	0%
Vol Thru, %	66%	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	122	55	200	565	27	23	245	25	80	95
LT Vol	42	0	200	0	0	23	0	0	15	0
Through Vol	80	0	0	565	0	0	245	0	65	0
RT Vol	0	55	0	0	27	0	0	25	0	95
Lane Flow Rate	128	58	211	595	28	24	258	26	84	100
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.314	0.128	0.463	1.224	0.053	0.059	0.59	0.055	0.207	0.224
Departure Headway (Hd)	9.279	8.394	7.918	7.408	6.693	9.131	8.617	7.898	9.228	8.422
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	390	430	457	494	537	395	420	456	392	429
Service Time	6.979	6.094	5.64	5.13	4.415	6.831	6.317	5.598	6.928	6.122
HCM Lane V/C Ratio	0.328	0.135	0.462	1.204	0.052	0.061	0.614	0.057	0.214	0.233
HCM Control Delay	16.2	12.3	17.3	142	9.8	12.4	23	11.1	14.3	13.5
HCM Lane LOS	C	B	C	F	A	B	C	B	B	B
HCM 95th-tile Q	1.3	0.4	2.4	23.2	0.2	0.2	3.7	0.2	0.8	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	1705	0	0	1250	44	0	0	0	59	0	58
Future Volume (veh/h)	56	1705	0	0	1250	44	0	0	0	59	0	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	0.98		0.96
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	1795	0	0	1316	43	0	0	0	62	0	53
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	3018	0	1	2680	88	0	1	1	111	0	97
Arrive On Green	0.04	0.85	0.00	0.00	0.76	0.76	0.00	0.00	0.00	0.06	0.00	0.06
Sat Flow, veh/h	1781	3647	0	1781	3511	115	0	1870	1585	1740	0	1519
Grp Volume(v), veh/h	59	1795	0	0	665	694	0	0	0	62	0	53
Grp Sat Flow(s),veh/h/ln	1781	1777	0	1781	1777	1849	0	1870	1585	1740	0	1519
Q Serve(g_s), s	4.9	23.1	0.0	0.0	21.3	21.3	0.0	0.0	0.0	5.2	0.0	5.1
Cycle Q Clear(g_c), s	4.9	23.1	0.0	0.0	21.3	21.3	0.0	0.0	0.0	5.2	0.0	5.1
Prop In Lane	1.00		0.00	1.00		0.06	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	76	3018	0	1	1356	1412	0	1	1	111	0	97
V/C Ratio(X)	0.78	0.59	0.00	0.00	0.49	0.49	0.00	0.00	0.00	0.56	0.00	0.54
Avail Cap(c_a), veh/h	220	3018	0	220	1356	1412	0	168	143	284	0	248
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.1	3.4	0.0	0.0	6.7	6.7	0.0	0.0	0.0	68.1	0.0	68.1
Incr Delay (d2), s/veh	15.4	0.9	0.0	0.0	1.3	1.2	0.0	0.0	0.0	4.3	0.0	4.7
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	2.6	6.5	0.0	0.0	7.9	8.2	0.0	0.0	0.0	2.5	0.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.5	4.3	0.0	0.0	8.0	7.9	0.0	0.0	0.0	72.4	0.0	72.8
LnGrp LOS	F	A	A	A	A	A	A	A	A	E	A	E
Approach Vol, veh/h		1854			1359			0			115	
Approach Delay, s/veh		6.9			8.0			0.0			72.6	
Approach LOS		A			A						E	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	10.0	133.9		16.1	12.9	121.0		0.0
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	18.5	67.5		24.5	18.5	67.5		13.5
Max Q Clear Time (g_c+I1), s	10.0	25.1		7.2	6.9	23.3		0.0
Green Ext Time (p_c), s	0.0	22.8		0.4	0.1	13.4		0.0

Intersection Summary	
HCM 6th Ctrl Delay	9.6
HCM 6th LOS	A

Notes

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

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	17	130	0	5	105
Future Vol, veh/h	0	17	130	0	5	105
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
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	18	141	0	5	114

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	265	141	0	0	141	0
Stage 1	141	-	-	-	-	-
Stage 2	124	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	724	907	-	-	1442	-
Stage 1	886	-	-	-	-	-
Stage 2	902	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	721	907	-	-	1442	-
Mov Cap-2 Maneuver	721	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	898	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.1	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	907	1442	-
HCM Lane V/C Ratio	-	-	0.02	0.004	-
HCM Control Delay (s)	-	-	9.1	7.5	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	105	130	5	17	0
Future Vol, veh/h	0	105	130	5	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	114	141	5	18	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	146	0	-	0	258	144
Stage 1	-	-	-	-	144	-
Stage 2	-	-	-	-	114	-
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	1436	-	-	-	731	903
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	911	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1436	-	-	-	731	903
Mov Cap-2 Maneuver	-	-	-	-	731	-
Stage 1	-	-	-	-	883	-
Stage 2	-	-	-	-	911	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1436	-	-	-	731
HCM Lane V/C Ratio	-	-	-	-	0.025
HCM Control Delay (s)	0	-	-	-	10.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.1

Appendix L
Traffic Signal Warrants

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE Near-Term Year 2024

DIST ____ CO ____ RTE ____ PM ____

CALC ____ DATE ____

CHK ____ DATE ____

Major St: Linda Vista Drive ADT = 11,550 Critical Approach Speed 35 mph

Minor St: South Pacific Street Higher Volume Approach ADT = 1,260 Critical Approach Speed 35 mph

Speed limit or critical speed on major street traffic > 40 mph..... ☐
or
In built up area of isolated community of < 10,000 population..... ☐
} **RURAL (R)**

☒ **URBAN (U)**

(Based on Estimated Average Daily Traffic - See Note)

URBAN..... RURAL.....

CONDITION A - Minimum Vehicular Volume

Satisfied ____ Not Satisfied X

Minimum Requirements EADT

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	8,000	5,600	2,400	1,680
2 or More	1	9,600	6,720	2,400	1,680
2 or More	2 or More	9,600	6,720	3,200	2,240
1	2 or More	8,000	5,600	3,200	2,240

CONDITION B - Interruption of Continuous Traffic

Satisfied ____ Not Satisfied X

Number of lanes for moving traffic on each approach		Vehicles Per Day on Major Street (Total of Both Approaches)		Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)	
Major Street	Minor Street	Urban	Rural	Urban	Rural
1	1	12,000	8,400	1,200	850
2 or More	1	14,400	10,080	1,200	850
2 or More	2 or More	14,400	10,080	1,600	1,120
1	2 or More	12,000	8,400	1,600	1,120

Combination of CONDITIONS A + B

Satisfied ____ Not Satisfied X

2 CONDITIONS 80%

2 CONDITIONS 80%

No one condition satisfied, but following conditions fulfilled 80% or more..... ____ A ____ B

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

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

Figure 4C-103 (CA). Traffic Signal Warrants Worksheet (Average Traffic Estimate Form)

COUNT DATE Horizon Year 2050

DIST _____ CO _____ RTE _____ PM _____

CALC _____ DATE _____

CHK _____ DATE _____

Major St: Linda Vista Drive ADT = 19,300 Critical Approach Speed 35 mph

Minor St: South Pacific Street Higher Volume Approach ADT = 5,100 Critical Approach Speed 35 mph

Speed limit or critical speed on major street traffic > 40 mph..... ☐
or
In built up area of isolated community of < 10,000 population..... ☐
} **RURAL (R)**

☒ **URBAN (U)**

(Based on Estimated Average Daily Traffic - See Note)

URBAN..... RURAL.....	Minimum Requirements EADT	
CONDITION A - Minimum Vehicular Volume Satisfied x Not Satisfied _____	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach	Urban / Rural	Urban / Rural
Major Street / Minor Street		
1 / 1	8,000 / 5,600	2,400 / 1,680
2 or More / 1	9,600 / 6,720	2,400 / 1,680
2 or More / 2 or More	9,600 / 6,720	3,200 / 2,240
1 / 2 or More	8,000 / 5,600	3,200 / 2,240
CONDITION B - Interruption of Continuous Traffic Satisfied x Not Satisfied _____	Vehicles Per Day on Major Street (Total of Both Approaches)	Vehicles Per Day on Higher-Volume Minor Street Approach (One Direction Only)
Number of lanes for moving traffic on each approach	Urban / Rural	Urban / Rural
Major Street / Minor Street		
1 / 1	12,000 / 8,400	1,200 / 850
2 or More / 1	14,400 / 10,080	1,200 / 850
2 or More / 2 or More	14,400 / 10,080	1,600 / 1,120
1 / 2 or More	12,000 / 8,400	1,600 / 1,120
Combination of CONDITIONS A + B Satisfied _____ Not Satisfied _____	2 CONDITIONS 80%	2 CONDITIONS 80%
No one condition satisfied, but following conditions fulfilled 80% or more..... A _____ B _____		

Note: To be used only for NEW INTERSECTIONS or other locations where it is not reasonable to count actual traffic volumes.

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

Appendix M
Peak Hour Arterial LOS Worksheets

Arterial Level of Service: NB S Pacific St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Linda Vista Dr	III	30	66.1	17.6	83.7	0.55	23.7	C
Total	III		66.1	17.6	83.7	0.55	23.7	C

Arterial Level of Service: SB S Pacific St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Linda Vista Dr	III	30	15.1	19.3	34.4	0.11	11.2	E
W San Marcos Bl	III	30	66.1	64.8	130.9	0.55	15.2	D
Total	III		81.2	84.1	165.3	0.66	14.3	D

Arterial Level of Service: NB S Pacific St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Linda Vista Dr	III	30	66.1	24.6	90.7	0.55	21.9	C
Total	III		66.1	24.6	90.7	0.55	21.9	C

Arterial Level of Service: SB S Pacific St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Linda Vista Dr	III	30	15.1	19.3	34.4	0.11	11.2	E
W San Marcos Bl	III	30	66.1	0.0	66.1	0.55	30.0	A
Total	III		81.2	19.3	100.5	0.66	23.6	C

Appendix N
LOS Calculation Worksheets Horizon Year 2050 with Project with Improvement Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	140	56	60	330	15	31	45	22	30	130	145
Future Volume (veh/h)	65	140	56	60	330	15	31	45	22	30	130	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		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	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707	1707
Adj Flow Rate, veh/h	74	159	64	68	375	17	35	51	25	34	148	165
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	13	13	13	13	13	13	13	13	13	13	13	13
Cap, veh/h	113	547	463	107	514	23	275	487	412	492	207	231
Arrive On Green	0.07	0.32	0.32	0.07	0.32	0.32	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1626	1707	1445	1626	1621	73	973	1707	1444	1206	727	811
Grp Volume(v), veh/h	74	159	64	68	0	392	35	51	25	34	0	313
Grp Sat Flow(s),veh/h/ln	1626	1707	1445	1626	0	1694	973	1707	1444	1206	0	1538
Q Serve(g_s), s	1.8	2.9	1.3	1.7	0.0	8.4	1.4	0.9	0.5	0.9	0.0	7.5
Cycle Q Clear(g_c), s	1.8	2.9	1.3	1.7	0.0	8.4	8.9	0.9	0.5	1.8	0.0	7.5
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	113	547	463	107	0	537	275	487	412	492	0	438
V/C Ratio(X)	0.66	0.29	0.14	0.64	0.00	0.73	0.13	0.10	0.06	0.07	0.00	0.71
Avail Cap(c_a), veh/h	432	1451	1228	416	0	1423	734	1293	1094	1062	0	1164
HCM Platoon Ratio	1.00	1.00	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	18.6	10.5	9.9	18.7	0.0	12.5	17.2	10.8	10.7	11.5	0.0	13.2
Incr Delay (d2), s/veh	6.3	0.3	0.1	6.1	0.0	1.9	0.2	0.1	0.1	0.1	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.9	0.3	0.7	0.0	2.8	0.3	0.3	0.1	0.2	0.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	10.7	10.1	24.9	0.0	14.4	17.4	10.9	10.7	11.5	0.0	15.4
LnGrp LOS	C	B	B	C	A	B	B	B	B	B	A	B
Approach Vol, veh/h		297			460			111			347	
Approach Delay, s/veh		14.1			15.9			12.9			15.0	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		16.2	7.2	17.7		16.2	7.4	17.5				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		31.1	10.5	34.9		31.1	10.9	34.5				
Max Q Clear Time (g_c+I1), s		10.9	3.7	4.9		9.5	3.8	10.4				
Green Ext Time (p_c), s		0.4	0.1	1.1		2.1	0.1	2.5				

Intersection Summary	
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	565	27	23	245	25	42	80	55	15	65	95
Future Volume (veh/h)	200	565	27	23	245	25	42	80	55	15	65	95
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		1.00
Parking Bus, Adj	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	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737	1737
Adj Flow Rate, veh/h	215	608	29	25	263	27	45	86	59	16	70	102
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, %	11	11	11	11	11	11	11	11	11	11	11	11
Cap, veh/h	279	789	653	50	489	50	282	347	293	351	127	186
Arrive On Green	0.17	0.45	0.45	0.03	0.32	0.32	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1654	1737	1438	1654	1549	159	1125	1737	1468	1152	638	929
Grp Volume(v), veh/h	215	608	29	25	0	290	45	86	59	16	0	172
Grp Sat Flow(s),veh/h/ln	1654	1737	1438	1654	0	1708	1125	1737	1468	1152	0	1567
Q Serve(g_s), s	5.3	12.6	0.5	0.6	0.0	6.0	1.6	1.8	1.4	0.5	0.0	4.2
Cycle Q Clear(g_c), s	5.3	12.6	0.5	0.6	0.0	6.0	5.8	1.8	1.4	2.3	0.0	4.2
Prop In Lane	1.00		1.00	1.00		0.09	1.00		1.00	1.00		0.59
Lane Grp Cap(c), veh/h	279	789	653	50	0	539	282	347	293	351	0	313
V/C Ratio(X)	0.77	0.77	0.04	0.50	0.00	0.54	0.16	0.25	0.20	0.05	0.00	0.55
Avail Cap(c_a), veh/h	794	2012	1666	252	0	1419	597	833	704	673	0	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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.0	9.8	6.5	20.4	0.0	12.0	18.0	14.4	14.3	15.4	0.0	15.4
Incr Delay (d2), s/veh	4.5	1.6	0.0	7.7	0.0	0.8	0.3	0.4	0.3	0.1	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	3.7	0.1	0.3	0.0	2.0	0.4	0.6	0.4	0.1	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.5	11.4	6.5	28.1	0.0	12.9	18.2	14.8	14.6	15.4	0.0	16.9
LnGrp LOS	C	B	A	C	A	B	B	B	B	B	A	B
Approach Vol, veh/h		852			315			190			188	
Approach Delay, s/veh		13.8			14.1			15.5			16.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		13.0	5.8	23.9		13.0	11.7	18.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		20.5	6.5	49.5		20.5	20.5	35.5				
Max Q Clear Time (g_c+I1), s		7.8	2.6	14.6		6.2	7.3	8.0				
Green Ext Time (p_c), s		0.6	0.0	4.8		0.8	0.5	1.8				

Intersection Summary												
HCM 6th Ctrl Delay			14.4									
HCM 6th LOS			B									

Appendix O
Intersection Queue Reports

Near-Term Year 2024 Base with Project Conditions

South Pacific Street & Project Driveway #1

AM Peak Hour

HCM 6th LANE	NBT	NBR	WBLn1	SBL	SBT
Capacity (vph)	-	-	983	1520	-
HCM Lane V/C Ratio	-	-	0.003	0.011	-
HCM Control Delay (s)	-	-	8.7	7.396	0
HCM Lane LOS	-	-	A	A	A
HCM 95th Percentile Queue (veh)	-	-	0	0	-

PM Peak Hour

HCM 6th LANE	NBT	NBR	WBLn1	SBL	SBT
Capacity (vph)	-	-	929	1465	-
HCM Lane V/C Ratio	-	-	0.02	0.004	-
HCM Control Delay (s)	-	-	9	7.466	0
HCM Lane LOS	-	-	A	A	A
HCM 95th Percentile Queue (veh)	-	-	0.1	0	-

Project Driveway #2 & South Pacific Street

AM Peak Hour

HCM 6th LANE	EBL	EBT	WBT	WBR	SBLn1
Capacity (vph)	1499	-	-	-	702
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	10.2
HCM Lane LOS	A	-	-	-	B
HCM 95th Percentile Queue (veh)	0	-	-	-	0

PM Peak Hour

HCM 6th LANE	EBL	EBT	WBT	WBR	SBLn1
Capacity (vph)	1459	-	-	-	765
HCM Lane V/C Ratio	-	-	-	-	0.024
HCM Control Delay (s)	0	-	-	-	9.8
HCM Lane LOS	A	-	-	-	A
HCM 95th Percentile Queue (veh)	0	-	-	-	0.1

Horizon Year 2050 with Project Conditions

South Pacific Street & Project Driveway #1

AM Peak Hour

HCM 6th LANE	NBT	NBR	WBLn1	SBL	SBT
Capacity (vph)	-	-	975	1513	-
HCM Lane V/C Ratio	-	-	0.003	0.011	-
HCM Control Delay (s)	-	-	8.7	7.406	0
HCM Lane LOS	-	-	A	A	A
HCM 95th Percentile Queue (veh)	-	-	0	0	-

PM Peak Hour

HCM 6th LANE	NBT	NBR	WBLn1	SBL	SBT
Capacity (vph)	-	-	917	1453	-
HCM Lane V/C Ratio	-	-	0.02	0.004	-
HCM Control Delay (s)	-	-	9	7.487	0
HCM Lane LOS	-	-	A	A	A
HCM 95th Percentile Queue (veh)	-	-	0.1	0	-

Project Driveway #2 & South Pacific Street

AM Peak Hour

HCM 6th LANE	EBL	EBT	WBT	WBR	SBLn1
Capacity (vph)	1491	-	-	-	674
HCM Lane V/C Ratio	-	-	-	-	0.005
HCM Control Delay (s)	0	-	-	-	10.4
HCM Lane LOS	A	-	-	-	B
HCM 95th Percentile Queue (veh)	0	-	-	-	0

PM Peak Hour

HCM 6th LANE	EBL	EBT	WBT	WBR	SBLn1
Capacity (vph)	1447	-	-	-	742
HCM Lane V/C Ratio	-	-	-	-	0.024
HCM Control Delay (s)	0	-	-	-	10
HCM Lane LOS	A	-	-	-	B
HCM 95th Percentile Queue (veh)	0	-	-	-	0.1