

HOSKINGS RANCH TRAFFIC IMPACT STUDY

TM5312

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GLOSSARY OF TERMS AND ACRONYMS

Acronyms	Definitions
AASHTO	American Association of State Highway and Transportation Officials
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
APE	Area of Potential Effect
AWSC	All-way Stop-Controlled
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CMP	Congestion Management Program
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
GIS	Geographic Information Systems
HCM	2000 Highway Capacity Manual
HUD	U.S. Department of Housing and Urban Development
ILV	Intersecting Lane Volume
ITS	Intelligent Transportation Systems
LOS	Level of Service
MHPA	Multi-Habitat Planning Area
MOA	Memorandum of Agreement
MOE	Measure of Effectiveness
MOU	Memorandum of Understanding
mph	miles per hour
MTDB	Metropolitan Transit Development Board
NOC	Notice of Completion
NOP	Notice of Preparation
PCE	Passenger Car Equivalent
pcphgpl	passenger cars per hour of green per lane
PeMS	Performance Measurement Systems
RTP	Regional Transportation Plan
SANDAG	San Diego Association of Governments
SANTEC	San Diego Traffic Engineers' Council
sf	square feet
SR	State Route
TIF	Transportation Impact Fee
TIS	Traffic Impact Study
TWSC	Two-way Stop Controlled
V/C	Volume-to-Capacity ratio

EXECUTIVE SUMMARY

This traffic impact analysis has been prepared for the proposed Hoskings Ranch development. The proposed development is located in the unincorporated County of San Diego in the Community Plan Area of Julian. KOA was retained by TRS Consultants to analyze the potential traffic impacts of the proposed project. The project location is south of SR-78/79 and west of Pine Hills Road. Access to the project site is provided by Hoskings Ranch Road and Tenaya Road. SR-78/79 connects the project to the surrounding areas including regional roadways such as SR-67, I-8, and I-15.

The traffic study is prepared in accordance with the *County of San Diego Report Format and Content Requirements (Transportation and Traffic)* and the *County of San Diego Guidelines for Determining Significance (Transportation and Traffic, August 24, 2011)*.

Traffic counts for the project were taken in February 2010 and January 2011. The project is estimated to generate 946 total daily trips, and the consolidated project alternative is estimated to generate 420 total daily trips to and from the site. The trip generation rates used in this analysis are determined based on rates contained in the *(SANDAG) (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (2002). This manual provides standards and recommendations for the probable traffic generation of various land uses based upon local, regional and nationwide studies of existing developments in comparable settings.

Trip distribution and assignment is the process of identifying the probable destinations, directions and traffic routes that project related traffic will likely affect. The trip distribution and assignment for this project is based on observed traffic patterns and engineering judgment. 65% of the project traffic will travel west on SR-78/79 towards Ramona; 30% will travel east towards Main St in Julian; 5% will travel south on Pine Hills Road.

The project has been evaluated for potential direct impacts. The traffic study indicates that the project will not cause any direct impacts. The *County of San Diego Transportation Impact Fee Report* identifies impacts caused by all proposed future development that is reasonably conformant to the County's General Plan. Cumulative impacts for Hoskings Ranch are proposed to be addressed by paying the TIF.

CHAPTER 1 THE PROJECT

This traffic impact analysis has been prepared for the proposed Hoskings Ranch development. The proposed development is located approximately three miles west of the Main St & SR78/SR79 intersection near Julian, California. KOA was retained by Genesee Properties, Inc. to analyze the potential traffic impacts of the proposed project.

The project is located within the Community Plan Area of Julian. The project is planned to take access to local roads via Hoskings Ranch Road onto SR-78/79 and via Tenaya Road onto Pine Hills Road, which is currently not built.

Figure 1-1 shows the project vicinity and study area. Figure 1-2 shows the project site plan, and Figure 1-3 shows the consolidated project alternative site plan.

PROJECT DESCRIPTION

The proposed project consists of 24 single-family estate dwelling units and 495 acres of agriculture. The project, as proposed, is consistent with the zoning requirements and will generate approximately 1278 daily trips with 23 AM peak hour trips and 29 PM peak hour trips.

An alternative with no agricultural use and a higher intensity of 34 single-family estate dwelling units and 160 acres of agriculture will also be analyzed. This consolidated project alternative will generate approximately 728 daily trips with 33 AM peak hour trips and 41 PM peak hour trips.

Also, the proposed project would be subject to Williamson Act regulations. For residential homes to be built, active agriculture operations must be present.

STUDY AREA

The study area for this project includes those locations that are expected to be affected by this project. The scope of the study area is based on the County of San Diego Guidelines and developed through a review of on-going traffic studies, and a working knowledge of the local transportation system. The study area is shown in Figure 1-1. The specific study area includes the following roadway segments and street intersections:

Intersections

- SR-78 & SR-79/Washington Street
- SR-78/79 & Hoskings Ranch Road
- SR-78/79 & Pine Hills Road
- Tenaya Road & Pine Hills Road

Roadway Segments

- SR-78/79 between SR-79/Washington Street and Hoskings Ranch Road
- SR-78/79 between Hoskings Ranch Road and Pine Hills Road
- Pine Hills Road south of SR-78/79

Project Frontage Roads

SR-78/79

SR-78/79 has an existing 60' easement with +/- 35' existing paving. The southside of the roadway is the project frontage and has a right-of-way dedication of 25', +/- 7.5' of additional paving with type "E" AC dike and a 5' bike lane associated with minor grading.

Pine Hills Road

Pine Hills Road has an existing 40' right-of-way with +/- 24' of existing paving. The westside of the roadway is the project frontage and has a right-of-way dedication of 15', +/- 13' of additional paving with type "E" AC dike, a 5' bike lane, and 10' of pedestrian/equestrian trail associated with grading.

Off-Site Roads

Hoskings Ranch Road

Hoskings Ranch Road is an existing private road that has a 60' easement and 24' of existing paved road. No improvements are required.

On-Site Roads

Hoskings Ranch Road/Daley Flat Road

Hoskings Ranch Road/Daley Flat Road is an existing private road with a 60' easement and +/- 24' of existing paving. It is required to maintain 24' of paving with a 2' shoulder with associated grading.

Orinoco Drive

Orinoco Drive is an existing private road with a 60' easement and +/- 24' of existing paving. It is required to maintain 24' of paving with a 2' shoulder and associated grading.

New Private Roads

Tenaya Road

The proposed roadway will have a 40' easement with 24' of new paving and a 2' should and associated grading.

Ute Peak Lane

The proposed roadway will have a 40' easement with 24' of new paving and a 2' should and associated grading.

Bear Run Lane

The proposed roadway will have a 40' easement with 24' of new paving and a 2' should and associated grading.

Deer Run Lane

The proposed roadway will have a 40' easement with 24' of new paving and a 2' should and associated grading.

PROJECT TRIP GENERATION

Trip generation is a measure or forecast of the number of trips that begin or end at the project site. The traffic generated is a function of the extent and type of development proposed for the site. These trips will result in some traffic increases on the streets where they occur. Vehicular traffic generation characteristics for projects are estimated based on established rates. These rates identify the probable traffic generation of various land uses based studies of developments in comparable settings. The rates used in this analysis were determined based on rates contained in the (SANDAG) (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (2002). This manual provides standards and recommendations for the probable traffic generation of various land uses based upon local, regional and nationwide studies of existing developments in comparable settings. Appendix C contains excerpts from this manual. Table 1-1 and 1-2 summarizes the trips generated by the proposed project. Also, see Appendix H for a discussion of the agricultural trips.

Table 1-1
Project Trip Generation

Land Use	Intensity	Units	Rate/Trips	Daily	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Estate Residential	24	Dwelling	Rate	12	8%	30%	70%	10%	70%	30%
			Trips	288	23	7	16	29	20	9
Agriculture	495	AC	Rate	2	0%	0%	0%	0%	0%	0%
			Trips	990	0	0	0	0	0	0
Total				1278	23	7	16	29	20	9

Note: Numbers may not total due to rounding.

Table 1-2
Consolidated Project Alternative Trip Generation

Land Use	Intensity	Units	Rate/Trips	Daily	AM Peak Hour			PM Peak Hour		
					Total	In	Out	Total	In	Out
Estate Residential	34	Dwelling	Rate Trips	12 408	8% 33	30% 10	70% 23	10% 41	70% 29	30% 12
Agriculture	160	AC	Rate Trips	2 320	0% 0	0% 0	0% 0	0% 0	0% 0	0% 0
Total				728	33	10	23	41	29	12

Note: Numbers may not total due to rounding.

TRIP DISTRIBUTION AND ASSIGNMENT

Trip distribution and assignment is the process of identifying the probable destinations, directions, and traffic routes that project related traffic will likely affect. Trip distribution and assignment information can be estimated from observed traffic patterns, experience, or through use of a computerized travel forecast model. Once the proposed developments trips have been estimated, they are assigned to the study area network. The trip distribution and assignment for this project is based on observed traffic patterns and engineering judgment.

As shown in Figure 1-4, we estimate 65% of the project trips will head west on SR-78/79 from the project site and 30% will head east, and on Pine Hills Road 5% will head south. For this analysis, the project trip distribution was estimated from observed traffic patterns and consideration of surrounding land uses.

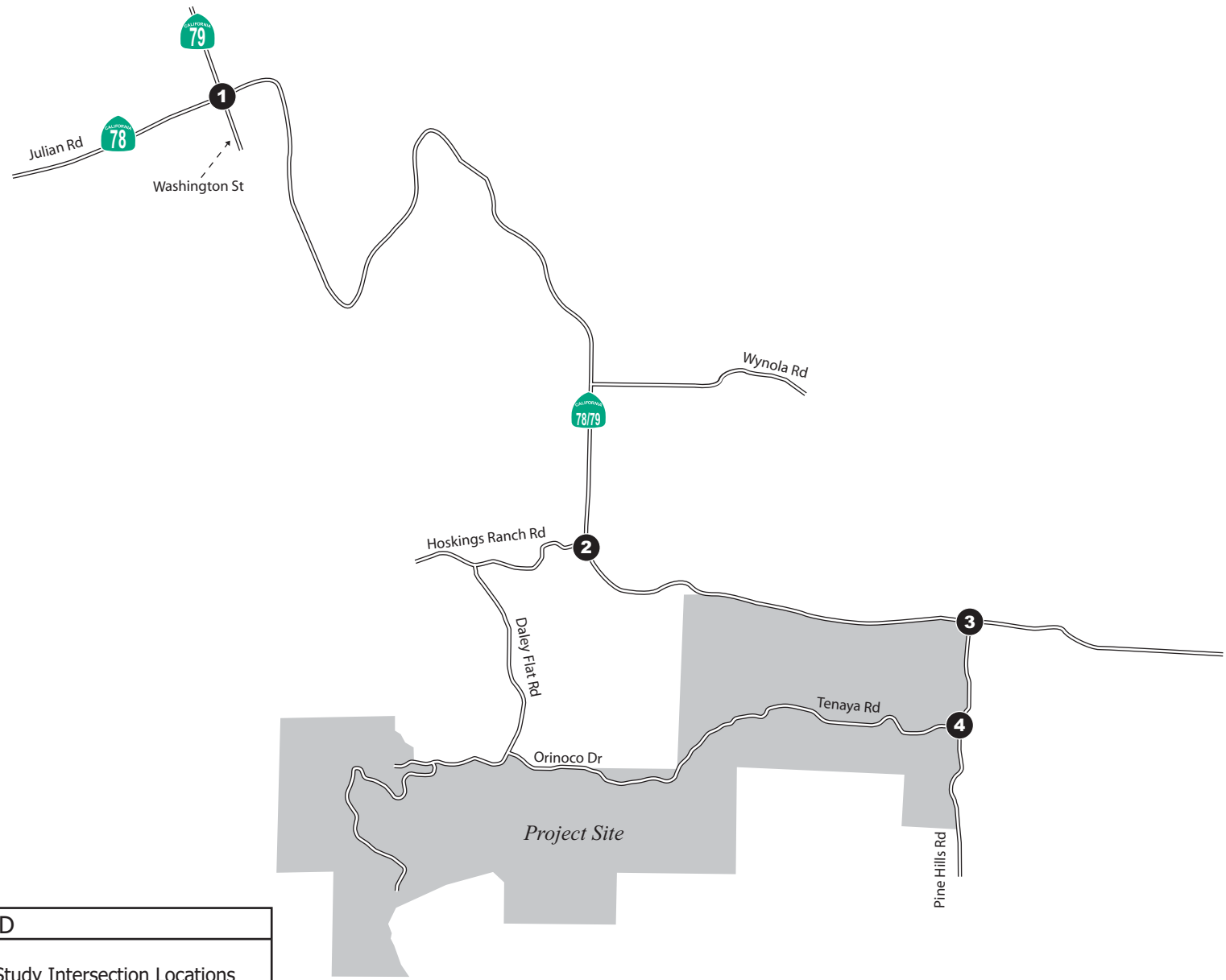
The trip distribution and assignment for the project-related trips is shown in Figure 1-4. Figures 1-5 through 1-10 show the daily and peak hour project trips.

PROJECT ACCESS

The proposed project will take access to local roads via Hoskings Ranch Road onto SR-78/79 and onto Pine Hills Road via Tenaya Road, which is currently an unpaved road with a gate and lock at Pine Hills Road.

PARKING

The County of San Diego requires that two parking spaces be developed per dwelling unit.

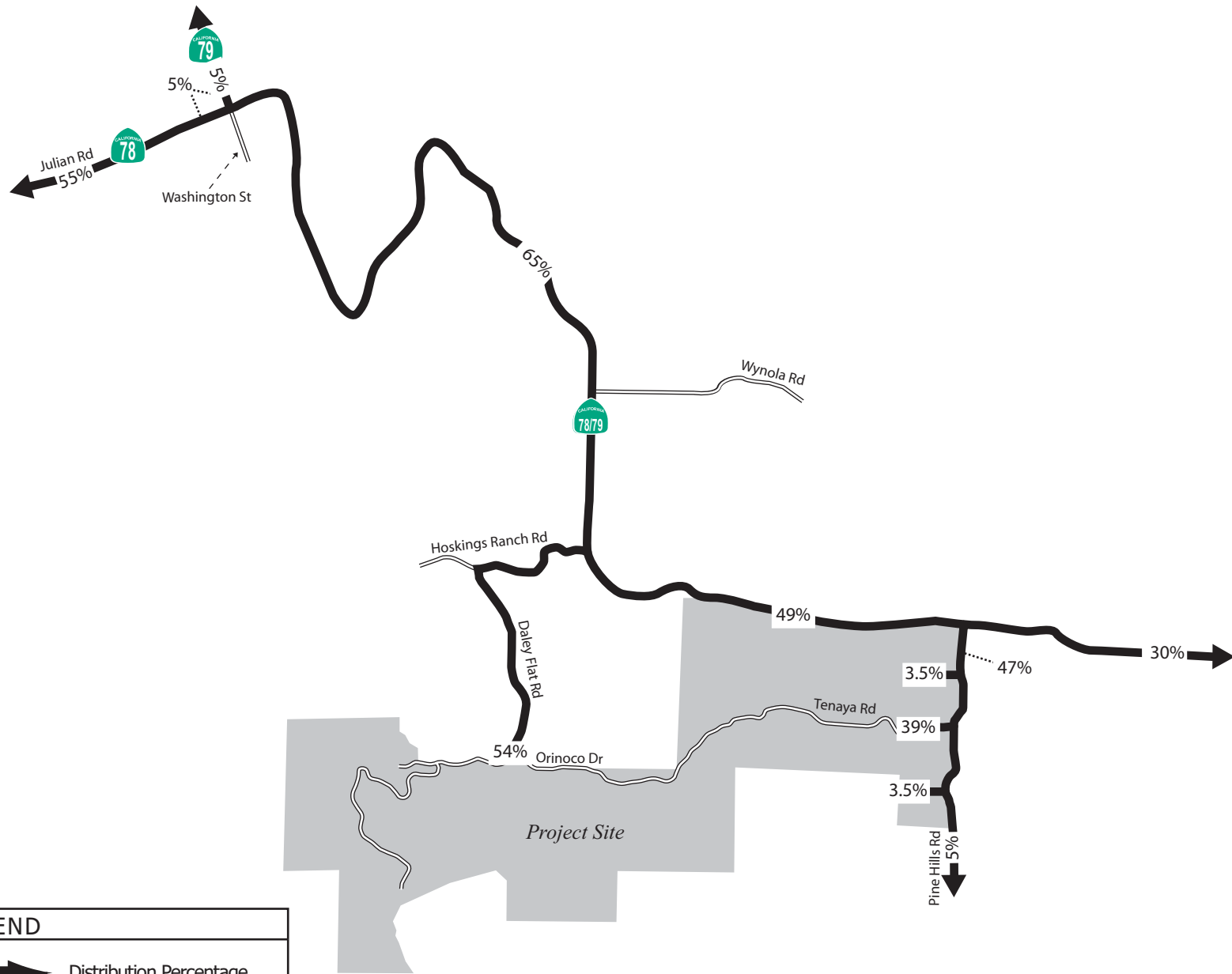


LEGEND	
1	Study Intersection Locations

Figure 1-1
Project Study Area





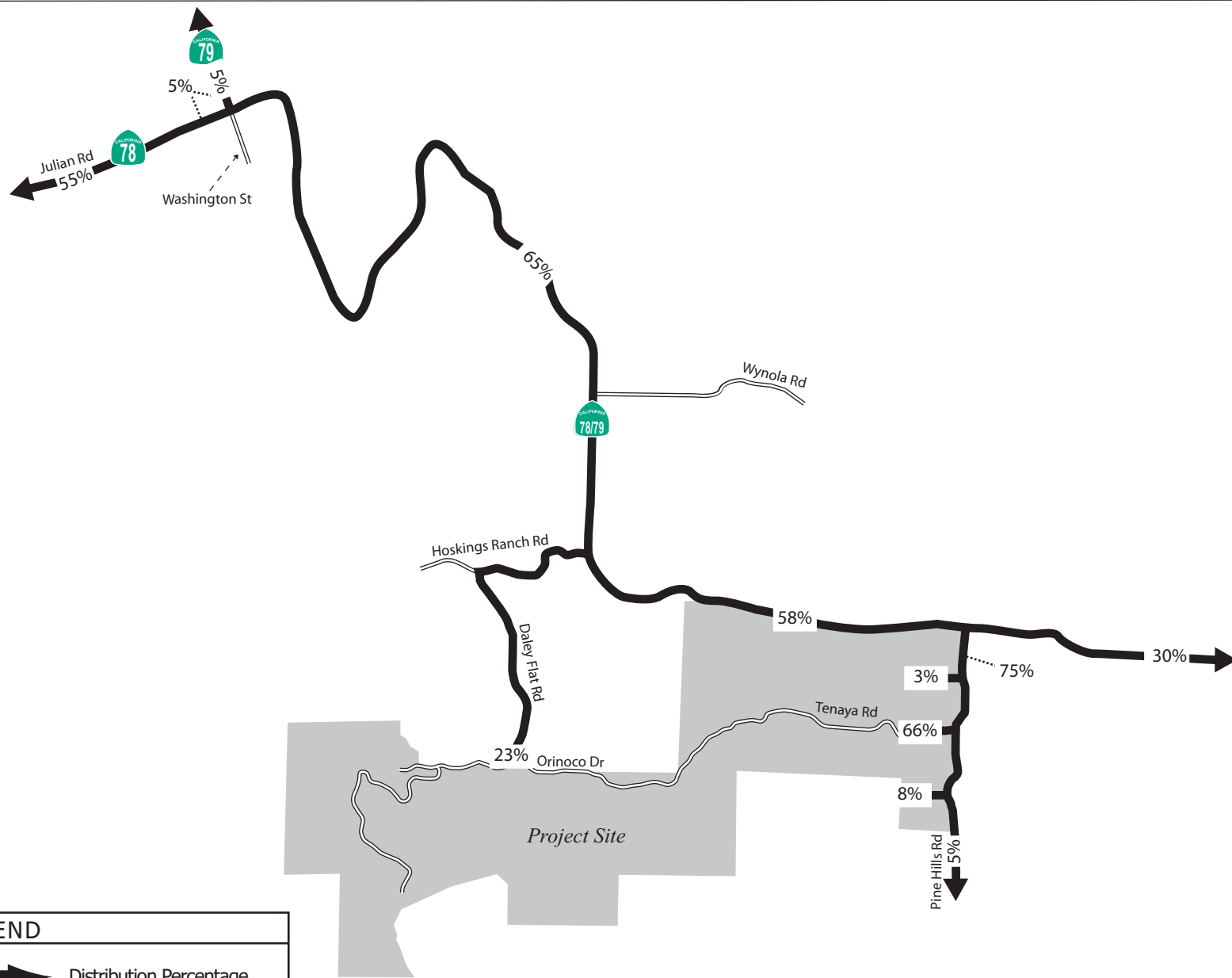


LEGEND	
■ 15%	➔ Distribution Percentage

Figure 1-4
Project Trip Distribution



Not To Scale



LEGEND	
■ 15%	➔ Distribution Percentage

Figure 1-5
Consolidated Project Alternative Trip Distribution



Not To Scale

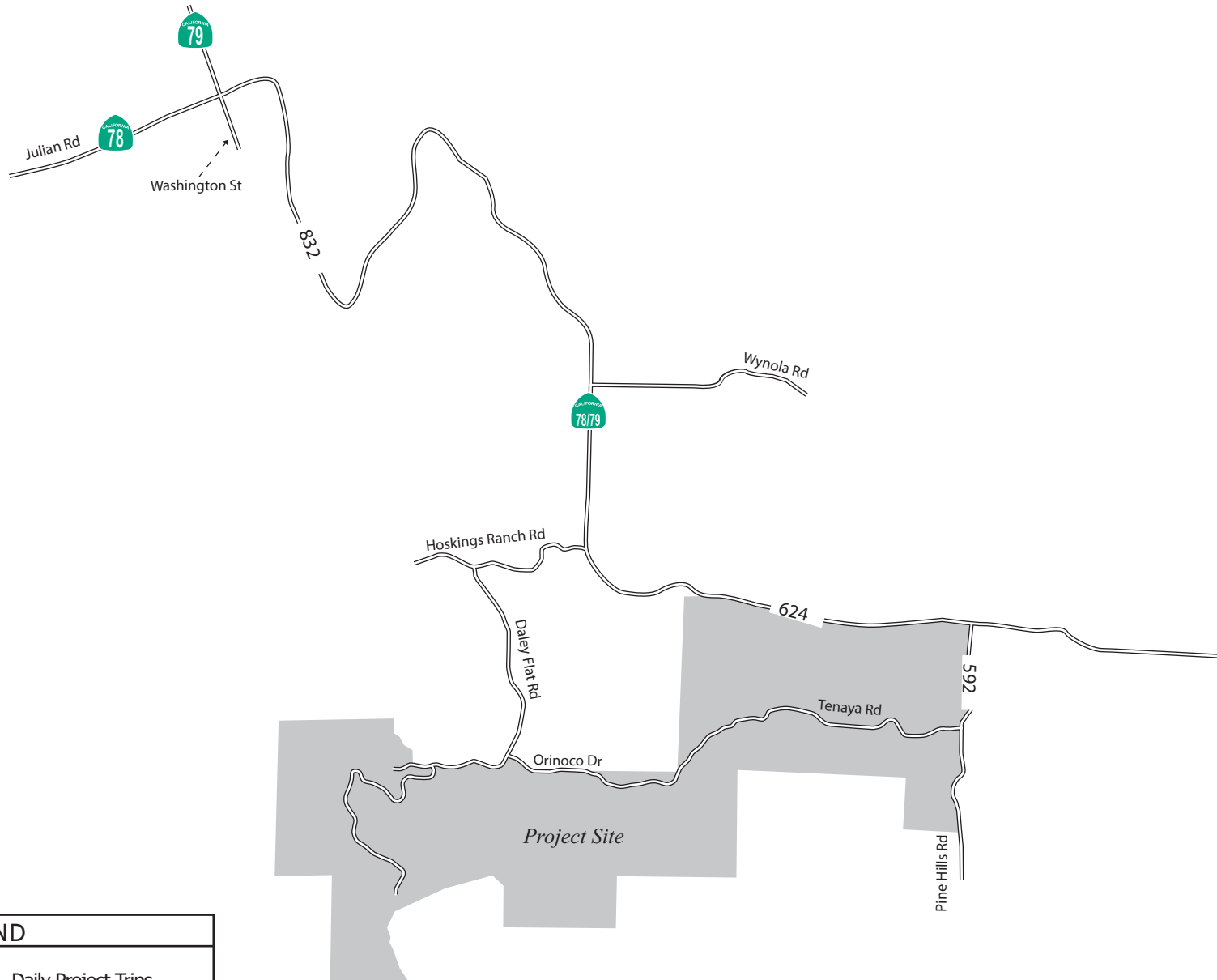


Figure 1-6
Project Daily Trips Project



Not To Scale

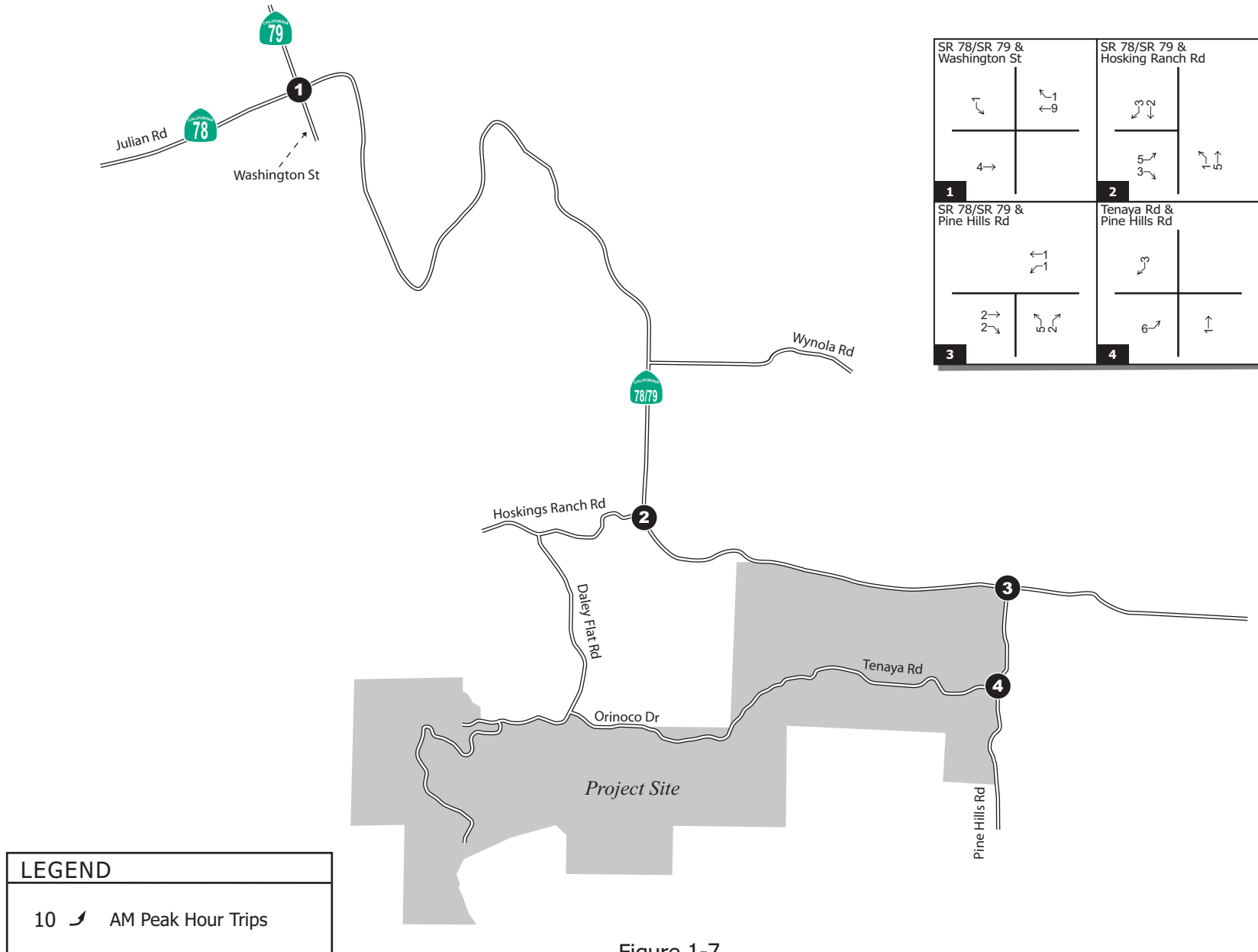


Figure 1-7
Project AM Peak Hour Trips



Not To Scale

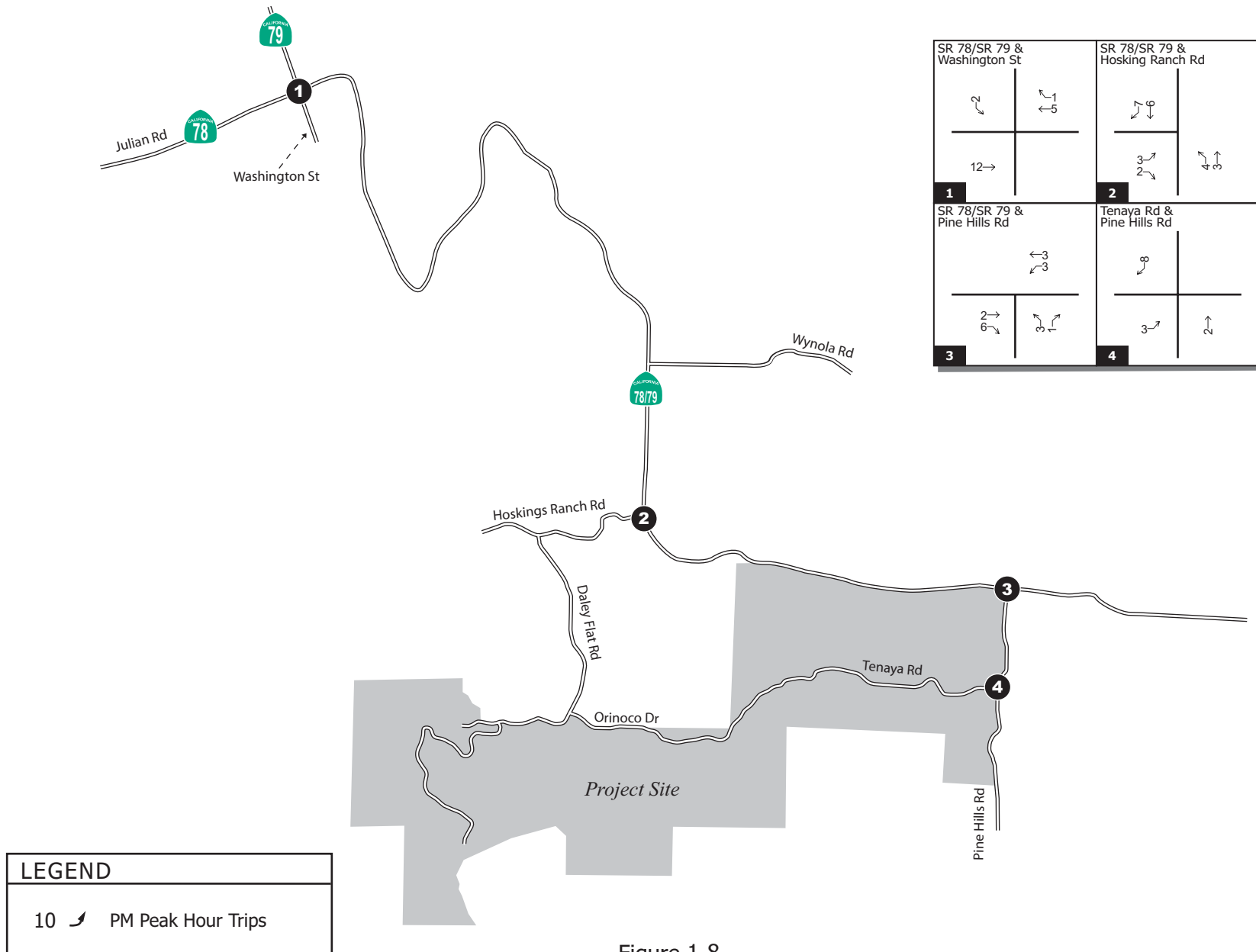
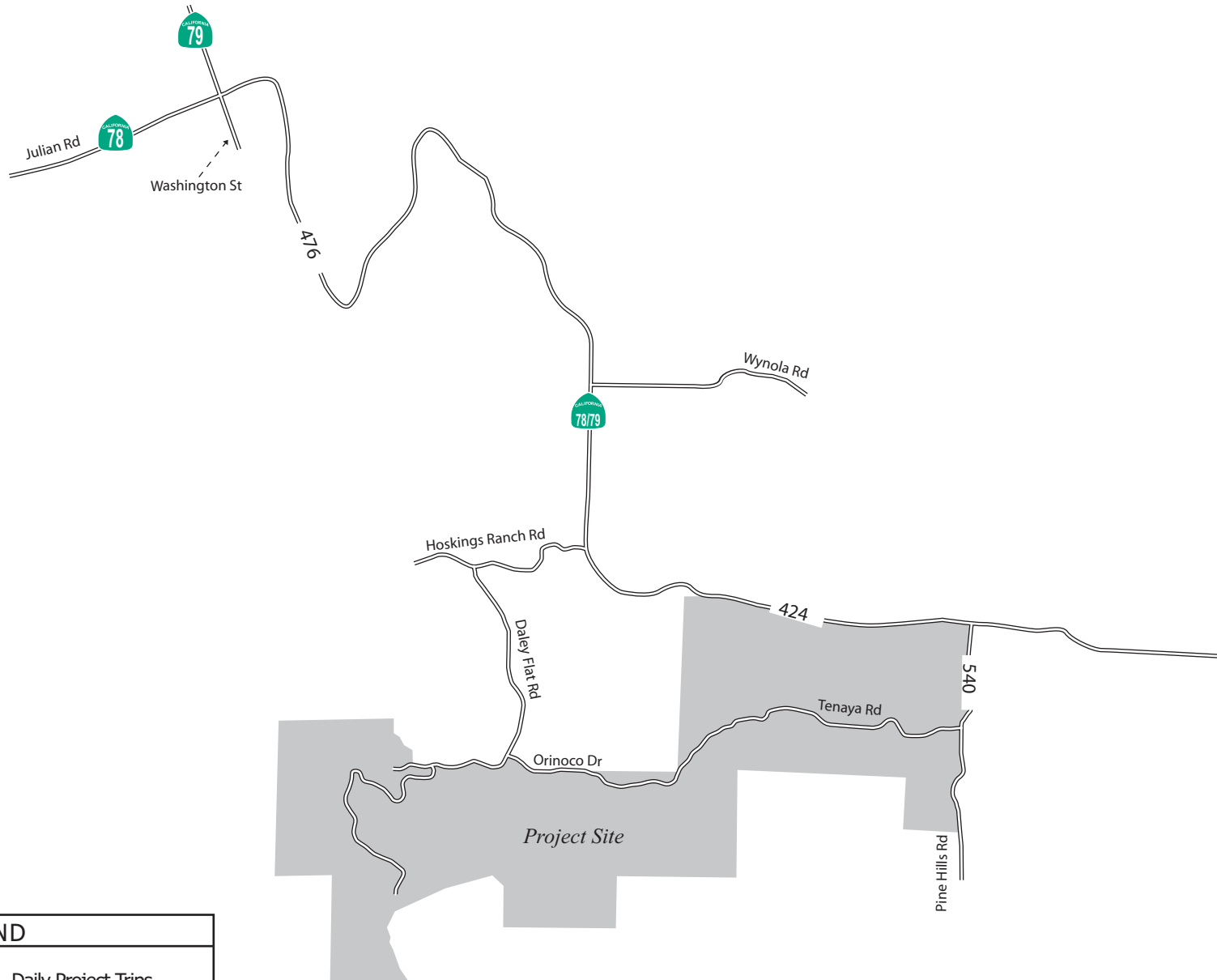


Figure 1-8
Project PM Peak Hour Trips



Not To Scale



LEGEND	
—15—	Daily Project Trips

Figure 1-9
Consolidated Project Alternative Daily Trips



Not To Scale

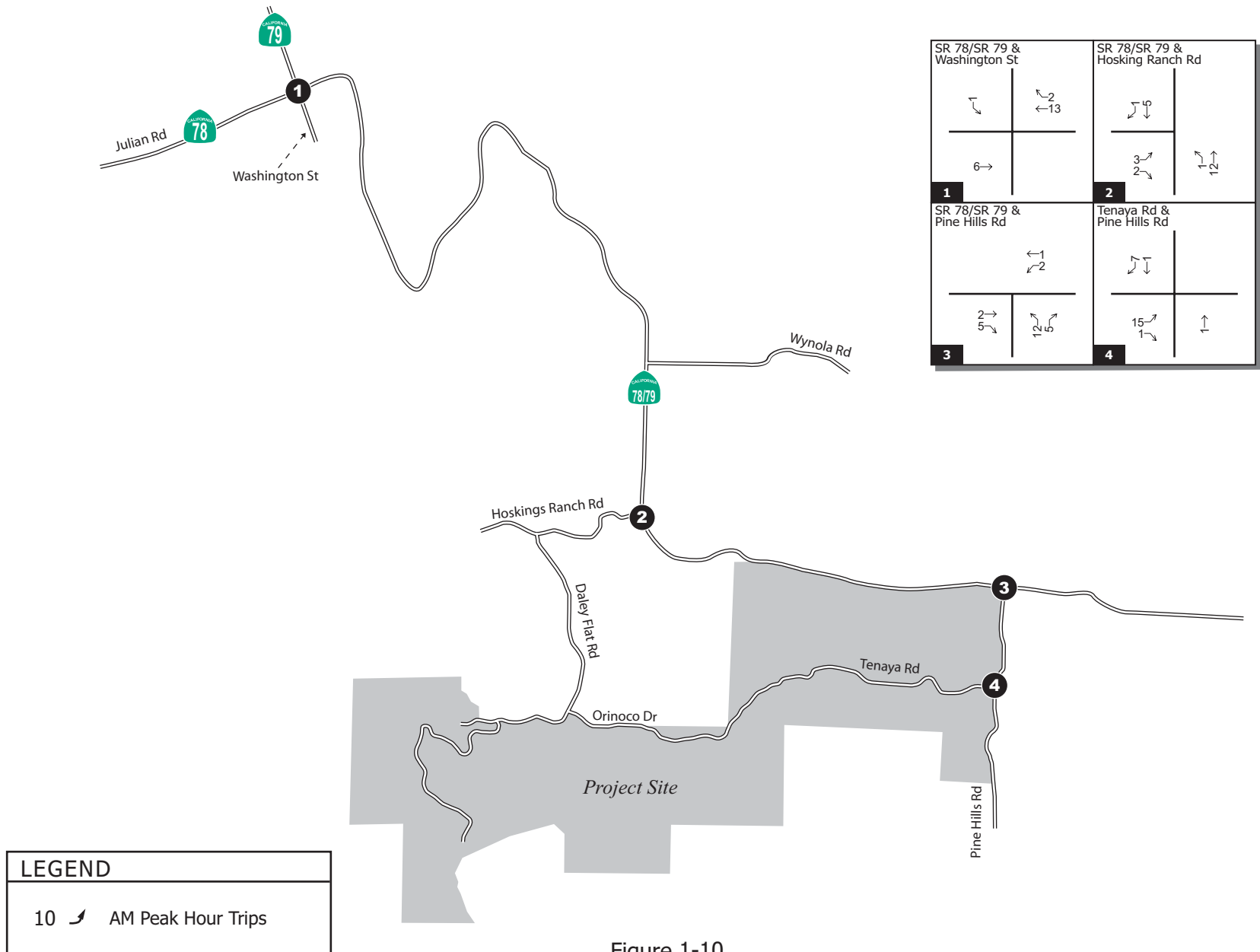


Figure 1-10
Consolidated Project Alternative AM Peak Hour Trips



Not To Scale

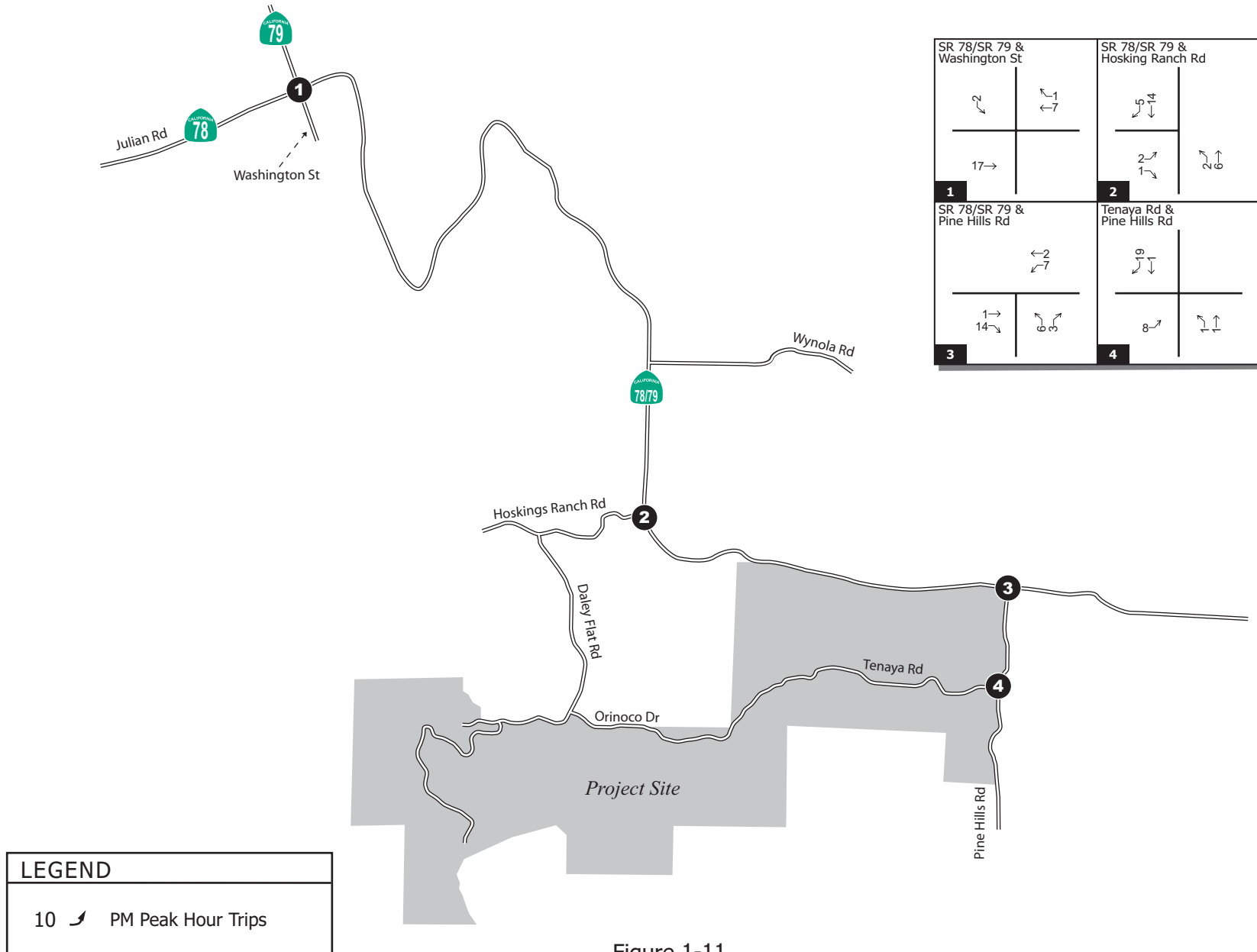


Figure 1-11
Consolidated Project Alternative PM Peak Hour Trips



Not To Scale

CHAPTER 2 METHODOLOGIES

This chapter documents the methodologies and assumptions used to conduct the traffic impact analysis for the project. The study methodology and analysis is based on the *County of San Diego Report Format and Content Requirements (Transportation and Traffic)* and the *County of San Diego Guidelines for Determining Significance (Transportation and Traffic)*. The guidelines are used to determine the project's conformance with County of San Diego Public Facility Element policies and evaluate whether a project's impacts are perceptible to the average driver.

STUDY SCENARIOS

Analysis is presented for the following scenarios:

- Existing Conditions
- Existing Conditions with Project
- Existing Conditions with Consolidated Project Alternative

ANALYSIS METHODOLOGIES

Street system operating conditions are typically described in terms of "level of service." Level of service is a report-card scale used to indicate the quality of traffic flow on roadway segments and at intersections. Level of service (LOS) ranges from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion). A more detailed description of the concepts described in this section is provided in Appendix A of this document. The following methods are outlined in the Highway Capacity Manual (HCM) and are used in this study.

Roadway Segment Capacity Analysis

The County of San Diego has published daily traffic volume standards for roadways within its jurisdiction. To determine service levels on study area roadway segments, we compared the appropriate average daily traffic thresholds for level of service to the daily capacity of the study area roadway segments, and the existing and future volumes in the study area. The thresholds for determining level of service used in this analysis are summarized in Appendix A.

Regionally Significant Arterial Analysis

The regional association of governments (SANDAG) Congestion Management Program (CMP) identifies the regionally significant circulation network. The SANDAG CMP requires that all large projects generating over 2,400 average daily trips perform a detailed analysis of any CMP roadways within the project study area. To determine service levels on arterial segments, we compare the average speed of traffic by direction in the peak hours on each CMP arterial. The method used to determine the speed and level of service on arterials is contained the 2000 Highway Capacity Manual (HCM) in Chapter 15. No arterial analysis is required in this case since the proposed project will be generating at most 946 average daily trips which is well below the 2,400 trip threshold.

Intersection Capacity Analysis

The analysis of peak hour intersection performance was conducted using the Traffix analysis software program, which uses methodologies defined in the 2000 Highway Capacity Manual (HCM) to

calculate results. Level of service (LOS) for intersections is determined by control delay. Control delay is defined as the total elapsed time from when a vehicle stops at the end of a queue to the time the vehicle departs from the stop line. The total elapsed time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position, including deceleration of vehicles from free-flow speed to the speed of vehicles in the queue. Appendix A lists the HCM delay/LOS criteria for both signalized and unsignalized intersections.

Signalized Intersections

The HCM analysis methodology for evaluating signalized intersections is based on the “operational analysis” procedure. This technique uses 1,900 passenger cars per hour of green per lane (pcphgpl) as the maximum saturation flow of a single lane at an intersection. This saturation flow rate is adjusted to account for lane width, on-street parking, conflicting pedestrian flow, traffic composition, (e.g., the percentage of vehicles that are trucks) and shared lane movements (e.g., through and right-turn movements from the same lane). Average control delay is calculated by taking a volume-weighted average of all the delays for all vehicles entering the intersection.

All-Way Stop-Controlled Intersections

The HCM analysis methodology for evaluating all-way stop-controlled (AWSC) intersections is based on the degree of conflict for each independent approach created by the opposing approach and each conflicting approach. Level of Service for AWSC intersections is also based on the average control delay. However, AWSC intersections have different threshold values than those applied to signalized intersections. This is based on the rationale that drivers expect AWSC intersections to carry lower traffic volumes than at signalized intersections. Therefore, a higher level of delay is acceptable at a signalized intersection for the same LOS.

Two-Way Stop-Controlled Intersections

The HCM analysis methodology for evaluating two-way stop-controlled (TWSC) intersections is based on gap acceptance and conflicting traffic for vehicles stopped on the minor-street approaches. The critical gap (or minimum gap that would be acceptable) is defined as the minimum time interval in the major-street traffic stream that allows intersection entry for one minor-street vehicle. Average control delay and LOS for the “worst approach” are reported. Level of service is not defined for the intersection as a whole.

Analysis of Significance

To determine direct project impacts, the County of San Diego has developed a series of thresholds based on allowable increases in volume-to-capacity ratios that become more stringent as level of service worsens. Appendix A summarizes these thresholds. Where roadway segments and intersections operate at LOS D or better impacts are not considered significant.

The February 19, 2010 Guidelines define the threshold of significance as on average the addition of one car per lane every 2.4 – 4.8 minutes during peak hour conditions depending on the level of service of the roadway. In most cases, this increase would result in changes to traffic flow that would not be noticeable to the average driver and, therefore, would not constitute a significant impact on the roadway.

SANDAG Congestion Management Plan

State Proposition 111, passed by voters in 1990, established a requirement that urbanized areas prepare a Congestion Management Program (CMP). The purpose of the CMP is to monitor the performance of the region’s transportation system, develop programs to address near-term and long-term congestion, and better integrate transportation and land use planning. SANDAG has prepared the

CMP for the San Diego region. It establishes significance criteria that identifies that LOS D is the minimum acceptable LOS for peak hour operation. Any roadway segment operating at LOS E or F is considered to be operating deficiently.

County of San Diego General Plan Public Facilities Element (Part XII)

The County of San Diego Guidelines for Determining Significance and *Report Format & Content Requirements Transportation and Traffic*, August 24, 2011, includes a summary of the Public Facilities Element of the San Diego County General Plan as follows:

"The County of San Diego General Plan Public Facilities Element establishes policies and implementation measures regarding the assessment and mitigation of traffic impacts of new development. One of the goals of the Public Facilities Element (PFE) is to provide "A safe, convenient, and economical integrated transportation system including a wide range of transportation modes (PFE, page XH-4-18)." The PFE also identifies an objective in the Transportation Section to provide a "Level of Service C or better on County Circulation Element roads (PFE, page XII-4-18)." The PFE, however, establishes LOS D as an off-site mitigation threshold for discretionary projects. When an existing Level of Service is already D, "a LOS of D may be allowed (PFE, page XII-4-18)." According to the PFE, projects that significantly increase congestion on roads operating at LOS E or LOS F must provide mitigation. According to the PFE, this mitigation can consist of a fair share contribution to an established program or project to mitigate the project's impacts. If impacts cannot be mitigated, the project will be denied unless a specific statement of overriding findings is made pursuant to Sections 15091 and 15093 of the State CEQA Guidelines to approve the project as proposed."

The County of San Diego significance criteria is consistent with the aforementioned summary of PFE Policy LI, which requires mitigation for projects that significantly increase congestion on roads operating at LOS E or LOS F.

In summary, the County of San Diego traffic impact significance criteria covers the significance criteria identified in PFE policies.

CHAPTER 3 EXISTING CONDITIONS

TRAFFIC VOLUMES

The intersection turning movement counts were conducted during the weekday morning peak period from 7:00 AM to 9:00 AM and during the weekday evening peak period from 4:00 PM to 6:00 PM in the months of February 2010 and January 2011. Average daily traffic volumes were obtained through machine data collection. The resultant daily traffic volumes and existing weekday morning and evening peak hour intersection volumes are shown in Figures 3-2 through 3-4.

ROADWAY NETWORK

The principal roadways in the project study area are described briefly below. The description includes the physical characteristics, adjacent land uses, and traffic control devices along these roadways. The existing roadway geometry and control conditions are shown in Figure 3-1. Additional details regarding specific intersection operating conditions can be found on the capacity analysis worksheets in the Appendix.

SR-78/79

SR-78/79 is currently constructed as a two-lane state route with a 55 mph posted speed limit. Adjacent land uses within the study area include strip commercial, light industrial, parks, agricultural, and residential uses. Access to SR-78/79 for adjacent land uses is provided via private driveways and collector roads.

Pine Hills Road

Pine Hills Road is currently constructed as a two-lane rural collector with an unposted 55 mph speed limit. Adjacent land uses within the study area include light industrial, parks, agricultural, and residential uses. Access to Pine Hills Road for adjacent land uses is provided via private driveways and collector roads.

Hoskings Ranch Road

Hoskings Ranch Road is a paved, private drive, which currently has a gate and speaker/dial-pad to call residents in order to gain access.

The County of San Diego Circulation Element classifies SR-78/79 as a two-lane state route having a LOS E capacity of 22,900 ADT, and Pine Hills Road as rural collector having a LOS E capacity of 16,200 ADT. Levels of service are not applied to Hoskings Ranch Road since its primary purpose is to serve the abutting properties and not to carry through traffic.

Table 3-2
Existing Roadway Segment Conditions – Project

Roadway Segment	Lanes/ Class	LOS E Capacity	Existing			Existing + Project			Δ Traffic	Δ v/c	Direct Impact?	CMP Impact?
			ADT	V/C	LOS	ADT	V/C	LOS				
SR-78/79												
SR-79/Washington St to Hoskings Ranch Rd	2SR	22,900	3,561	0.156	C	4,393	0.192	C	832	0.036	No	No
Hoskings Ranch Rd to Pine Hills Rd	2SR	22,900	4,095	0.179	C	4,719	0.206	C	624	0.027	No	No
Pine Hills Rd												
south of SR-78/79	2RC	16,200	1,651	0.102	A	2,243	0.138	B	592	0.037	No	No

Note: 2RC: 2-lane Rural Collector; 2SR: 2-lanes State Route.

Table 3-3
Existing Roadway Segment Conditions – Consolidated Project Alternative

Roadway Segment	Lanes/ Class	LOS E Capacity	Existing			Existing + Consolidated Project Alternative			Δ Traffic	Δ v/c	Direct Impact?	CMP Impact?
			ADT	V/C	LOS	ADT	V/C	LOS				
SR-78/79												
SR-79/Washington St to Hoskings Ranch Rd	2SR	22,900	3,561	0.156	C	4,037	0.176	C	476	0.021	No	No
Hoskings Ranch Rd to Pine Hills Rd	2SR	22,900	4,095	0.179	C	4,519	0.197	C	424	0.019	No	No
Pine Hills Rd												
south of SR-78/79	2RC	16,200	1,651	0.102	A	2,191	0.135	B	540	0.033	No	No

Note: 2RC: 2-lane Rural Collector; 2SR: 2-lanes State Route.

Table 3-4
Existing Intersection Conditions – Project

Intersection	Peak Hour	Existing		Existing + Project		Δ Trips	Δ Delay	Direct Impact?	CMP Impact?
		Delay	LOS	Delay	LOS				
1. SR-78 & SR-79/Washington St ¹	AM	10.4	B	10.5	B	NA	0.1	No	No
	PM	13.0	B	13.2	B	NA	0.2	No	No
2. SR-78/79 & Hoskings Ranch Rd ¹	AM	9.0	A	9.7	A	NA	0.7	No	No
	PM	9.8	A	10.1	B	NA	0.3	No	No
3. SR-78/79 & Pine Hills Rd ¹	AM	10.1	B	10.3	B	NA	0.2	No	No
	PM	10.4	B	10.6	B	NA	0.2	No	No
4. Tenaya Rd & Pine Hills Rd ¹	AM	8.8	A	9.5	A	NA	0.7	No	No
	PM	8.6	A	9.5	A	NA	0.9	No	No

¹ Significance of unsignalized intersections is determined by the number of added project trips to the critical movement.

Note: The change in trips added to the critical movement are only reported for intersections operating at LOS E or F.

Table 3-5
Existing Intersection Conditions – Consolidated Project Alternative

Intersection	Peak Hour	Existing		Existing + Consolidated Project Alternative		Δ Trips	Δ Delay	Direct Impact?	CMP Impact?
		Delay	LOS	Delay	LOS				
1. SR-78 & SR-79/Washington St ¹	AM	10.4	B	10.6	B	NA	0.2	No	No
	PM	13.0	B	13.3	B	NA	0.3	No	No
2. SR-78/79 & Hoskings Ranch Rd ¹	AM	9.0	A	9.6	A	NA	0.6	No	No
	PM	9.8	A	10.1	B	NA	0.3	No	No
3. SR-78/79 & Pine Hills Rd ¹	AM	10.1	B	10.5	B	NA	0.4	No	No
	PM	10.4	B	10.8	B	NA	0.4	No	No
4. Tenaya Rd & Pine Hills Rd ¹	AM	8.8	A	9.6	A	NA	0.8	No	No
	PM	8.6	A	9.6	A	NA	1.0	No	No

¹ Significance of unsignalized intersections is determined by the number of added project trips to the critical movement.

Note: The change in trips added to the critical movement are only reported for intersections operating at LOS E or F.

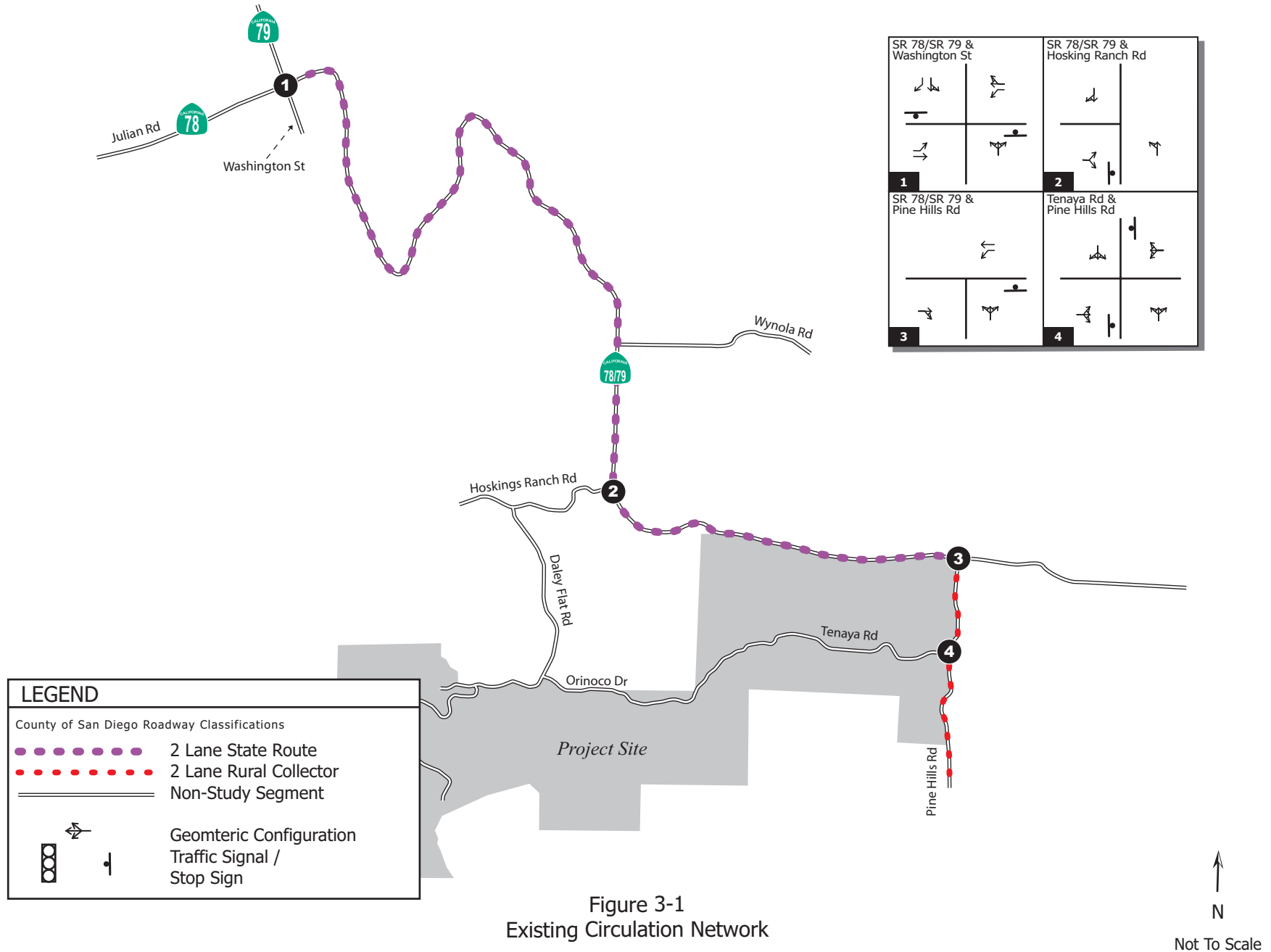
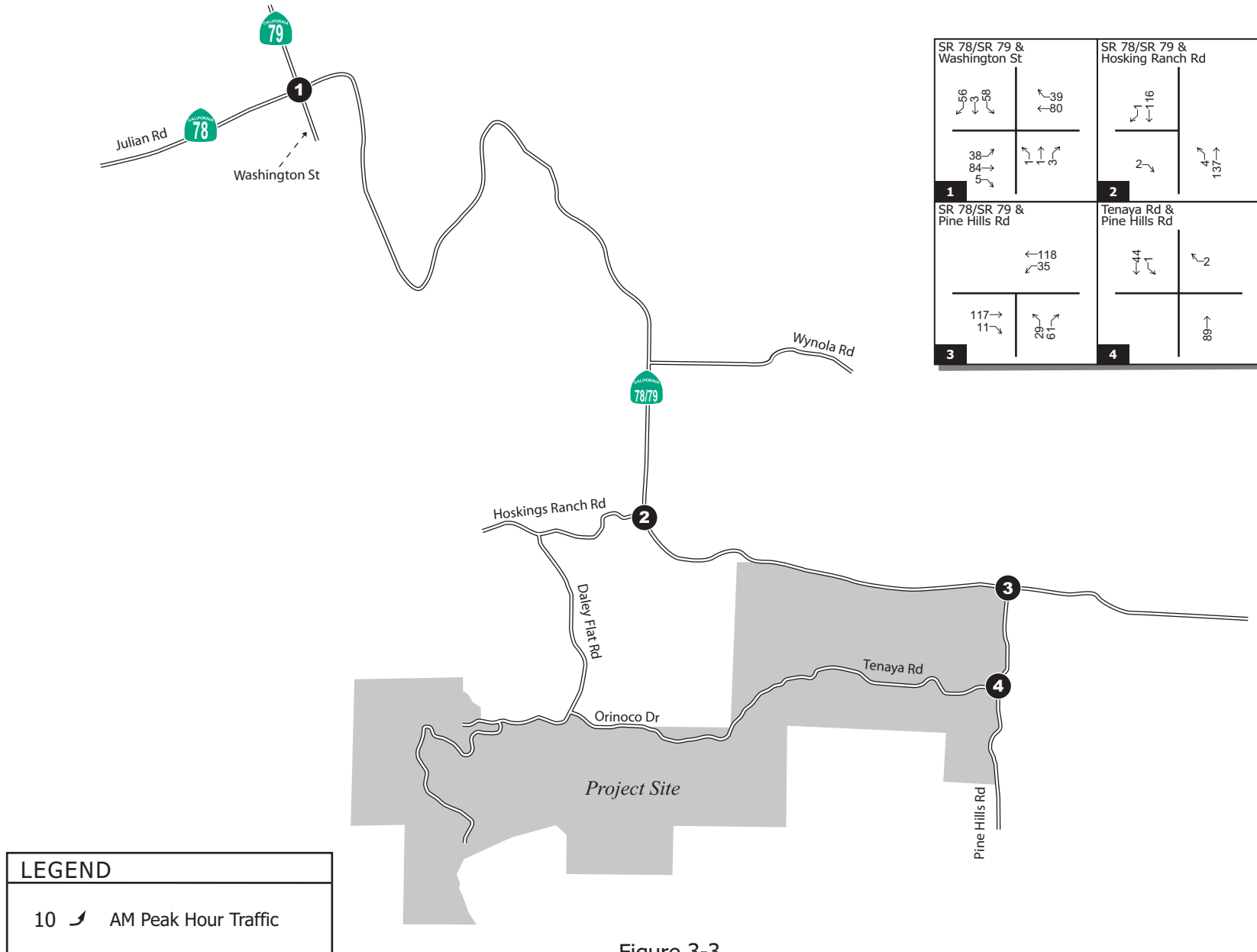


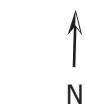


Figure 3-2
Existing Roadway Segment Volumes



SR 78/SR 79 & Washington St 	SR 78/SR 79 & Hosking Ranch Rd
SR 78/SR 79 & Pine Hills Rd 	Tenaya Rd & Pine Hills Rd

Figure 3-3
Existing AM Peak Hour Intersection Volumes



Not To Scale

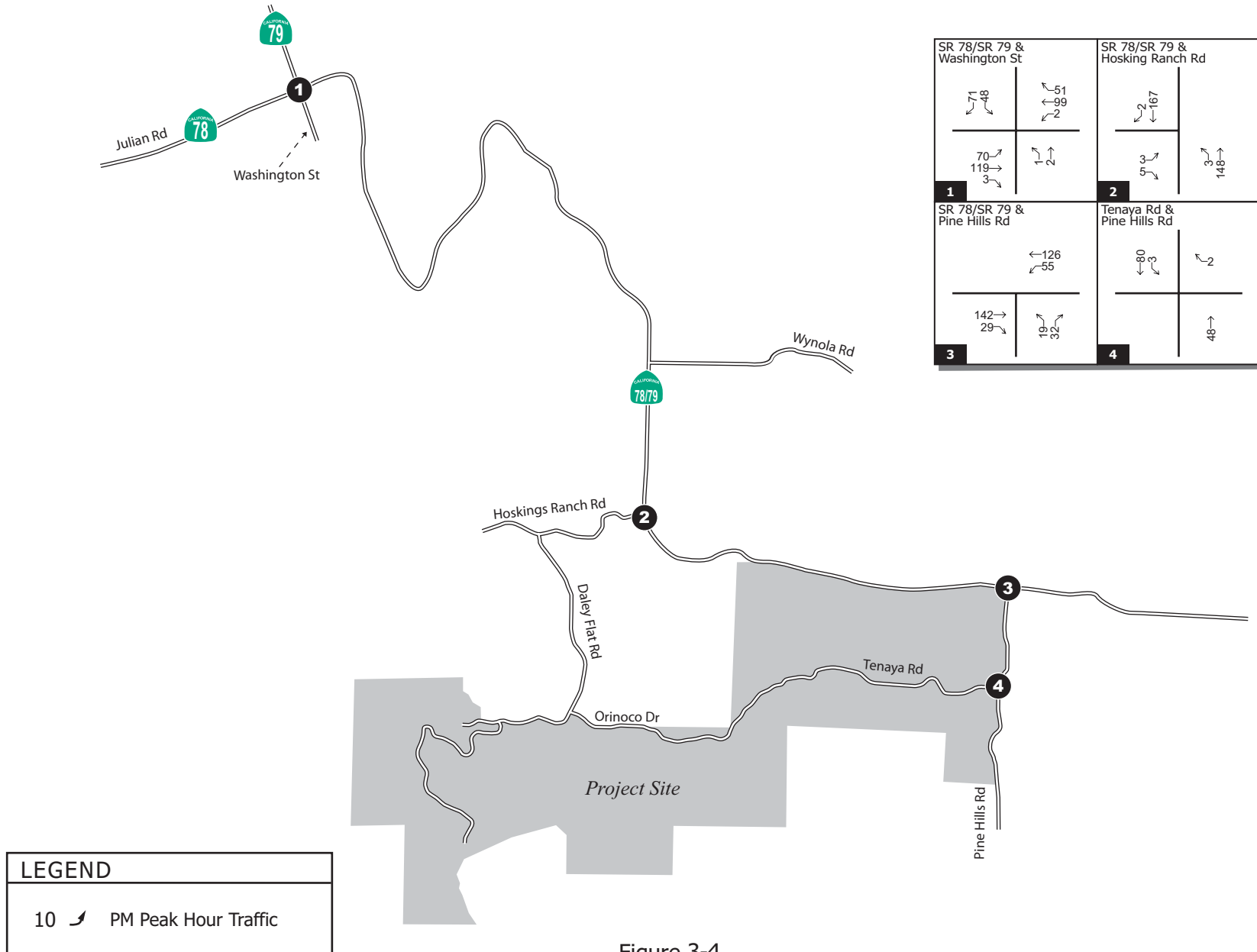
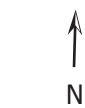


Figure 3-4
Existing PM Peak Hour Intersection Volumes



Not To Scale



Figure 3-5
Existing Roadway Segment Volumes With Project

Not To Scale

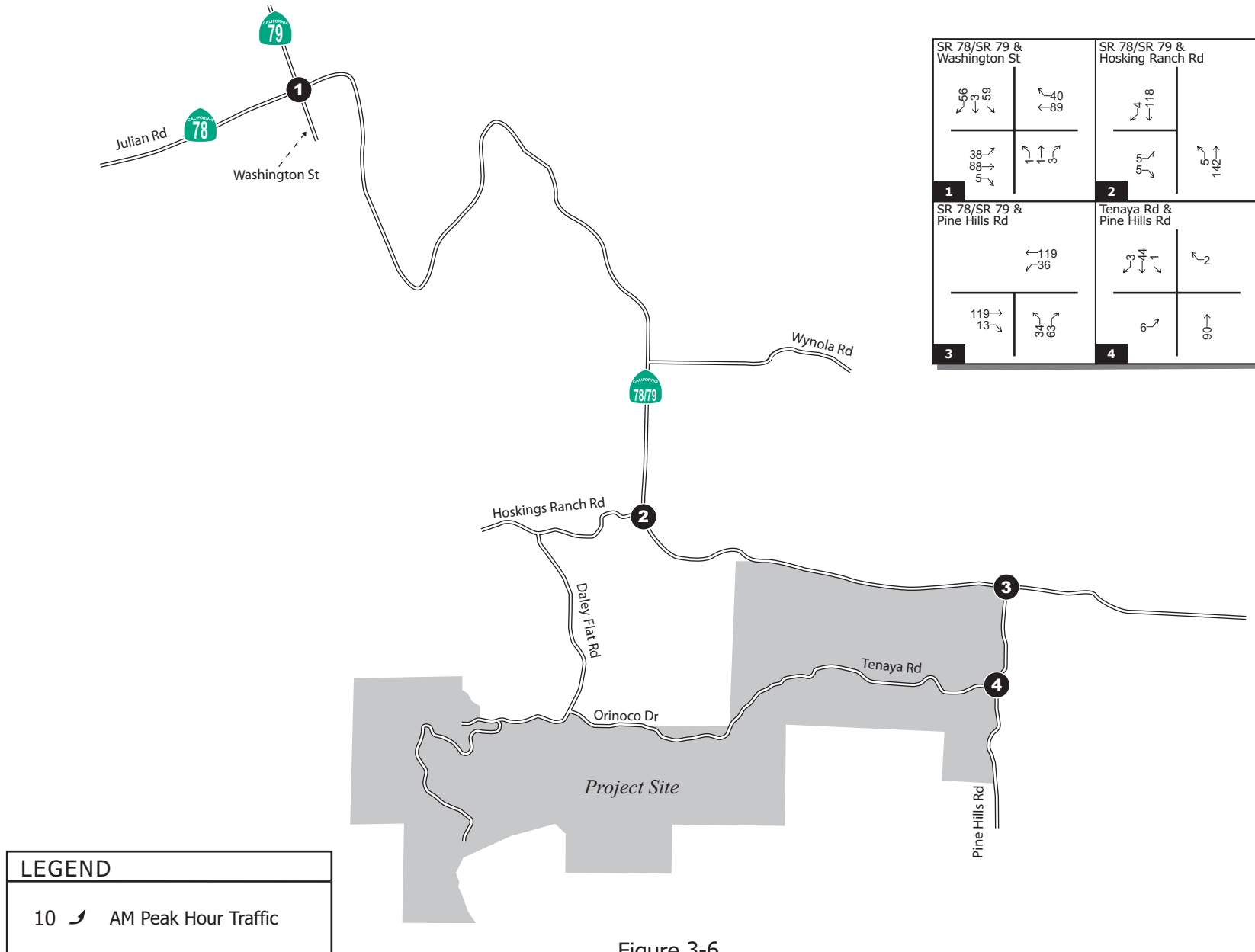
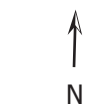


Figure 3-6
Existing AM Peak Hour Intersection Volumes With Project



Not To Scale

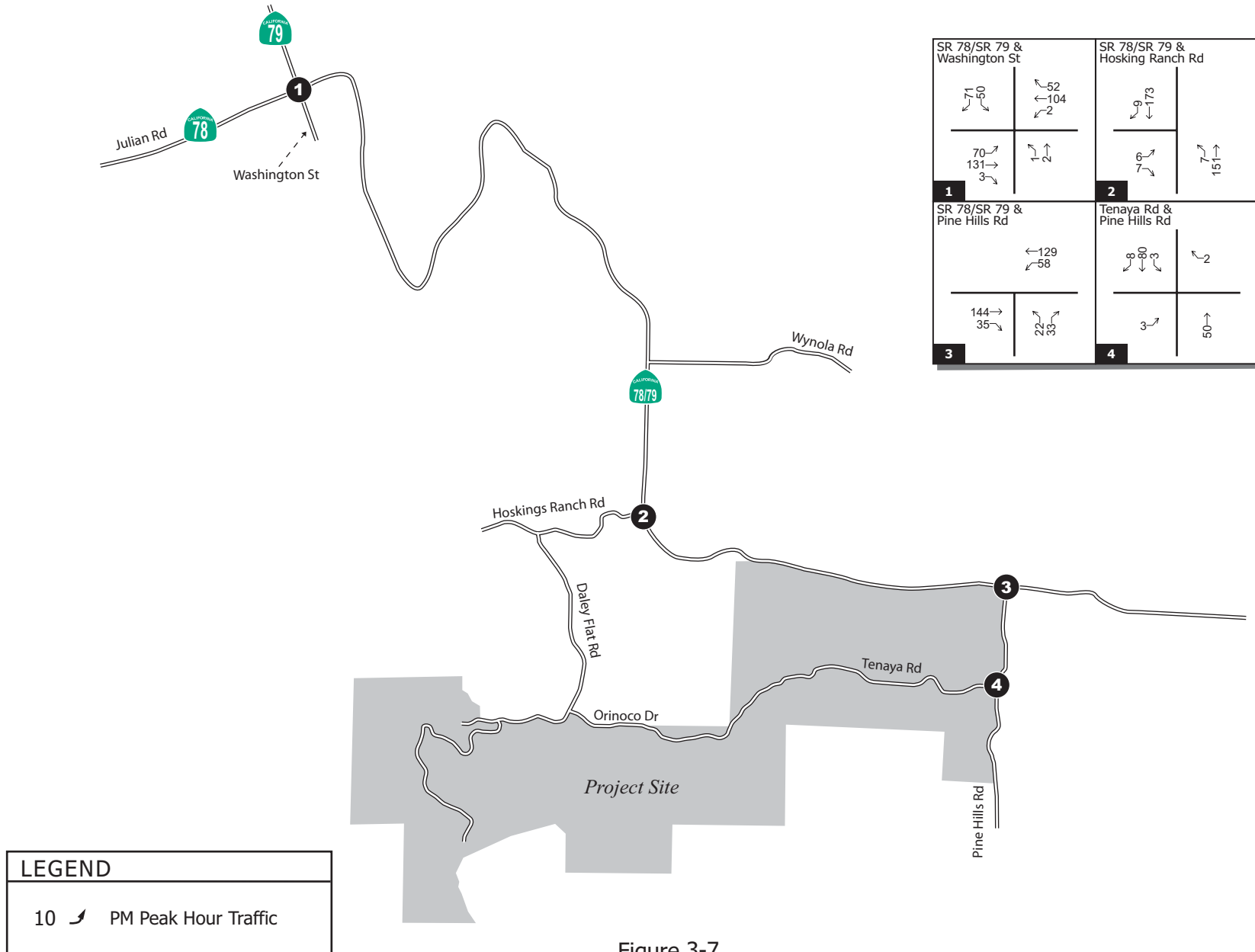
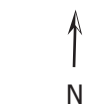


Figure 3-7
Existing PM Peak Hour Intersection Volumes With Project



Not To Scale

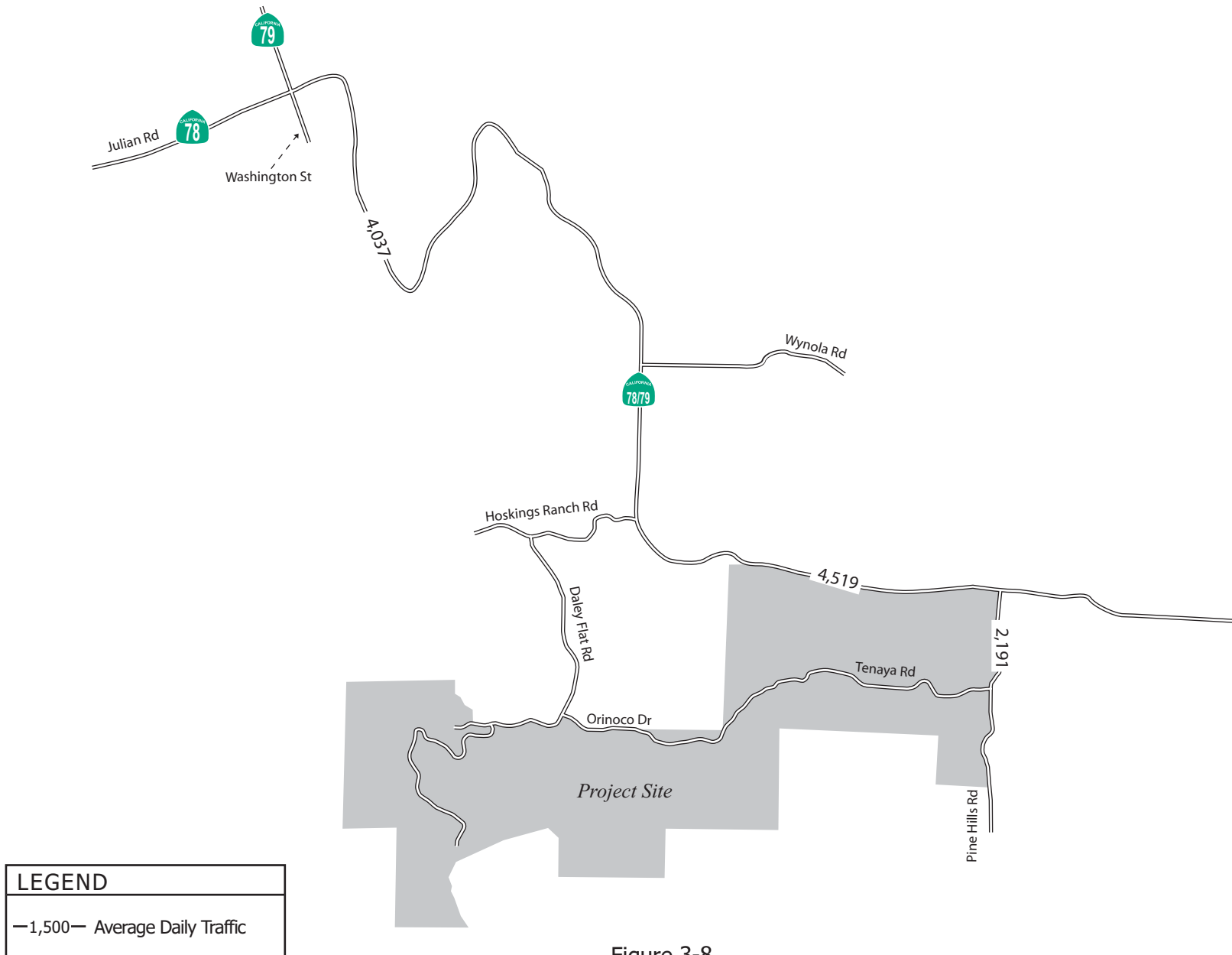


Figure 3-8
Existing Roadway Segment Volumes With Consolidated Project Alternative

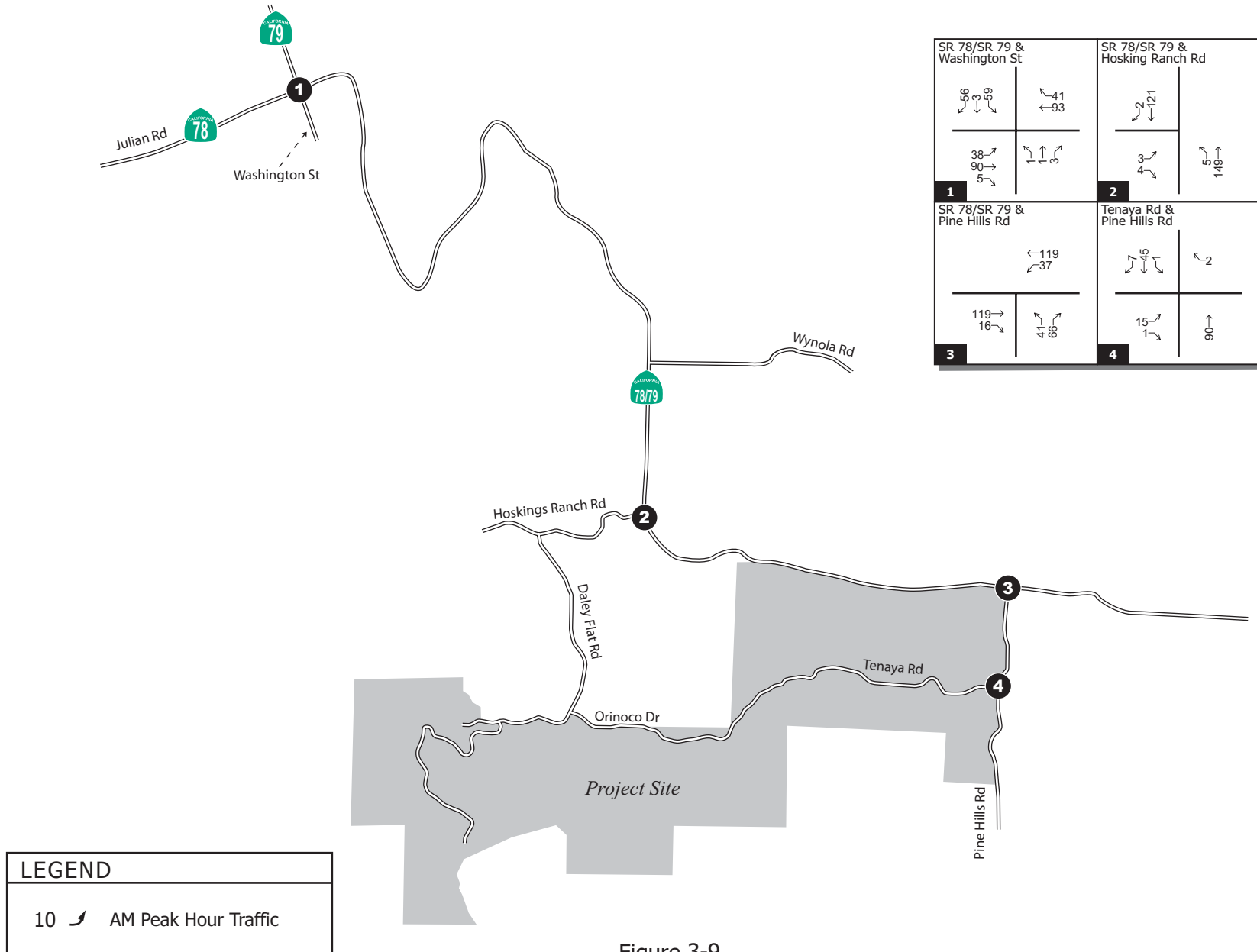
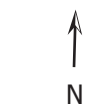


Figure 3-9
Existing AM Peak Hour Intersection Volumes With Consolidated Project Alternative



Not To Scale

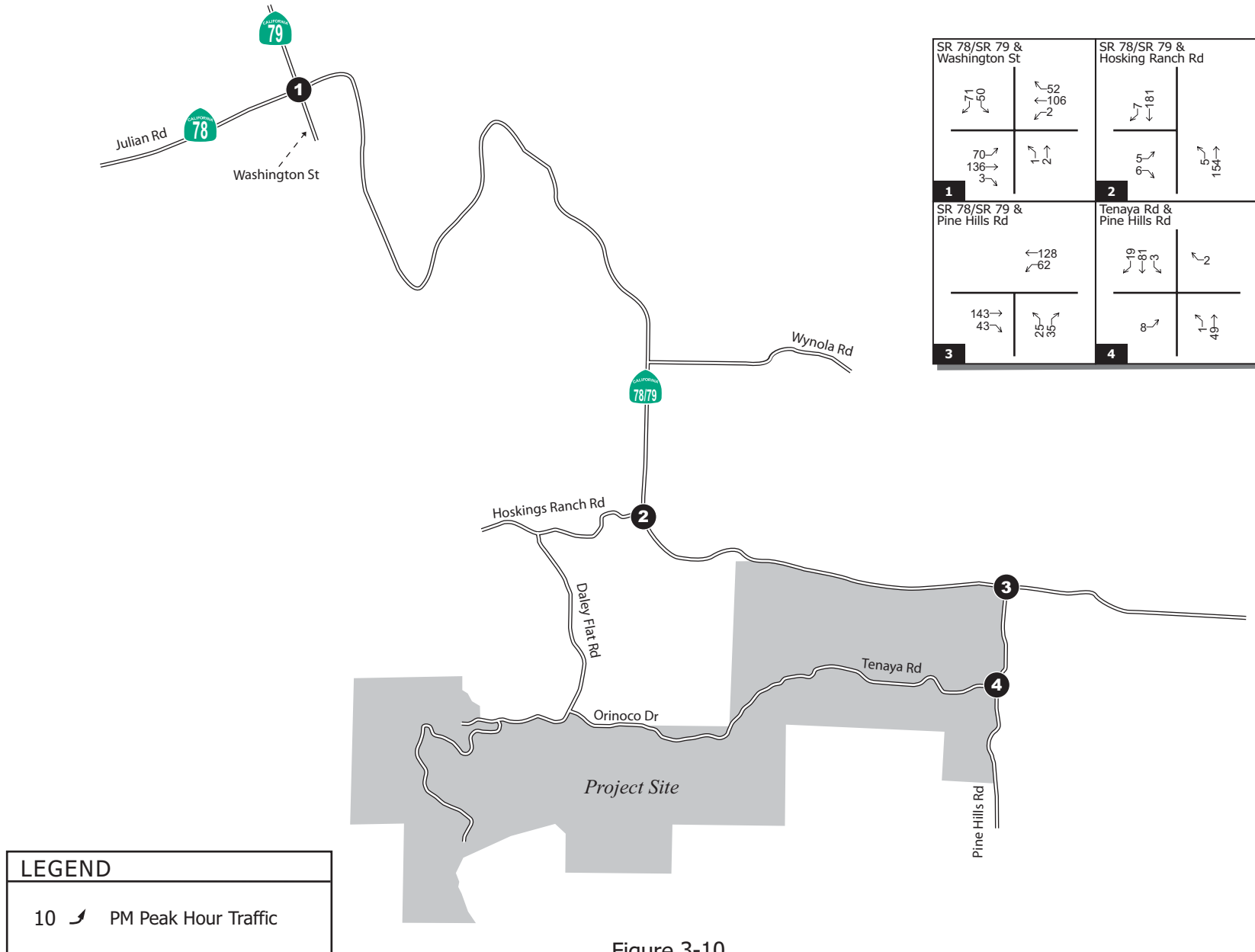
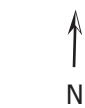


Figure 3-10
Existing PM Peak Hour Intersection Volumes With Consolidated Project Alternative



Not To Scale

CHAPTER 4

CUMULATIVE CONDITIONS

The County of San Diego has developed an overall programmatic solution that addressed existing and projected future road deficiencies in the unincorporated portion of San Diego County. This program includes the adoption of a Transportation Impact Fee (TIF) program to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. Based on SANDAG regional growth and land use forecasts, the SANDAG Regional Transportation Model was utilized to analyze projected (year 2030) development conditions on the existing circulation element roadway network throughout the unincorporated area of the County. Based on the results of the traffic modeling, funding necessary to construct transportation facilities that will mitigate cumulative impacts from new development was identified. Existing roadway deficiencies will be corrected through improvement projects funded by other public funding sources, such as TransNet, gas tax, and grants. Potential cumulative impacts to the region's freeways have been addressed in SANDAG's Regional Transportation Plan (RTP). This plan, which considers freeway buildout over the next 30 years, will use funds from TransNet, state, and federal funding to improve freeways to projected level of service objectives in the RTP.

The proposed project generates 1278 daily trips, or if the consolidated project alternative is implemented then 728 daily trips will be generated. These trips will be distributed on circulation element roadways in the County that were analyzed by the TIF program, some of which currently or are projected to operate at inadequate levels of service. These project trips therefore contribute to a potential significant cumulative impact and mitigation is required. The potential growth represented by this project was included in the growth projections upon which the TIF program is based. Therefore, payment of the TIF, which will be required at issuance of building permits, in combination with other components of the program described above, will mitigate potential cumulative traffic impacts to less than significant.

CHAPTER 5

SIGHT DISTANCE

The proposed project will take access to local roads via Hoskings Ranch Road onto SR78/79 and onto Pine Hills Road via Tenaya Road, which is currently not built. KOA Corporation performed a sight distance analysis at these two access points, and a third sight distance analysis at the intersection of SR-78/79 and Pine Hills Road. Sight distance is the continuous length of roadway visible to the driver sufficient enough to assess an oncoming vehicle to avoid collision and perform a maneuver without requiring through traffic to radically alter their speed.

KOA Corporation conducted a speed survey of vehicles traveling northbound/southbound on Pine Hills Road and vehicles traveling eastbound/westbound on SR-78/79 at the project access intersections; the analysis can be found in Appendix F. Based on the 85th percentile of the speed data collected, the operational speed at Hoskings Ranch Road is 58 mph for both eastbound and westbound, and 48 mph for northbound and 47 mph for southbound on Pine Hills Road. According to the County of San Diego Public Road Standards, the minimum intersection sight distance for 47, 48 and 58 mph are 470 feet, 480 feet and 580 feet, respectively. According to AASHTO, the minimum intersection sight distance for 43, 44 and 58 mph are 520 feet, 530 feet and 640 feet, respectively.

Sight Distance

The project will be accessing the County's public roads via two proposed private driveways on SR-78/79 at Hoskings Ranch Rd approximately 1.8 miles west of Pine Hills Road, and Pine Hills Road at Tenaya Road approximately 0.5 miles south of SR-78/79. These access points require sight distance evaluations in compliance with the San Diego County Standards for Private Roads. These evaluations may not be a "stand-alone" analysis because it only addresses the existing conditions of sight distance in coordination with the project site plan. Therefore, review of the site plan should ensure that no proposed objects on site would diminish sight distance below the minimum requirements contained within this section. Furthermore, because of the inherent limitations of field review and in-office estimations on the effect of proposed mitigation measures, the project site plan and/or intersection plan provided by the applicant shall yield the distance obtained from proposed mitigation measures if any are required.

The extent of sight distance evaluations can range from a few photos and statement from the preparer of this report to a full analysis of potentially conflicting intersection maneuvers with multiple photographs and detailed field measurements. Based on a field review of the project access at Hoskings Ranch Road and Tenaya Road, it has been determined that a detailed assessment of sight distance will be needed due to the horizontal curve and sight distance obstructions along Hoskings Ranch Road and Tenaya Road.

Corner Sight Distance

Corner sight distance—also known as "Intersection Sight Distance" and more generally as "Decision Sight Distance"—is the distance from the point of conflict to the locations where both potentially conflicting vehicles can see each other. If the vehicle without the right-of-way should decide to enter the intersection, then this distance should allow enough time for the vehicle with the right-of-way to slow or avoid other vehicles as necessary.

In the case of side-street stop-controlled intersections one vehicle is stopped on the minor road while the approaching vehicle on the major road is in motion. Should the stopped vehicle decide to enter the same travel lane as the approaching vehicle, then the approaching vehicle would need enough distance to allow the stopped vehicle to enter the traffic flow without the use of hard braking. It is preferred that corner sight distance be met without causing unreasonable hardship to the applicant by means of costly or impractical mitigation measures.

Corner sight distance for left turns from the major road is generally less than what is required for minor road stopped vehicles. This is because left turns from the major road only need to clear the lanes rather than entering the oncoming traffic flow. However, corner sight distance analysis would be required if the intersection is near a horizontal or crest vertical curve on the major road which could potentially reduce the sight distance to less than that of the minor road stopped vehicles.

Corner sight distance for the minor road crossing maneuver is adequate if the corner sight distances for the left and right turns from the same minor road approach are met.

Stopping Sight Distance

Stopping sight distance is the distance from the point of conflict to the locations where both potentially conflicting vehicles can see each other. If the vehicle without the right-of-way should decide to enter the intersection, then this distance should allow enough time for the vehicle with the right-of-way to come to a complete stop if necessary.

The approaching vehicles on the major road have the right-of-way at a minor road side-street stop controlled intersection. Major road through movement vehicles may be required to make a sudden stop for vehicles accessing to and from the minor road. Stopping sight distance is fundamental to intersection operation; therefore, adequate sight distance must be provided to meet these requirements.

The San Diego County Standards for Private Roads defers to the American Association of State Highway and Transportation Officials (AASHTO) standards for stopping sight distance requirements. The standards used in this analysis were obtained from AASHTO's A Policy on Geometric Design of Highways and Streets (2004).

Stopping sight distance for the minor road crossing maneuver is adequate if the stopping sight distances for the left and right turns from the same minor road approach are met.

Prevailing Speed

Speed surveys were conducted to determine the approaching speed of vehicles at the project access on Hoskings Ranch Road 1.8 miles west of Pine Hills Road, and Tenaya Road 0.65 miles south of SR-78/79.

The prevailing speed of 58 MPH will be used for both the eastbound and westbound intersection approach on SR78/79. The prevailing speed of 44 MPH will be used for the northbound intersection approach, and the prevailing speed of 43 MPH will be used for the southbound intersection approach on Pine Hills Road. The speed surveys performed comply with the methods described in the California Manual on Uniform Traffic Control Devices Part 2 (January 21, 2010), and the corresponding worksheets can be found in Appendix G.

Field Measurements

Measurements taken in the field are documented with photos and aerials which can be found in Appendix G. Figure 7-1 and 7-2 display the conceptual reference points for one approach of a minor road (private access) that stops for a major road (County public road). Vehicles in the drawings have a letter of the alphabet assigned to them (A through E) and the descriptions are as follows:

- Vehicle A – Stopped on the minor road and can make a left, through, or right turn as permitted
- Vehicle B – Traveling on the major road approaching Vehicle A from the right
- Vehicle C – Traveling on the major road approaching Vehicle A from the left
- Vehicle D – Stopped on the major road waiting to turn left into the approach occupied by Vehicle A

These drawings are provided as an aid to understanding the vehicle conflicts being discussed and are not meant to be representative of the actual intersection layout. Because the discussion is oriented around only one minor road approach, this sight distance analysis method can be applied to “T” intersections as well.

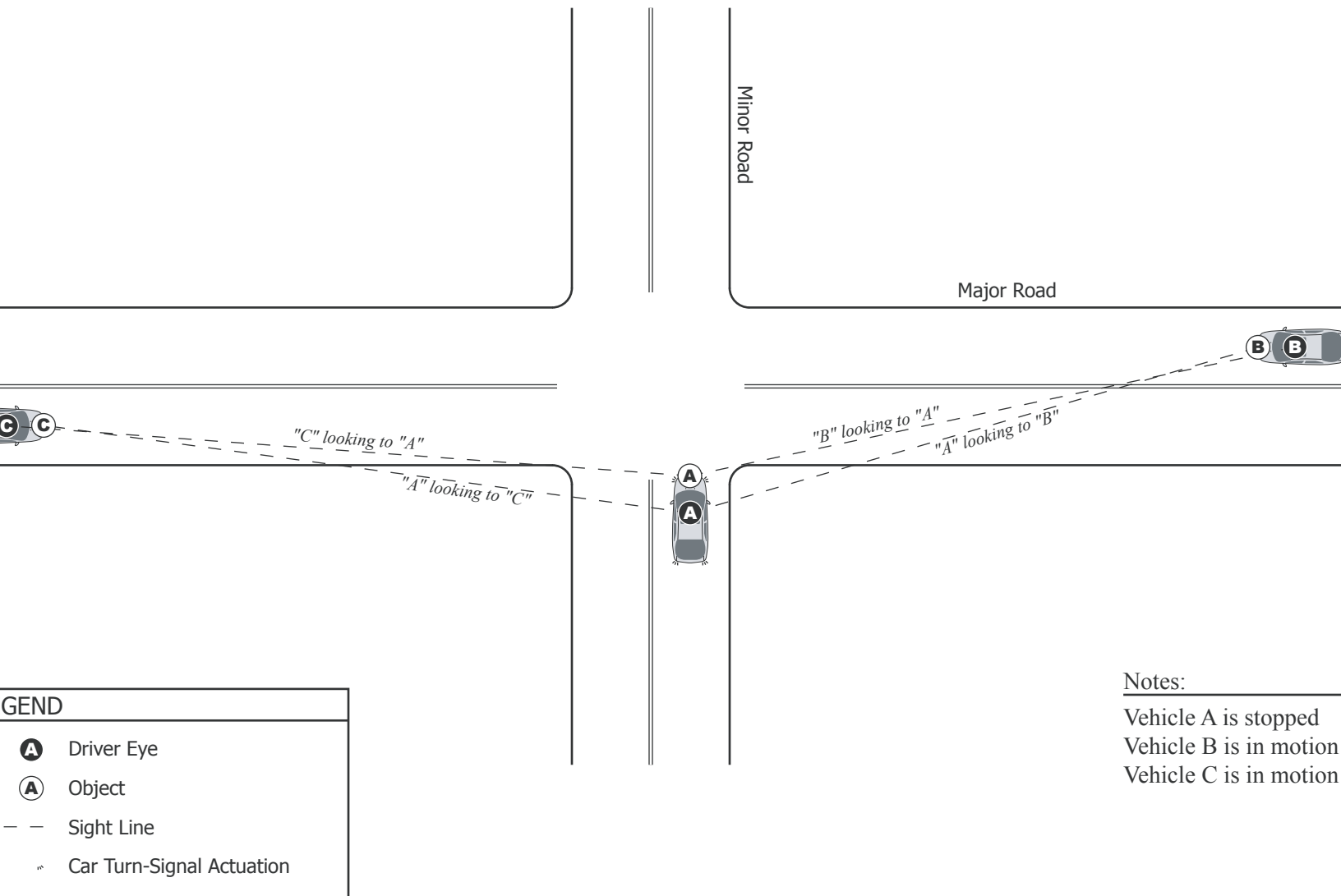


Figure 5-1
Minor Road Sight Lines

Conceptual Layout
Not to Scale

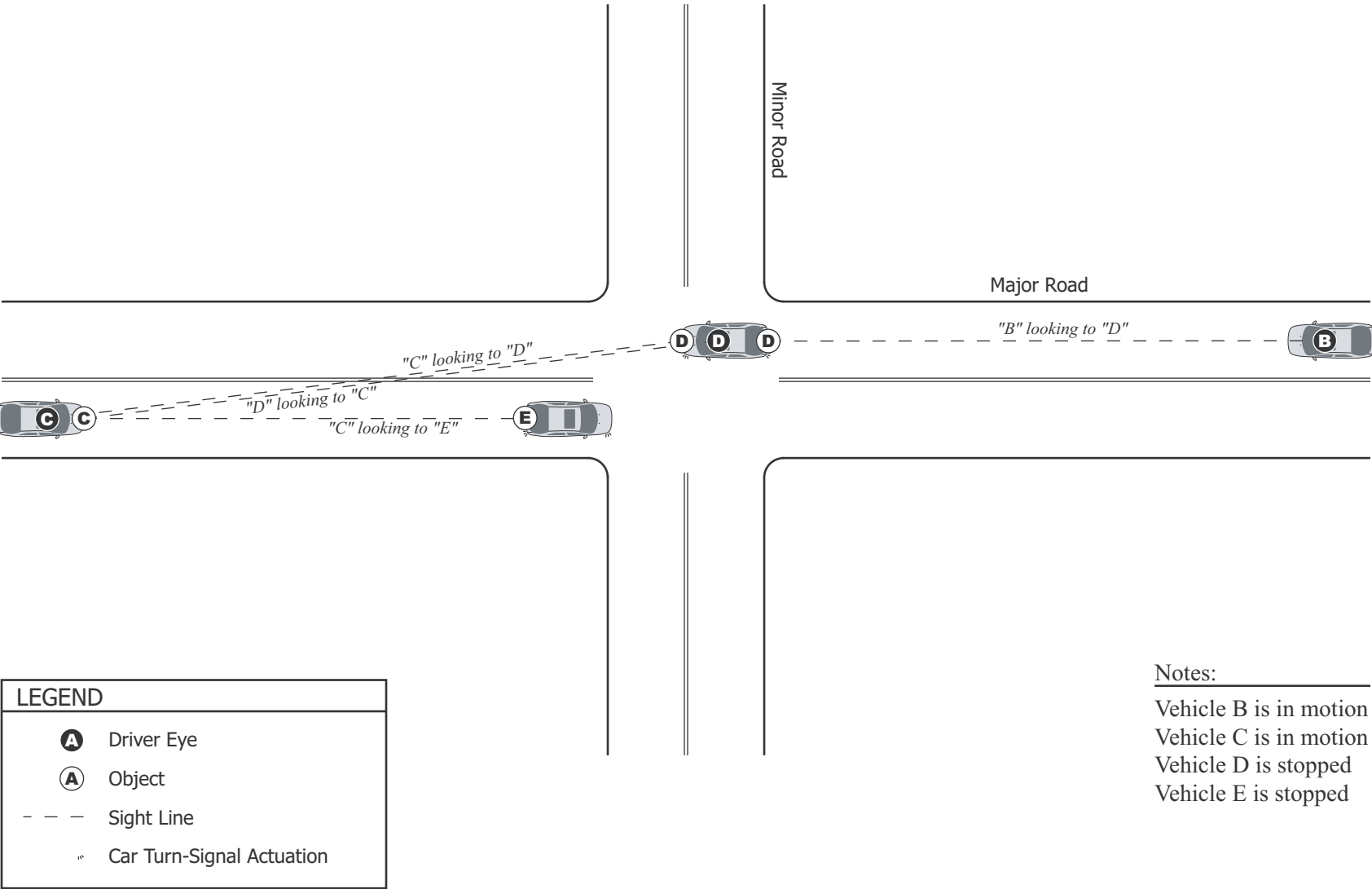


Figure 5-2
Major Road Sight Lines

Conceptual Layout
Not to Scale

Project Access – Existing Configuration

Table 5-1 below summarizes the results of sight distance analysis for the project access located on Hoskings Ranch Road 1.8 miles west of Pine Hills Road, Pine Hills Road 0.95 miles east of Orinoco Drive, and Tenaya Road 0.65 miles south of SR-78/79. Figures in Appendix G contain the photographs of each respective field measurement.

**Table 5-1
Existing Configuration Sight Distance Summary**

Maneuver	Prevailing Speed	Existing Sight Distance (feet)				
		Type	Evasive Action	Needed	Available	Adequate?
Hoskings Ranch Road / SR-78/79						
Left turn from Hoskings Ranch Road looking right	58 MPH	Corner	B slows for A	580* / 640**	710	Yes
		Stopping	B stops for A	540	585	Yes
Right turn from Hoskings Ranch Road looking left	58 MPH	Corner	C slows for A	580* / 640**	985	Yes
		Stopping	C stops for A	540	750	Yes
EB Through on SR-78/79 looking east	58 MPH	Corner	----	----	----	----
		Stopping	B stops for D	540	750	Yes
Pine Hills Road / SR-78/79						
Left turn from Pine Hills Road looking right	58 MPH	Corner	B slows for A	580* / 640**	535	No
		Stopping	B stops for A	540	950	Yes
Right turn from Pine Hills Road looking left	58 MPH	Corner	C slows for A	580* / 640**	750	Yes
		Stopping	C stops for A	540	750	Yes
EB Through on SR-78/79 looking east	58 MPH	Corner	----	----	----	----
		Stopping	B stops for D	540	750	Yes
Tenaya Road / Pine Hills Road						
Left turn from Tenaya Road looking right	48 MPH	Corner	B slows for A	440* / 530**	665	Yes
		Stopping	B stops for A	400	670	Yes
Right turn from Tenaya Road looking left	47 MPH	Corner	C slows for A	430* / 520**	400	No
		Stopping	C stops for A	385	745	Yes
SB Through on Pine Hills Road looking south	47 MPH	Corner	----	----	----	----
		Stopping	B stops for D	385	725	Yes

* Per County of San Diego guidelines

** Per AASHTO guidelines

Corner Sight Distance

For this project access location all movements have adequate corner sight distance except for:

Left turn from Pine Hills Road onto SR-78/79 (Movement “B slows for A”)

Right turn from Tenaya Road onto Pine Hills Road (Movement “C slows for A”)

From the Pine Hills Road looking right (Movement “B slows for A”) the sight distance is restricted by the existing embankment on the south side of the horizontal curve in the road. This may be acceptable because stopping sight distance is adequate for this maneuver. However, adequate corner sight distance can be met if the trees on the south side of the horizontal curve were trimmed or removed.

From the Tenaya Road looking left (Movement “C slows for A”) the sight distance is restricted by trees on the west side of the horizontal curve in the road. However, adequate corner sight distance can be met if the trees on the west side of Pine Hills Road on/adjacent to the applicant’s property were removed, allowing for corner sight distance to increase to 745 feet.

Stopping Sight Distance

For this project access location all movements have adequate stopping sight distance.

CHAPTER 6

IMPACTS AND MITIGATION

This chapter identifies significant impacts and outlines the project mitigation as well as their fair share contributions.

CONSTRUCTION IMPACTS

It is not estimated that the project will require any street closures during construction. There are no sidewalks in the area, so sidewalk closures would not be an issue. In addition, construction impacts on the area are projected to be minimal since construction vehicles are estimated to contribute fewer vehicles during the peak hours than the project would after completion.

SIGNIFICANT IMPACTS

The following intersections and roadway segments were found to be significantly impacted by the proposed project based on the significance criteria presented in Appendix A.

Direct Impacts

- No Direct Impacts

Cumulative Impacts

- County of San Diego local and regional TIF facilities: project will pay the TIF

CHAPTER 7 SUMMARY OF ANALYSIS

This chapter summarizes the operations at the study intersections and segments. Table 8-1 shows the summary of roadway segment conditions for each scenario. Table 8-2 shows the summary of intersection conditions for each scenario.

**Table 7-1
Summary of Roadway Segment Conditions**

Roadway Segment	Existing		Existing + Project		Existing + Consolidated Project Alternative	
	V/C	LOS	V/C	LOS	V/C	LOS
SR-78/79						
SR-79/Washington St to Hoskings Ranch Rd	0.156	C	0.192	C	0.176	C
Hoskings Ranch Rd to Pine Hills Rd	0.179	C	0.206	C	0.197	C
Pine Hills Rd						
south of SR-78/79	0.102	A	0.138	B	0.135	B

**Table 7-2
Summary of Intersection Conditions**

Intersection	Peak Hour	Existing		Existing + Project		Existing + Consolidated Project Alternative	
		Delay	LOS	Delay	LOS	Delay	LOS
1. SR-78 & SR-79/Washington St	AM	10.4	B	10.5	B	10.6	B
	PM	13.0	B	13.2	B	13.3	B
2. SR-78/79 & Hoskings Ranch Rd	AM	9.0	A	9.7	A	9.6	A
	PM	9.8	A	10.1	B	10.1	B
3. SR-78/79 & Pine Hills Rd	AM	10.1	B	10.3	B	10.5	B
	PM	10.4	B	10.6	B	10.8	B
4. Tenaya Rd & Pine Hills Rd	AM	8.8	A	9.5	A	9.6	A
	PM	8.6	A	9.5	A	9.6	A

CHAPTER 8 RECOMMENDATIONS

The proposed project consists of 28 single family estate dwelling units along with 305.15 acres of agricultural use. The consolidated project alternative consists of 35 single family estate dwelling units. Should either the project or the consolidated project alternative be built we recommend the following based on the preceding analysis:

- The project should follow the mitigation outlined in Chapter 6 by paying the County of San Diego TIF fee for all cumulative impacts.
- Provide adequate sight distance at proposed project access points according to County of San Diego sight distance requirements.

Prepared By:

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George Ghossain, Senior Transportation Engineer
Rogelio Pelayo, Assistant Transportation Planner

APPENDIX A

LEVEL OF SERVICE CONCEPTS, ANALYSIS METHODOLOGIES, STANDARDS OF SIGNIFICANCE

Roadway Segment Level of Service Definitions

LOS	V/C	Congestion/Delay	Traffic Description
(Used for surface streets, freeways, expressways and conventional highways)			
"A"	≤ 0.41	None	Free flow.
"B"	$> 0.41-0.62$	None	Free to stable flow, light to moderate volumes.
"C"	$> 0.62-0.80$	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted.
"D"	$> 0.80-0.92$	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
"E"	$> 0.92-1.00$	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
(Used for surface streets and conventional highways)			
"F"	> 1.00	Considerable	Forced or breakdown flow. Delay measured in average travel speed (MPH). Signalized segments experience delays > 60.0 seconds/vehicle.
(Used for freeways and expressways)			
"F(0)"	$> 1.00-1.25$	Considerable 0-1 hour delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go.
"F(1)"	$> 1.25-1.35$	Severe 1-2 hour delay	Very heavy congestion, very long queues.
"F(2)"	$> 1.35-1.45$	Very Severe 2-3 hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
"F(3)"	> 1.45	Extremely Severe 3+ hours of delay	Gridlock

Source: Caltrans, 1992.

LEVEL OF SERVICE (LOS) DEFINITIONS

The concept of LOS is defined as a qualitative 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 speed, travel time, freedom to maneuver, comfort, convenience, and safety. Levels of service for freeway segments can generally be categorized as shown in the table above.

San Diego County Roadway Classifications, Levels of Service (LOS) and
Average Daily Traffic (ADT)

Street Classification	Lanes	Maximum Recommended ADT by LOS				
		A Free flow	B Steady flow	C Stable flow	D Approach unstable	E Unstable flow
Expressway	6	36,000	54,000	70,000	86,000	108,000
Prime	6	22,200	37,000	44,600	50,000	57,000
Major	4	14,800	24,700	29,600	33,400	37,000
Collector	4	13,700	22,800	27,400	30,800	34,200
Town Collector	3	3,000	6,000	9,500	13,500	19,000
Two Lane Highway	2	1,900	4,100	7,100	10,900	16,200

Arterial Level of Service Definitions

LOS	Class I (45 to 35 mph)	Class II (35-30 mph)	Class III (35 to 25)	LOS Characteristic
"A"	≥35	≥30	≥25	Speeds 90% of free-flow speed. minimal stopped delay
"B"	≥28	≥24	≥19	Speeds 70% of free-flow speed, delay not bothersome
"C"	≥22	≥18	≥13	Speeds 50% of free-flow speed, longer queues, noticeable delay
"D"	≥17	≥14	≥9	Speeds 40% of free-flow, substantial delay.
"E"	≥13	≥10	≥7	Speeds 30% of free-flow, high delay.
"F"	<13	<10	<7	Speeds 25% of free-flow, high delay, extensive queuing

LEVEL OF SERVICE (LOS) DEFINITIONS

The concept of LOS is defined as a qualitative 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 speed, travel time, freedom to maneuver, comfort, convenience, and safety. Levels of service for arterial segments with a range of free-flow speeds can generally be categorized as shown in the table above.

Signalized Intersection Level of Service Highway Capacity Manual Operational Analysis Method

The operational analysis method for evaluation of signalized intersections presented in the *2000 Highway Capacity Manual* (Transportation Research Board Special Report 209) defines level of service in terms of delay, or more specifically, control stopped delay per vehicle. Delay is a measure of driver and/or passenger discomfort, frustration, fuel consumption, and lost travel time.

Control Stopped Delay Per Vehicle (seconds)	Level of Service (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 to be 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 capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes to such delay.

Source: Highway Capacity Manual 2000, Exhibit 16-2

MINOR STREET STOP AND ALL-WAY STOP CONTROLLED INTERSECTION LEVEL OF SERVICE

HIGHWAY CAPACITY MANUAL OPERATIONAL ANALYSIS METHOD

The Highway Capacity Manual (HCM) analysis method for evaluating minor street stop intersections is based on the average total delay for each impeded movement. For all-way stop controlled intersections it is based on the average total delay for the entire intersection. As used here, total delay is defined as the total elapsed time from when a vehicle stops at the end of a queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue to the first-in-queue position. The average total delay for any particular minor movement is a function of the service rate or capacity of the approach and the degree of saturation. The resulting delay is used to determine the level of service as shown in the following table.

Average Total Delay	Level of Service (LOS) Characteristics
0-10	<i>LOS A</i> – Little or no delay
>10 – 15	<i>LOS B</i> – Short traffic delay
>15 – 25	<i>LOS C</i> – Average traffic delay
>25 – 35	<i>LOS D</i> – Long traffic delays
>35 – 50	<i>LOS E</i> – Very long traffic delays
>50	<i>LOS F</i> – When the demand exceeds the capacity of the lane, extreme delays will be encountered and queuing may cause severe congestion to the intersection.

Source: Highway Capacity Manual 2000, Exhibit 17-22

City of San Diego
Measure of Significant Project Traffic Impacts

Level of Service with Project*	Allowable Change due to Project Impact**					
	Freeways		Roadway Sections		Intersections	Ramps***
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E	0.01	1	0.02	1	2	2
F	0.005	0.5	0.01	0.5	1	1

Notes:

* All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using Table 2 or an equivalent LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped locations). For metered freeway ramps, project traffic impacts are generally acceptable if they do not cause any traffic queues to exceed ramp storage capacities.

** If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. These impact changes may be measured from acceptable computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigation within the Traffic Impact Study [TIS] report that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project is "E" or "F," the project applicant shall be responsible for mitigating significant impact changes.

***See Attachment B for ramp metering analysis.

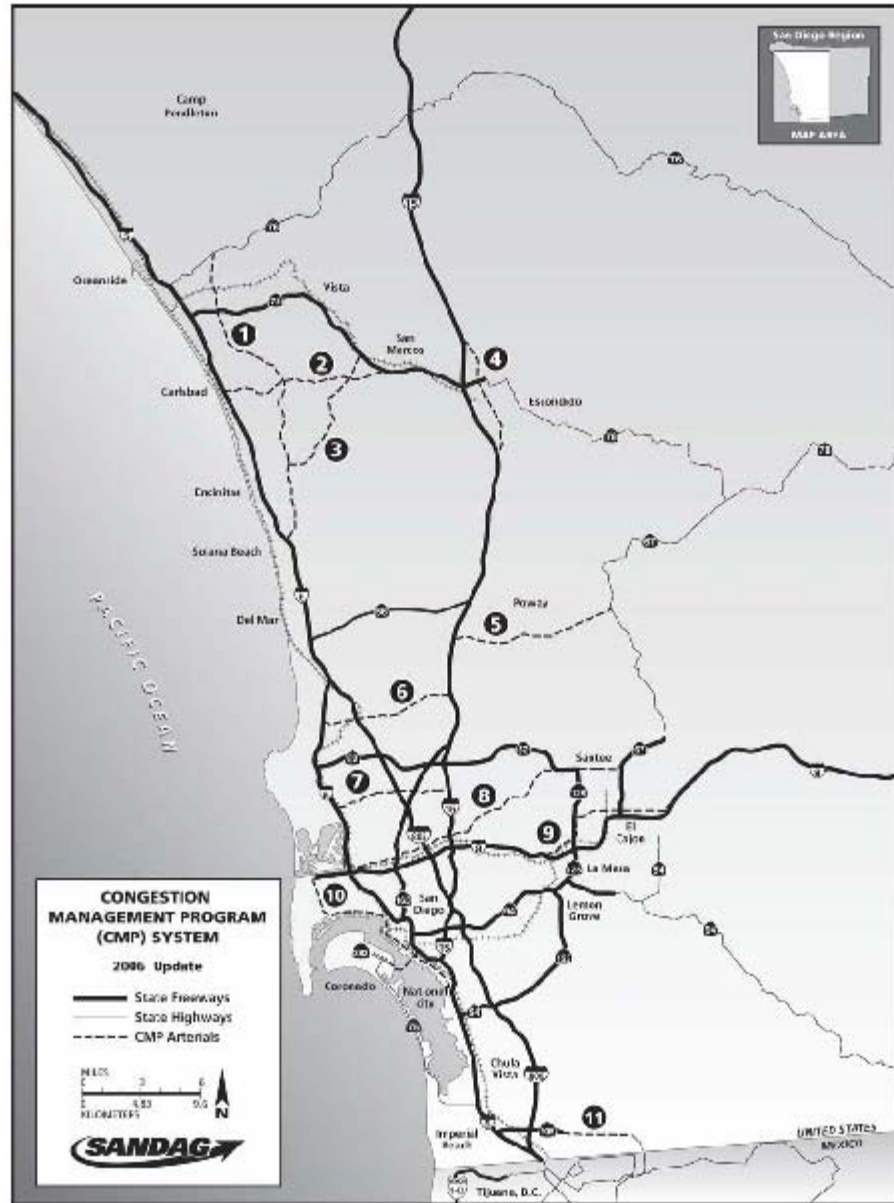
Key: V/C = Volume to Capacity ratio
Speed = Speed measured in miles per hour
Delay = Average stopped delay per vehicle measured in seconds, or minutes
LOS = Level of Service

Measure of Significant Project Impacts

Roadway Segment LOS	Allowable Increase on Congested Segments				Intersection LOS	Allowable Increase at Congested Intersections	
	2-Lane Road	4-Lane Road	6-Lane Road	2-Lane Highway		Signalized	Unsignalized
LOS E	200 ADT	400 ADT	600 ADT	325 ADT	LOS E	Delay of 2 seconds	20 peak hour trips on a critical movement
LOS F	100 ADT	200 ADT	300 ADT	225 ADT	LOS F	Delay of 1 second, or 5 peak hour trips on a critical movement	5 peak hour trips on a critical movement

Note: A critical movement is one that is experiencing excessive queues.

Map 2-1
2006 CMP Roadway Network



Note: See the following Exhibit 2-1 for a description of the CMP arterials that are numbered on this map.

Exhibit 2-1
List of CMP System Roadways

CMP Freeways:
Interstate 5: Orange County Line to U.S./Mexico Border Interstate 8: Nimitz Boulevard to Imperial County Line Interstate 15: Riverside County Line to I-5 Interstate 805: I-5 (North) to I-5 (South) State Route 52: I-5 to SR 25 State Route 54: I-5 to Briarwood Road State Route 56: I-5 to I-15 State Route 67: Maplevue Street to I-8 State Route 78: I-5 to North Broadway State Route 94: I-5 to Avocado Boulevard State Route 125: SR 54 to SR 52 State Route 163: I-15 to I-5 State Route 905: Oro Vista Road to Otay Mesa Road
CMP Highways:
State Route 54: SR 94 to Grove Road State Route 67: SR 78 to Maplevue Valley State Route 75: I-5 (North) to I-5 (South) State Route 76: Coast Highway to SR 79 State Route 78: North Broadway to Imperial County Line State Route 79: Riverside County Line to I-8 State Route 94: Avocado Boulevard to Old Highway 80 State Route 282: Alameda Boulevard to Orange Avenue
CMP Arterials:
(1) Manchester Avenue/El Camino Real: I-5 to SR 76/Mission Avenue (2) Palomar Airport Road/San Marcos Boulevard: I-5 to SR 78 (South) (3) Olivenhain Road/Rancho Santa Fe Road: El Camino Real to SR 78 (4) Centre City Parkway: I-15 (North) to I-15 (South) (5) Scripps Poway Parkway: I-15 to SR 67 (6) La Jolla Village Drive/Miramar Road: I-5 to I-15 (7) Balboa Avenue: I-5 to I-15 (8) Sea World Drive/Friars Road/Mission Gorge Road/Woodside Avenue: I-5 to SR 67 (9) Fletcher Parkway/Broadway/E. Main Street: I-8 (West) to I-8 (East) (10) Nimitz Blvd./North Harbor Dr./Grape & Hawthorne Streets/Pacific Highway/Harbor Drive: I-8 to I-5 (11) Otay Mesa Road-Interim SR 905: SR 905 (West) to SR 905 (East)¹

¹ This CMP Arterial is designated as an Interim facility on the CMP network and will be replaced by a state highway following its construction.

APPENDIX B

TRAFFIC COUNT DATA

MetroCount Traffic Executive

Vehicle Counts

736 -- English (ENU)

Datasets:

Site: [1110.01] OLD JULIAN HWY SR-79.SR-78 (EAST OF SR-79-WASHINGTON ST) NORTHBOUND
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 14:17 Tuesday, January 18, 2011 => 7:55 Friday, January 21, 2011
File: 1110.0121Jan2011.EC0 (Base)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Wednesday, January 19, 2011 => 0:00 Thursday, January 20, 2011
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: North (bound)
In profile: Vehicles = 1789 / 7097 (25.21%)

* Wednesday, January 19, 2011 - Total=1789, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	3	2	13	29	57	100	98	134	130	111	120	145	133	164	164	125	130	58	27	24	9	9	4	
0	0	0	2	6	12	21	30	39	26	39	23	31	34	40	42	39	41	13	10	13	4	2	0	-
0	1	0	1	7	15	19	22	26	31	29	29	41	26	41	38	33	42	18	4	3	3	0	1	-
0	0	1	5	2	13	30	27	33	28	22	29	35	39	36	45	32	25	11	8	5	2	5	2	-
0	2	1	5	14	17	30	19	36	45	21	39	38	34	47	39	21	22	16	5	3	0	2	1	-

AM Peak 1145 - 1245 (146), AM PHF=0.89

MetroCount Traffic Executive Vehicle Counts

737 -- English (ENU)

Datasets:

Site: [1110.01] OLD JULIAN HWY SR-79.SR-78 (EAST OF SR-79-WASHINGTON ST) SOUTHBOUND
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 14:17 Tuesday, January 18, 2011 => 7:55 Friday, January 21, 2011
File: 1110.0121Jan2011.EC0 (Base)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Wednesday, January 19, 2011 => 0:00 Thursday, January 20, 2011
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: South (bound)
In profile: Vehicles = 1772 / 7097 (24.97%)

*** Wednesday, January 19, 2011 - Total=1772, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
5	6	2	5	7	11	48	123	82	70	117	143	134	110	139	122	131	171	125	70	41	52	42	16	
1	3	1	1	1	2	11	25	26	21	15	35	28	25	37	22	35	53	40	29	14	9	9	8	-
3	1	0	0	4	1	7	28	19	12	34	37	40	18	35	28	38	48	34	17	9	17	14	4	-
1	2	1	3	0	7	11	32	22	16	34	35	36	35	25	30	34	39	31	10	11	16	10	2	-
0	0	0	1	2	1	19	38	15	21	34	36	30	32	42	42	24	31	20	14	7	10	9	2	-

AM Peak 1100 - 1200 (143), AM PHF=0.97

MetroCount Traffic Executive Vehicle Counts

352 -- English (ENU)

Datasets:

Site: [1007.02] JULIAN RD (WEST OF PINE VALLEY RD) EASTBOUND
Direction: 6 - West bound A>B, East bound B>A. Lane: 0
Survey Duration: 22:49 Wednesday, February 17, 2010 => 17:33 Friday, February 19, 2010
File: 1007.0219Feb2010.EC0 (Base)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Thursday, February 18, 2010 => 0:00 Friday, February 19, 2010
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: East (bound)
In profile: Vehicles = 2053 / 7027 (29.22%)

*** Thursday, February 18, 2010 - Total=2053, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
6	2	4	5	6	12	46	121	103	113	115	174	168	151	190	151	168	173	98	76	62	64	28	17	
1	1	0	4	1	1	4	22	27	26	38	44	43	38	52	44	42	46	30	23	19	20	9	5	-
2	0	0	0	2	3	14	33	25	26	26	41	43	27	38	39	42	43	39	17	14	23	4	9	-
2	0	3	0	0	4	11	33	28	26	35	49	47	47	55	39	51	46	14	19	19	13	9	1	-
1	1	1	1	3	4	17	33	23	35	16	40	35	39	45	29	33	38	15	17	10	8	6	2	-

AM Peak 1130 - 1230 (175), AM PHF=0.89

MetroCount Traffic Executive Vehicle Counts

353 -- English (ENU)

Datasets:

Site: [1007.02] JULIAN RD (WEST OF PINE VALLEY RD) WESTBOUND
Direction: 6 - West bound A>B, East bound B>A. Lane: 0
Survey Duration: 22:49 Wednesday, February 17, 2010 => 17:33 Friday, February 19, 2010
File: 1007.0219Feb2010.EC0 (Base)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Thursday, February 18, 2010 => 0:00 Friday, February 19, 2010
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: West (bound)
In profile: Vehicles = 2042 / 7027 (29.06%)

*** Thursday, February 18, 2010 - Total=2042, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
4	3	4	13	28	52	92	146	114	143	125	147	177	154	173	210	151	132	65	50	33	19	4	3	
2	0	1	1	4	18	22	26	31	33	28	37	47	46	35	50	48	42	17	13	13	4	1	2	-
1	1	1	6	4	11	27	34	24	34	34	30	48	38	49	49	37	44	16	6	6	7	0	0	-
0	1	0	1	10	13	17	40	26	33	30	48	49	37	51	52	30	31	17	10	8	5	1	1	-
1	1	2	5	10	10	26	46	33	43	33	32	33	33	38	59	36	15	15	21	6	3	2	0	-

AM Peak 1145 - 1245 (176), AM PHF=0.90

MetroCount Traffic Executive Vehicle Counts

350 -- English (ENU)

Datasets:

Site: [1007.01] PINE HILLS RD (SOUTH OF JULIAN RD) NORTHBOUND
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 22:34 Wednesday, February 17, 2010 => 17:33 Friday, February 19, 2010
File: 1007.0119Feb2010.EC0 (Base)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Thursday, February 18, 2010 => 0:00 Friday, February 19, 2010
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: North (bound)
In profile: Vehicles = 813 / 2686 (30.27%)

*** Thursday, February 18, 2010 - Total=813, 15 minute drops**

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	0	0	3	6	13	36	89	56	47	56	72	48	52	65	72	48	55	31	27	15	16	4	2	-
0	0	0	1	0	3	12	14	18	11	14	18	14	14	23	13	13	16	11	8	6	11	0	2	-
0	0	0	0	1	4	4	31	12	7	14	19	13	11	15	23	13	16	6	5	3	2	3	0	-
0	0	0	2	1	3	12	29	11	11	12	25	13	14	16	16	11	11	8	11	4	0	0	0	-
0	0	0	0	4	3	8	15	15	18	16	10	8	13	11	20	11	12	6	3	2	3	1	0	-

AM Peak 0715 - 0815 (93), AM PHF=0.75

MetroCount Traffic Executive Vehicle Counts

351 -- English (ENU)

Datasets:

Site: [1007.01] PINE HILLS RD (SOUTH OF JULIAN RD) SOUTHBOUND
Direction: 7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration: 22:34 Wednesday, February 17, 2010 => 17:33 Friday, February 19, 2010
File: 1007.0119Feb2010.EC0 (Base)
Data type: Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time: 0:00 Thursday, February 18, 2010 => 0:00 Friday, February 19, 2010
Included classes: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Direction: South (bound)
In profile: Vehicles = 838 / 2686 (31.20%)

* Thursday, February 18, 2010 - Total=838, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
1	0	2	1	2	6	26	44	41	51	44	56	69	49	80	59	86	66	40	45	31	25	8	6	
0	0	0	1	0	0	2	8	13	14	17	10	21	11	20	12	25	23	14	7	7	6	4	0	-
1	0	0	0	1	2	9	9	9	9	12	15	16	12	15	13	16	18	10	14	6	6	1	5	-
0	0	1	0	0	1	5	14	10	13	10	20	15	13	30	20	24	14	7	13	9	8	1	1	-
0	0	1	0	1	3	10	13	9	15	5	11	17	13	15	14	21	11	9	11	9	5	2	0	-

AM Peak 1130 - 1230 (68), AM PHF=0.81

True Count
4401 Twain Ave, Suite 27
San Diego, CA 92120

File Name : 01.1110.JULIAN RD.WASHINGTON ST
Site Code : 00000000
Start Date : 1/20/2011
Page No : 1

Groups Printed- Vehicles

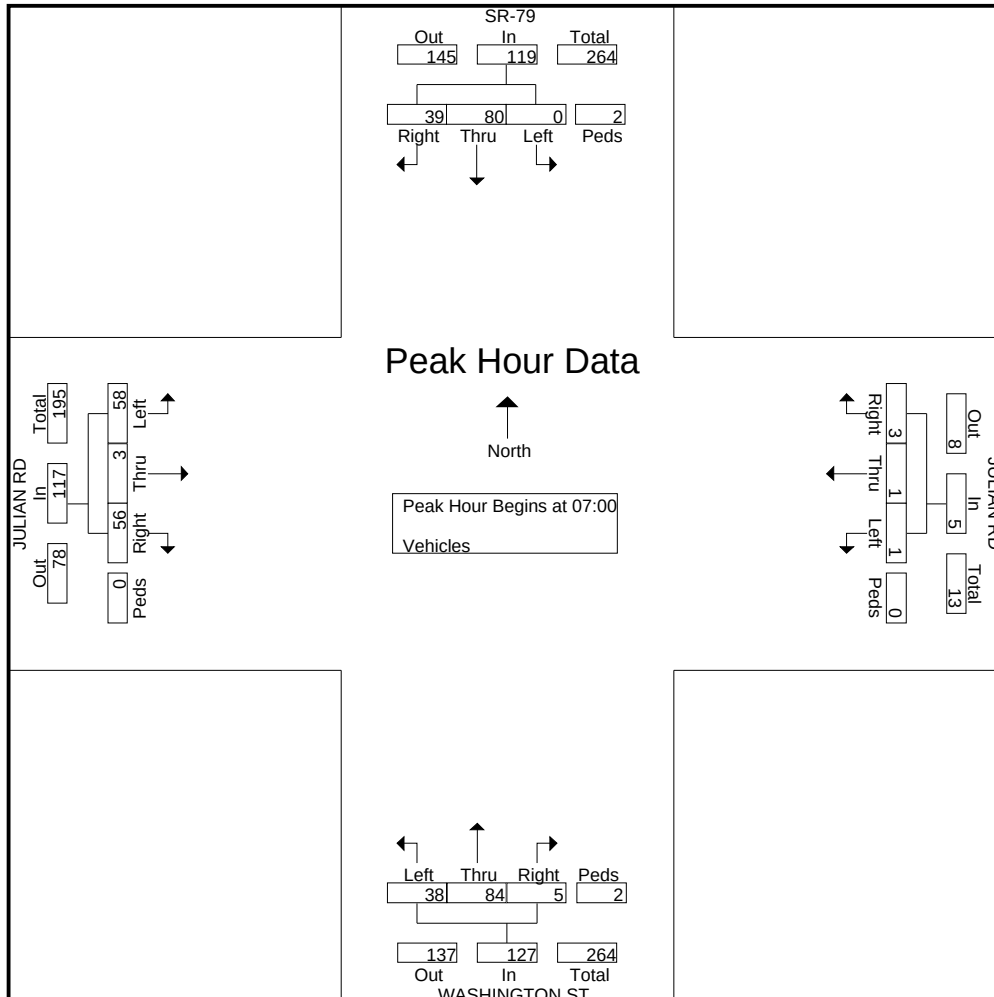
	SR-79 Southbound				JULIAN RD Westbound				WASHINGTON ST Northbound				JULIAN RD Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00	0	23	13	2	0	1	2	0	12	12	2	2	20	2	16	0	107
07:15	0	19	12	0	0	0	0	0	9	22	1	0	14	0	12	0	89
07:30	0	23	5	0	0	0	1	0	6	19	0	0	11	1	14	0	80
07:45	0	15	9	0	1	0	0	0	11	31	2	0	13	0	14	0	96
Total	0	80	39	2	1	1	3	0	38	84	5	2	58	3	56	0	372
08:00	0	27	14	0	1	0	0	0	7	16	1	1	17	1	15	0	100
08:15	0	21	7	0	1	0	1	0	13	14	4	0	5	0	17	0	83
08:30	0	29	7	0	1	0	1	0	6	14	1	0	12	1	12	0	84
08:45	0	26	12	0	2	0	0	0	13	12	0	0	7	0	17	0	89
Total	0	103	40	0	5	0	2	0	39	56	6	1	41	2	61	0	356
*** BREAK ***																	
16:00	0	29	17	0	1	0	0	0	21	27	0	0	6	0	19	0	120
16:15	0	23	16	0	0	0	0	0	15	35	0	0	17	0	18	0	124
16:30	2	25	12	0	0	2	0	0	19	24	2	0	9	0	22	0	117
16:45	0	17	8	0	1	0	0	0	19	20	1	0	12	0	18	0	96
Total	2	94	53	0	2	2	0	0	74	106	3	0	44	0	77	0	457
17:00	0	34	15	0	0	0	0	0	17	40	0	0	10	0	13	0	129
17:15	1	30	13	0	0	0	1	0	11	37	0	0	14	0	16	0	123
17:30	0	22	10	0	1	0	0	0	21	33	1	0	16	0	12	0	116
17:45	0	24	8	0	0	1	0	0	12	22	0	0	9	0	6	0	82
Total	1	110	46	0	1	1	1	0	61	132	1	0	49	0	47	0	450
Grand Total	3	387	178	2	9	4	6	0	212	378	15	3	192	5	241	0	1635
Apprch %	0.5	67.9	31.2	0.4	47.4	21.1	31.6	0	34.9	62.2	2.5	0.5	43.8	1.1	55	0	
Total %	0.2	23.7	10.9	0.1	0.6	0.2	0.4	0	13	23.1	0.9	0.2	11.7	0.3	14.7	0	

True Count

4401 Twain Ave, Suite 27
San Diego, CA 92120

File Name : 01.1110.JULIAN RD.WASHINGTON ST
Site Code : 00000000
Start Date : 1/20/2011
Page No : 2

	SR-79 Southbound					JULIAN RD Westbound					WASHINGTON ST Northbound					JULIAN RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00																					
07:00	0	23	13	2	38	0	1	2	0	3	12	12	2	2	28	20	2	16	0	38	107
07:15	0	19	12	0	31	0	0	0	0	0	9	22	1	0	32	14	0	12	0	26	89
07:30	0	23	5	0	28	0	0	1	0	1	6	19	0	0	25	11	1	14	0	26	80
07:45	0	15	9	0	24	1	0	0	0	1	11	31	2	0	44	13	0	14	0	27	96
Total Volume	0	80	39	2	121	1	1	3	0	5	38	84	5	2	129	58	3	56	0	117	372
% App. Total	0	66.1	32.2	1.7		20	20	60	0		29.5	65.1	3.9	1.6		49.6	2.6	47.9	0		
PHF	.000	.870	.750	.250	.796	.250	.250	.375	.000	.417	.792	.677	.625	.250	.733	.725	.375	.875	.000	.770	.869

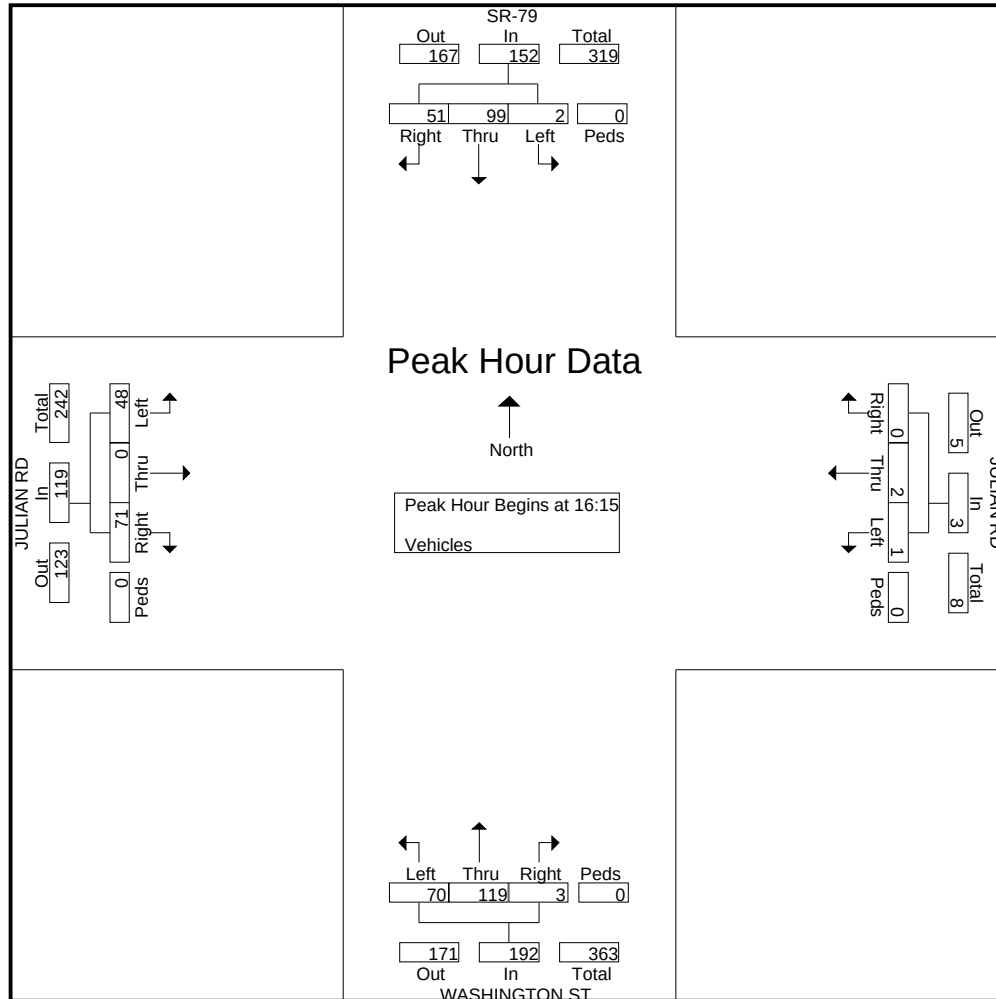


True Count

4401 Twain Ave, Suite 27
San Diego, CA 92120

File Name : 01.1110.JULIAN RD.WASHINGTON ST
Site Code : 00000000
Start Date : 1/20/2011
Page No : 3

	SR-79 Southbound					JULIAN RD Westbound					WASHINGTON ST Northbound					JULIAN RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:15																					
16:15	0	23	16	0	39	0	0	0	0	0	15	35	0	0	50	17	0	18	0	35	124
16:30	2	25	12	0	39	0	2	0	0	2	19	24	2	0	45	9	0	22	0	31	117
16:45	0	17	8	0	25	1	0	0	0	1	19	20	1	0	40	12	0	18	0	30	96
17:00	0	34	15	0	49	0	0	0	0	0	17	40	0	0	57	10	0	13	0	23	129
Total Volume	2	99	51	0	152	1	2	0	0	3	70	119	3	0	192	48	0	71	0	119	466
% App. Total	1.3	65.1	33.6	0		33.3	66.7	0	0		36.5	62	1.6	0		40.3	0	59.7	0		
PHF	.250	.728	.797	.000	.776	.250	.250	.000	.000	.375	.921	.744	.375	.000	.842	.706	.000	.807	.000	.850	.903



True Count
3401 First Ave #123
San Diego, CA 92103

File Name : 1007.01.SR-78.HOSKINS RANCH RD
Site Code : 00000000
Start Date : 2/18/2010
Page No : 1

Groups Printed- Vehicles

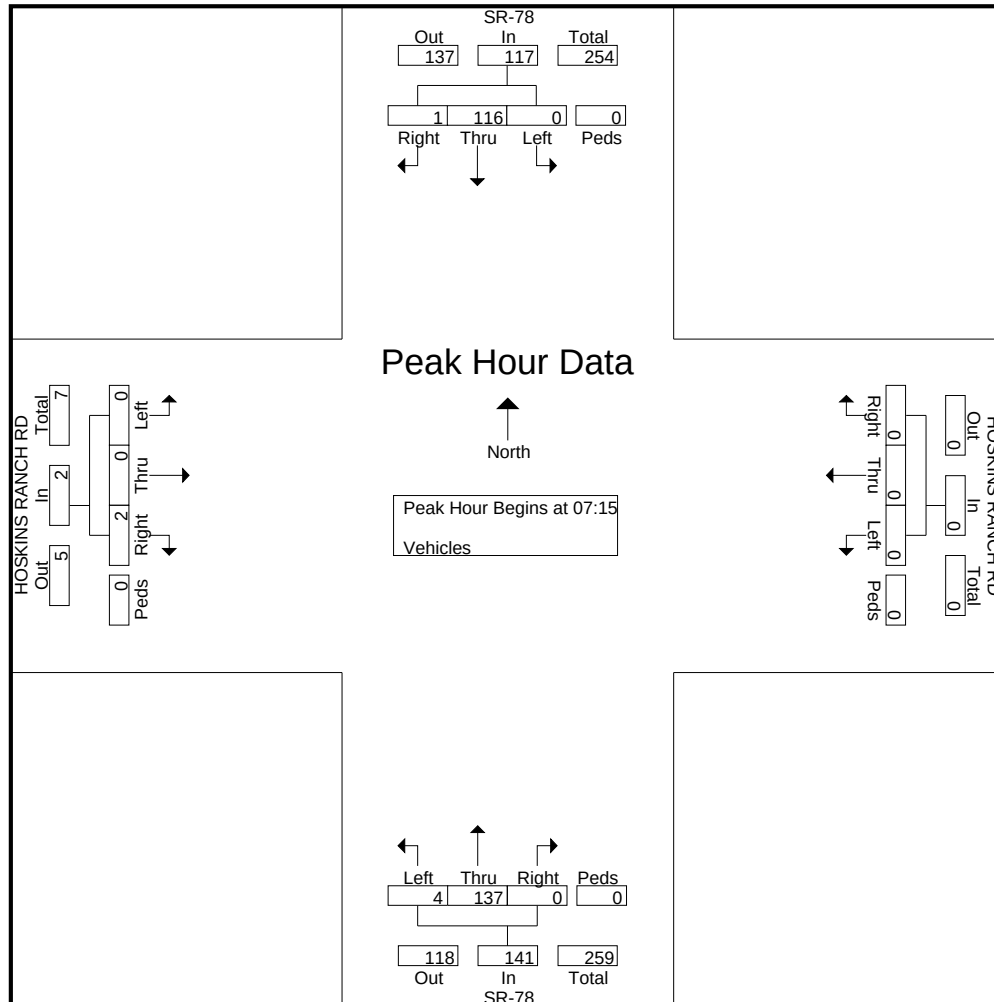
Start Time	SR-78 Southbound				HOSKINS RANCH RD Westbound				SR-78 Northbound				HOSKINS RANCH RD Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	0	14	3	0	0	0	0	0	0	28	0	0	1	1	1	0	48
07:15	0	29	1	0	0	0	0	0	3	30	0	0	0	0	2	0	65
07:30	0	27	0	0	0	0	0	0	1	33	0	0	0	0	0	0	61
07:45	0	32	0	0	0	0	0	0	0	43	0	0	0	0	0	0	75
Total	0	102	4	0	0	0	0	0	4	134	0	0	1	1	3	0	249
08:00	0	28	0	0	0	0	0	0	0	31	0	0	0	0	0	0	59
08:15	0	17	0	0	0	0	0	0	0	23	0	0	1	0	1	0	42
08:30	0	32	0	0	0	0	0	0	0	25	0	0	0	0	1	0	58
08:45	0	21	0	0	0	0	0	0	1	32	0	0	3	0	0	0	57
Total	0	98	0	0	0	0	0	0	1	111	0	0	4	0	2	0	216
*** BREAK ***																	
16:00	0	40	0	0	0	0	0	0	1	46	0	0	0	0	1	0	88
16:15	0	42	1	0	0	0	0	0	0	42	0	0	1	0	0	0	86
16:30	0	45	0	0	0	0	0	0	0	33	0	0	0	0	4	0	82
16:45	0	40	1	0	0	0	0	0	2	27	0	0	2	0	0	0	72
Total	0	167	2	0	0	0	0	0	3	148	0	0	3	0	5	0	328
17:00	0	47	1	0	0	0	0	0	0	38	0	0	0	0	0	0	86
17:15	0	38	0	0	0	0	0	0	0	43	0	0	0	0	0	0	81
17:30	0	46	0	0	0	0	0	0	0	32	0	0	0	0	0	0	78
17:45	0	40	0	0	0	0	0	0	0	21	0	0	0	0	0	0	61
Total	0	171	1	0	0	0	0	0	0	134	0	0	0	0	0	0	306
18:00	0	7	0	0	0	0	0	0	0	5	0	0	0	0	0	0	12
Grand Total	0	545	7	0	0	0	0	0	8	532	0	0	8	1	10	0	1111
Apprch %	0	98.7	1.3	0	0	0	0	0	1.5	98.5	0	0	42.1	5.3	52.6	0	
Total %	0	49.1	0.6	0	0	0	0	0	0.7	47.9	0	0	0.7	0.1	0.9	0	

True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1007.01.SR-78.HOSKINS RANCH RD
Site Code : 00000000
Start Date : 2/18/2010
Page No : 2

	SR-78 Southbound					HOSKINS RANCH RD Westbound					SR-78 Northbound					HOSKINS RANCH RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	29	1	0	30	0	0	0	0	0	3	30	0	0	33	0	0	2	0	2	65
07:30	0	27	0	0	27	0	0	0	0	0	1	33	0	0	34	0	0	0	0	0	61
07:45	0	32	0	0	32	0	0	0	0	0	0	43	0	0	43	0	0	0	0	0	75
08:00	0	28	0	0	28	0	0	0	0	0	0	31	0	0	31	0	0	0	0	0	59
Total Volume	0	116	1	0	117	0	0	0	0	0	4	137	0	0	141	0	0	2	0	2	260
% App. Total	0	99.1	0.9	0		0	0	0	0		2.8	97.2	0	0		0	0	100	0		
PHF	.000	.906	.250	.000	.914	.000	.000	.000	.000	.000	.333	.797	.000	.000	.820	.000	.000	.250	.000	.250	.867

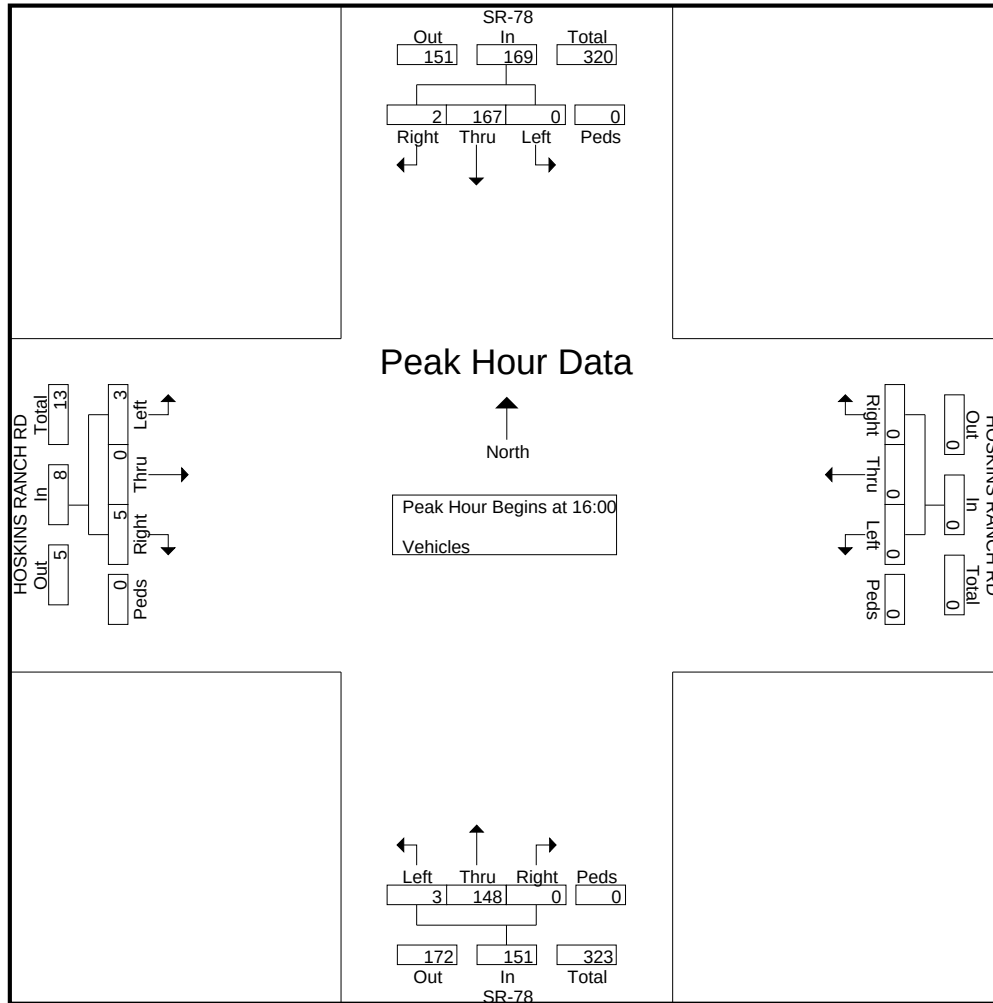


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1007.01.SR-78.HOSKINS RANCH RD
Site Code : 00000000
Start Date : 2/18/2010
Page No : 3

	SR-78 Southbound					HOSKINS RANCH RD Westbound					SR-78 Northbound					HOSKINS RANCH RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 to 18:00 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:00																					
16:00	0	40	0	0	40	0	0	0	0	0	1	46	0	0	47	0	0	1	0	1	88
16:15	0	42	1	0	43	0	0	0	0	0	0	42	0	0	42	1	0	0	0	1	86
16:30	0	45	0	0	45	0	0	0	0	0	0	33	0	0	33	0	0	4	0	4	82
16:45	0	40	1	0	41	0	0	0	0	0	2	27	0	0	29	2	0	0	0	2	72
Total Volume	0	167	2	0	169	0	0	0	0	0	3	148	0	0	151	3	0	5	0	8	328
% App. Total	0	98.8	1.2	0		0	0	0	0		2	98	0	0		37.5	0	62.5	0		
PHF	.000	.928	.500	.000	.939	.000	.000	.000	.000	.000	.375	.804	.000	.000	.803	.375	.000	.313	.000	.500	.932



True Count
3401 First Ave #123
San Diego, CA 92103

File Name : 1007.02.PINE HILLS RD.SR-78
Site Code : 00000000
Start Date : 2/18/2010
Page No : 1

Groups Printed- Vehicles

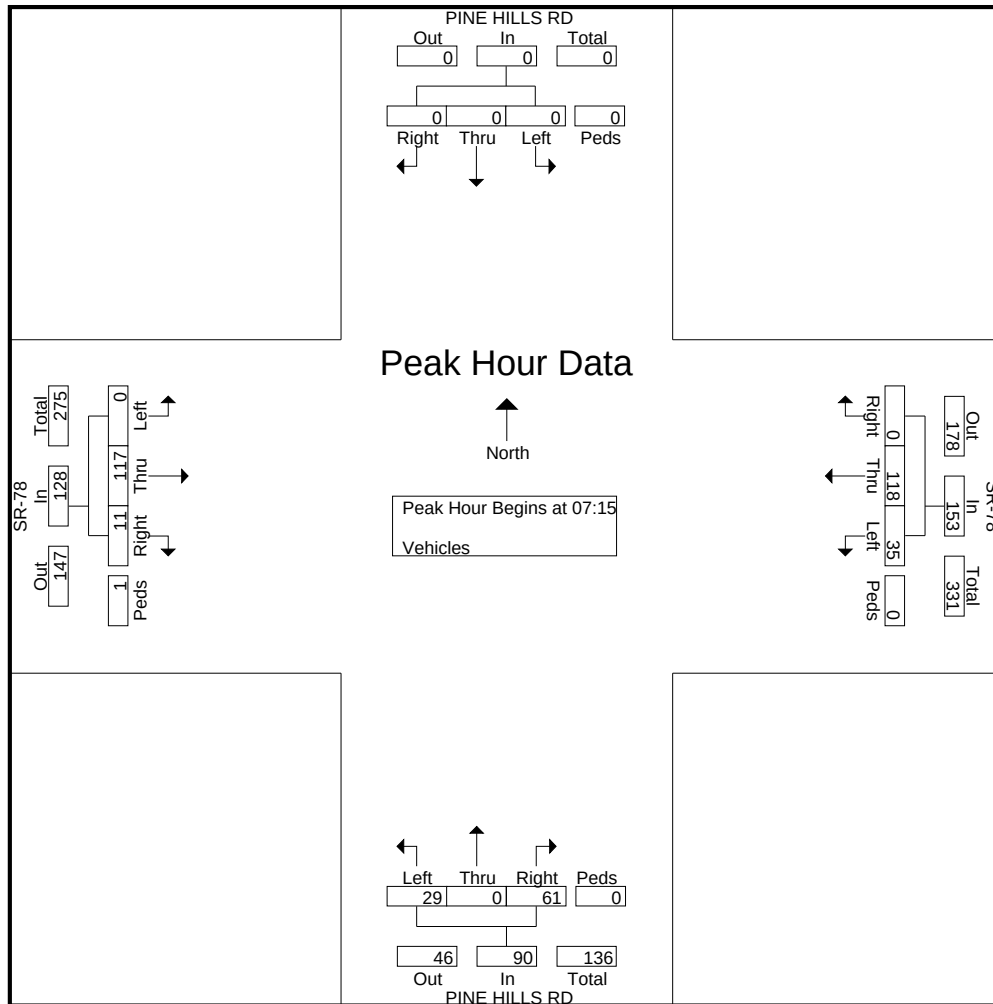
Start Time	PINE HILLS RD Southbound				SR-78 Westbound				PINE HILLS RD Northbound				SR-78 Eastbound				Int. Total
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
07:00	0	0	0	0	2	20	0	0	3	0	10	0	0	12	4	0	51
07:15	0	0	0	0	6	28	0	0	7	0	26	0	0	35	1	1	104
07:30	0	0	0	0	11	33	0	0	7	0	18	0	0	30	3	0	102
07:45	0	0	0	0	10	36	0	0	7	0	5	0	0	28	4	0	90
Total	0	0	0	0	29	117	0	0	24	0	59	0	0	105	12	1	347
08:00	0	0	0	0	8	21	0	0	8	0	12	0	0	24	3	0	76
08:15	0	0	0	0	2	21	0	0	5	0	7	0	0	16	8	0	59
08:30	0	0	0	0	3	16	0	0	9	0	4	0	0	20	8	0	60
08:45	0	0	0	0	4	29	0	0	4	0	10	0	0	18	4	0	69
Total	0	0	0	0	17	87	0	0	26	0	33	0	0	78	23	0	264
*** BREAK ***																	
16:00	0	0	0	0	17	43	0	0	6	0	6	0	0	36	6	0	114
16:15	0	0	0	0	12	32	0	0	7	0	7	0	0	35	5	0	98
16:30	0	0	0	0	18	23	0	0	4	0	7	0	0	46	5	0	103
16:45	0	0	0	0	13	31	0	0	4	0	6	0	0	24	8	0	86
Total	0	0	0	0	60	129	0	0	21	0	26	0	0	141	24	0	401
17:00	0	0	0	0	12	37	0	0	5	0	12	1	0	35	11	0	113
17:15	0	0	0	0	12	35	0	0	6	0	7	0	0	37	5	0	102
17:30	0	0	0	1	10	24	0	0	7	0	4	0	0	41	5	0	92
17:45	0	0	0	0	7	16	0	0	1	0	11	0	0	35	3	0	73
Total	0	0	0	1	41	112	0	0	19	0	34	1	0	148	24	0	380
Grand Total	0	0	0	1	147	445	0	0	90	0	152	1	0	472	83	1	1392
Apprch %	0	0	0	100	24.8	75.2	0	0	37	0	62.6	0.4	0	84.9	14.9	0.2	
Total %	0	0	0	0.1	10.6	32	0	0	6.5	0	10.9	0.1	0	33.9	6	0.1	

True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1007.02.PINE HILLS RD.SR-78
Site Code : 00000000
Start Date : 2/18/2010
Page No : 2

	PINE HILLS RD Southbound					SR-78 Westbound					PINE HILLS RD Northbound					SR-78 Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	0	0	0	0	6	28	0	0	34	7	0	26	0	33	0	35	1	1	37	104
07:30	0	0	0	0	0	11	33	0	0	44	7	0	18	0	25	0	30	3	0	33	102
07:45	0	0	0	0	0	10	36	0	0	46	7	0	5	0	12	0	28	4	0	32	90
08:00	0	0	0	0	0	8	21	0	0	29	8	0	12	0	20	0	24	3	0	27	76
Total Volume	0	0	0	0	0	35	118	0	0	153	29	0	61	0	90	0	117	11	1	129	372
% App. Total	0	0	0	0	0	22.9	77.1	0	0	0	32.2	0	67.8	0	0	0	90.7	8.5	0.8	0	0
PHF	.000	.000	.000	.000	.000	.795	.819	.000	.000	.832	.906	.000	.587	.000	.682	.000	.836	.688	.250	.872	.894

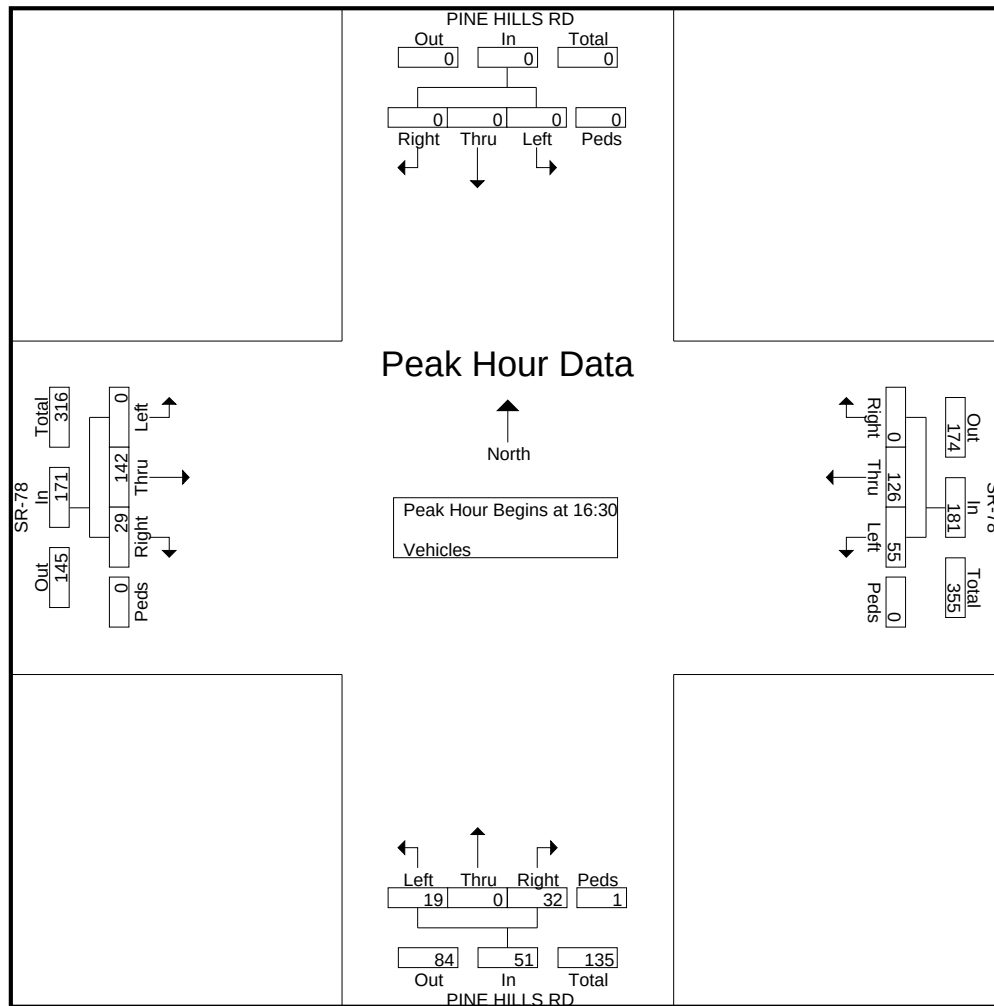


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1007.02.PINE HILLS RD.SR-78
Site Code : 00000000
Start Date : 2/18/2010
Page No : 3

	PINE HILLS RD Southbound					SR-78 Westbound					PINE HILLS RD Northbound					SR-78 Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	0	0	0	0	18	23	0	0	41	4	0	7	0	11	0	46	5	0	51	103
16:45	0	0	0	0	0	13	31	0	0	44	4	0	6	0	10	0	24	8	0	32	86
17:00	0	0	0	0	0	12	37	0	0	49	5	0	12	1	18	0	35	11	0	46	113
17:15	0	0	0	0	0	12	35	0	0	47	6	0	7	0	13	0	37	5	0	42	102
Total Volume	0	0	0	0	0	55	126	0	0	181	19	0	32	1	52	0	142	29	0	171	404
% App. Total	0	0	0	0	0	30.4	69.6	0	0		36.5	0	61.5	1.9		0	83	17	0		
PHF	.000	.000	.000	.000	.000	.764	.851	.000	.000	.923	.792	.000	.667	.250	.722	.000	.772	.659	.000	.838	.894



True Count
3401 First Ave #123
San Diego, CA 92103

File Name : 1007.03.PINE HILLS RD.VAN DUESAN RD
Site Code : 00000000
Start Date : 2/18/2010
Page No : 1

Groups Printed- Vehicles

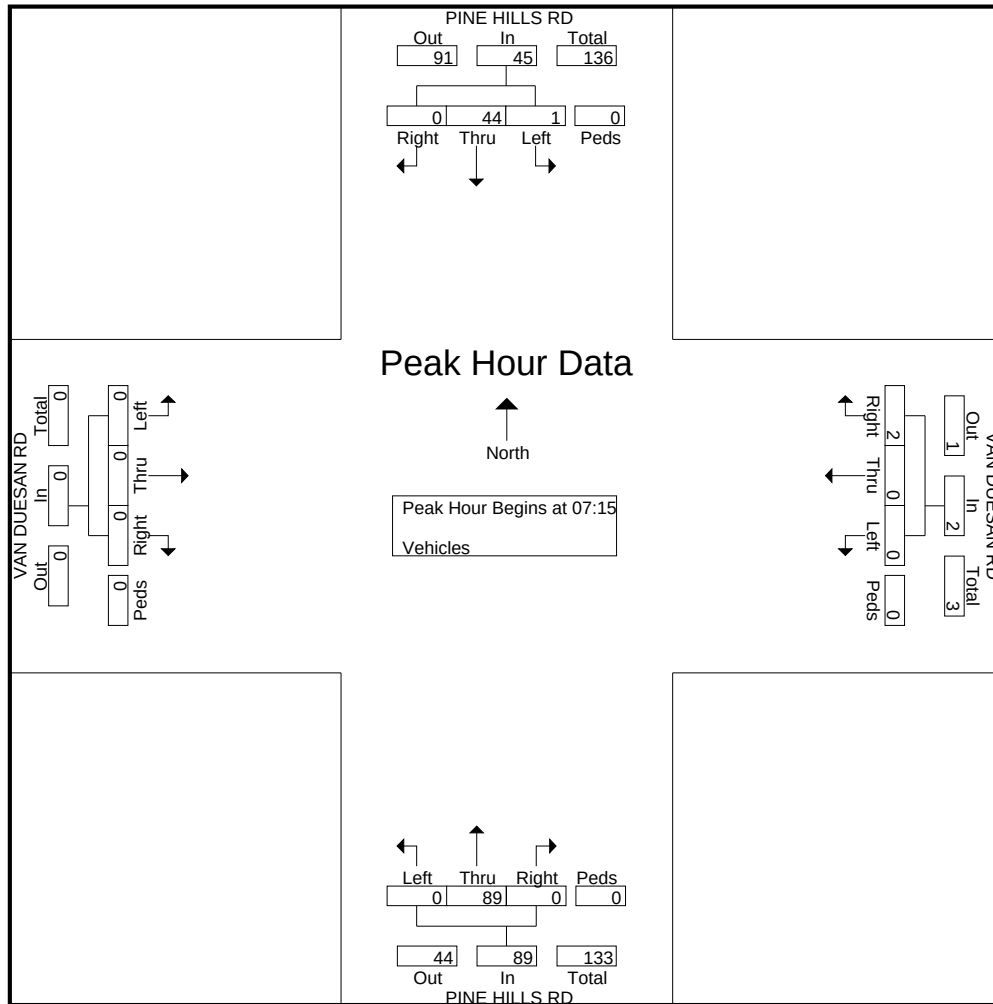
	PINE HILLS RD Southbound				VAN DUESAN RD Westbound				PINE HILLS RD Northbound				VAN DUESAN RD Eastbound				
Start Time	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Int. Total
07:00	0	5	0	0	0	0	0	0	0	14	0	0	0	0	0	0	19
07:15	1	6	0	0	0	0	2	0	0	27	0	0	0	0	0	0	36
07:30	0	12	0	0	0	0	0	0	0	26	0	0	0	0	0	0	38
07:45	0	12	0	0	0	0	0	0	0	16	0	0	0	0	0	0	28
Total	1	35	0	0	0	0	2	0	0	83	0	0	0	0	0	0	121
08:00	0	14	0	0	0	0	0	0	0	20	0	0	0	0	0	0	34
08:15	0	9	0	0	0	0	0	0	0	12	0	0	0	0	0	0	21
08:30	0	11	0	0	0	0	2	0	0	11	0	0	0	0	0	0	24
08:45	1	9	0	0	0	0	0	0	0	15	0	0	0	0	0	0	25
Total	1	43	0	0	0	0	2	0	0	58	0	0	0	0	0	0	104
*** BREAK ***																	
16:00	0	22	0	0	0	0	0	0	0	12	0	0	0	0	0	0	34
16:15	1	16	0	0	0	0	0	0	0	12	0	0	0	0	0	0	29
16:30	1	22	0	0	0	0	1	0	0	9	0	0	0	0	0	0	33
16:45	0	16	0	0	0	0	1	0	0	9	0	0	0	0	0	0	26
Total	2	76	0	0	0	0	2	0	0	42	0	0	0	0	0	0	122
17:00	2	26	0	0	0	0	0	0	0	16	0	0	0	0	0	0	44
17:15	0	16	0	0	0	0	0	0	0	14	0	0	0	0	0	0	30
17:30	0	14	0	0	0	0	0	0	0	11	0	0	0	0	0	0	25
17:45	1	10	0	0	0	0	0	0	0	16	0	0	0	0	0	0	27
Total	3	66	0	0	0	0	0	0	0	57	0	0	0	0	0	0	126
Grand Total	7	220	0	0	0	0	6	0	0	240	0	0	0	0	0	0	473
Apprch %	3.1	96.9	0	0	0	0	100	0	0	100	0	0	0	0	0	0	
Total %	1.5	46.5	0	0	0	0	1.3	0	0	50.7	0	0	0	0	0	0	

True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1007.03.PINE HILLS RD.VAN DUESAN RD
Site Code : 00000000
Start Date : 2/18/2010
Page No : 2

	PINE HILLS RD Southbound					VAN DUESAN RD Westbound					PINE HILLS RD Northbound					VAN DUESAN RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 11:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	1	6	0	0	7	0	0	2	0	2	0	27	0	0	27	0	0	0	0	0	36
07:30	0	12	0	0	12	0	0	0	0	0	0	26	0	0	26	0	0	0	0	0	38
07:45	0	12	0	0	12	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	28
08:00	0	14	0	0	14	0	0	0	0	0	0	20	0	0	20	0	0	0	0	0	34
Total Volume	1	44	0	0	45	0	0	2	0	2	0	89	0	0	89	0	0	0	0	0	136
% App. Total	2.2	97.8	0	0		0	0	100	0		0	100	0	0		0	0	0	0		
PHF	.250	.786	.000	.000	.804	.000	.000	.250	.000	.250	.000	.824	.000	.000	.824	.000	.000	.000	.000	.000	.895

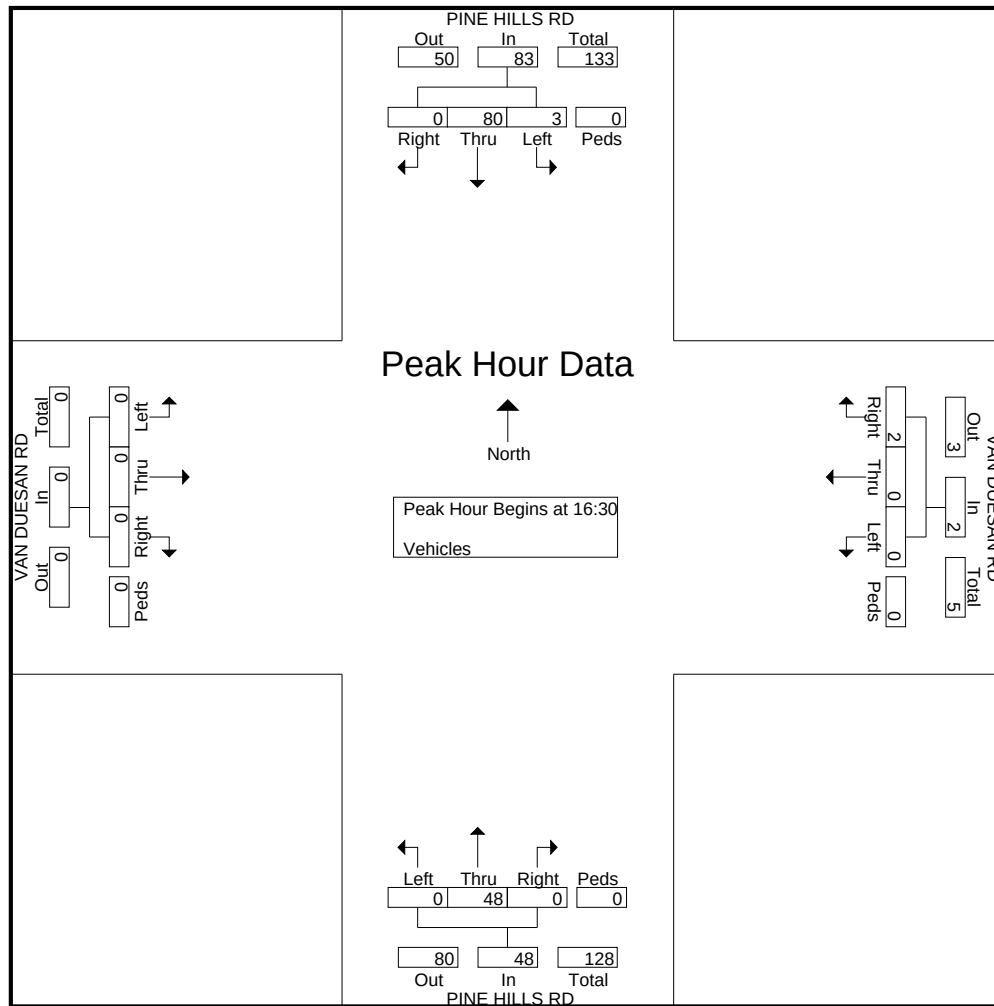


True Count

3401 First Ave #123
San Diego, CA 92103

File Name : 1007.03.PINE HILLS RD.VAN DUESAN RD
Site Code : 00000000
Start Date : 2/18/2010
Page No : 3

	PINE HILLS RD Southbound					VAN DUESAN RD Westbound					PINE HILLS RD Northbound					VAN DUESAN RD Eastbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 12:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	1	22	0	0	23	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	33
16:45	0	16	0	0	16	0	0	1	0	1	0	9	0	0	9	0	0	0	0	0	26
17:00	2	26	0	0	28	0	0	0	0	0	0	16	0	0	16	0	0	0	0	0	44
17:15	0	16	0	0	16	0	0	0	0	0	0	14	0	0	14	0	0	0	0	0	30
Total Volume	3	80	0	0	83	0	0	2	0	2	0	48	0	0	48	0	0	0	0	0	133
% App. Total	3.6	96.4	0	0		0	0	100	0		0	100	0	0		0	0	0	0		
PHF	.375	.769	.000	.000	.741	.000	.000	.500	.000	.500	.000	.750	.000	.000	.750	.000	.000	.000	.000	.000	.756



APPENDIX C

SANDAG TRIP GENERATION

(NOT SO)

BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION

APRIL 2002



401 B Street, Suite 800
San Diego, California 92101
(619) 699-1900 • Fax (619) 699-1950

NOTE: This listing only represents a **guide** of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. **Always check with local jurisdictions for their preferred or applicable rates.**

LAND USE	TRIP CATEGORIES [PRIMARY: DIVERTED: PASS-BY] ⁶	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio)		TRIP LENGTH (Miles) ¹
			Between 6:00-9:30 A.M.	Between 3:00-6:30 P.M.	
AGRICULTURE (Open Space)	[80:18:2]	2/acre**			10.8
AIRPORT	[78:20:2]	60/acre, 100/flight, 70/1000 sq. ft. * **	5% (6:4)	6% (5:5)	12.5
Commercial		6/acre, 2/flight, 6/based aircraft * **	9% (7:3)	15% (5:5)	
Heliports		100/acre**			
AUTOMOBILE ⁵					
Car Wash					
Automatic		900/site, 600/acre**	4% (5:5)	8% (5:5)	
Self-serve		100/wash stall**	4% (5:5)	8% (5:5)	
Gasoline	[21:51:28]	160/vehicle fueling space**	7% (5:5)	8% (5:5)	2.8
with/Food Mart		155/vehicle fueling space**	8% (5:5)	9% (5:5)	
with/Food Mart & Car Wash		150/vehicle fueling space, 900/station**	7% (5:5)	9% (5:5)	
Older Service Station Design		50/1000 sq. ft., 300/acre, 60/service stall* **	5% (7:3)	8% (4:6)	
Sales (Dealer & Repair)		20/1000 sq. ft., 400/acre, 20/service stall*	8% (7:3)	11% (4:6)	
Auto Repair Center		60/1000 sq. ft. **	4%	10%	
Auto Parts Sales		40/service stall**	7% (6:4)	10% (5:5)	
Quick Lube		25/1000 sq. ft., 30/service stall* *	7% (6:4)	11% (5:5)	
Tire Store					
CEMETERY		5/acre*			
CHURCH (or Synagogue)	[64:25:11]	9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)	5% (6:4)	8% (5:5)	5.1
COMMERCIAL/RETAIL ⁵					
Super Regional Shopping Center (More than 80 acres, more than 800,000 sq. ft., w/usually 3+ major stores)		35/1000 sq. ft., ^c 400/acre*	4% (7:3)	10% (5:5)	
Regional Shopping Center	[54:35:11]	50/1000 sq. ft., ^c 500/acre*	4% (7:3)	9% (5:5)	5.2
(40-80 acres, 400,000-800,000 sq. ft., w/usually 2+ major stores)					
Community Shopping Center	[47:31:22]	80/1000 sq. ft., 700/acre* **	4% (6:4)	10% (5:5)	3.6
(15-40 acres, 125,000-400,000 sq. ft., w/usually 1 major store, detached restaurant(s), grocery and drugstore)					
Neighborhood Shopping Center (Less than 15 acres, less than 125,000 sq. ft., w/usually grocery & drugstore, cleaners, beauty & barber shop, & fast food services)		120/1000 sq. ft., 1200/acre* **	4% (6:4)	10% (5:5)	
Commercial Shops	[45:40:15]				
Specialty Retail/Strip Commercial		40/1000 sq. ft., 400/acre*	3% (6:4)	9% (5:5)	4.3
Electronics Superstore		50/1000 sq. ft.**		10% (5:5)	
Factory Outlet		40/1000 sq. ft.**	3% (7:3)	9% (5:5)	
Supermarket		150/1000 sq. ft., 2000/acre* **	4% (7:3)	10% (5:5)	
Drugstore		90/1000 sq. ft.**	4% (6:4)	10% (5:5)	
Convenience Market (15-16 hours)		500/1000 sq. ft.**	8% (6:5)	8% (5:5)	
Convenience Market (24 hours)		700/1000 sq. ft.**	9% (5:5)	7% (5:5)	
Convenience Market (w/gasoline pumps)		850/1000 sq. ft., 550/vehicle fueling space**	6% (5:5)	7% (5:5)	
Discount Club		60/1000 sq. ft., 600/acre* **	1% (7:3)	9% (5:5)	
Discount Store		60/1000 sq. ft., 600/acre**	3% (6:4)	8% (5:5)	
Furniture Store		6/1000 sq. ft., 100/acre* *	4% (7:3)	9% (5:5)	
Lumber Store		30/1000 sq. ft., 150/acre**	7% (6:4)	9% (5:5)	
Home Improvement Superstore		40/1000 sq. ft., **	5% (6:4)	8% (5:5)	
Hardware/Paint Store		60/1000 sq. ft., 600/acre**	2% (6:4)	9% (5:5)	
Garden Nursery		40/1000 sq. ft., 90/acre**	3% (6:4)	10% (5:5)	
Mixed Use: Commercial (w/supermarket)/Residential		{ 110/1000 sq. ft., 2000/acre* (commercial only) 5/dwelling unit, 200/acre* (residential only)	3% (6:4) 9% (3:7)	8% (5:5) 13% (6:4)	
EDUCATION					
University (4 years)	[91:9:0]	2.4/student, 100 acre*	10% (8:2)	9% (3:7)	8.9
Junior College (2 years)	[92:7:1]	1.2/student, 24/1000 sq. ft., 120/acre* **	12% (8:2)	9% (6:4)	9.0
High School	[75:19:6]	1.3/student, 15/1000 sq. ft., 60/acre* **	20% (7:3)	10% (4:6)	4.8
Middle/Junior High	[63:25:12]	1.4/student, 12/1000 sq. ft., 50/acre**	30% (6:4)	9% (4:6)	5.0
Elementary	[57:25:10]	1.6/student, 14/1000 sq. ft., 90/acre* **	32% (6:4)	9% (4:6)	3.4
Day Care	[28:58:14]	5/child, 80/1000 sq. ft.**	17% (5:5)	18% (5:5)	3.7
FINANCIAL ⁵	[35:42:23]				3.4
Bank (Walk-In only)		150/1000 sq. ft., 1000/acre* **	4% (7:3)	8% (4:6)	
with Drive-Through		200/1000 sq. ft., 1500/acre*	5% (6:4)	10% (5:5)	
Drive-Through only		250 (125 one-way)/lane*	3% (5:5)	13% (5:5)	
Savings & Loan		60/1000 sq. ft., 600/acre**	2%	9%	
Drive-Through only		100 (50 one-way)/lane**	4%	15%	
HOSPITAL	[73:25:2]				8.3
General		20/bed, 25/1000 sq. ft., 250/acre*	8% (7:3)	10% (4:6)	
Convalescent/Nursing		3/bed**	7% (6:4)	7% (4:6)	
INDUSTRIAL					
Industrial/Business Park (commercial included)	[79:19:2]	16/1000 sq. ft., 200/acre* **	12% (8:2)	12% (2:8)	9.0
Industrial Park (no commercial)		8/1000 sq. ft., 90/acre**	11% (9:1)	12% (2:8)	
Industrial Plant (multiple shifts)	[92:5:3]	10/1000 sq. ft., 120/acre*	14% (8:2)	15% (3:7)	11.7
Manufacturing/Assembly		4/1000 sq. ft., 50/acre**	19% (9:1)	20% (2:8)	
Warehousing		5/1000 sq. ft., 60/acre**	13% (7:3)	15% (4:6)	
Storage		2/1000 sq. ft., 0.2/vault, 30/acre*	6% (5:5)	9% (5:5)	
Science Research & Development		8/1000 sq. ft., 80/acre*	16% (9:1)	14% (1:9)	
Landfill & Recycling Center		6/acre	11% (5:5)	10% (4:6)	

(OVER)

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista and County of San Diego.
ADVISORY/LIAISON MEMBERS: California Department of Transportation, County Water Authority, U.S. Department of Defense, S.D. Unified Port District and Tijuana/Baja California.

LAND USE	TRIP CATEGORIES [PRIMARY-DIVERTED-PASS-BY]*	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M. Between 3:00-6:30 P.M.		TRIP LENGTH (Miles) ¹		
LIBRARY	[44:44:12]	50/1000 sq. ft., 400/acre**	2%	(7:3)	10% (5:5)	3.9	
LODGING	[58:38:4]					7.6	
Hotel (w/convention facilities/restaurant)		10/occupied room, 300/acre	6%	(6:4)	8%	(6:4)	
Motel		9/occupied room, 200/acre*	8%	(4:6)	9%	(6:4)	
Resort Hotel		8/occupied room, 100/acre*	5%	(6:4)	7%	(4:6)	
Business Hotel		7/occupied room**	8%	(4:6)	9%	(6:4)	
MILITARY	[82:16:2]	2.5/military & civilian personnel*	9%	(9:1)	10%	(2:8)	11.2
OFFICE							
Standard Commercial Office	[77:19:4]	20/1000 sq. ft., ^o 300/acre*	14%	(9:1)	13%	(2:8)	8.8
(less than 100,000 sq. ft.)							
Large (High-Rise) Commercial Office	[82:15:3]	17/1000 sq. ft., ^o 600/acre*	13%	(9:1)	14%	(2:8)	10.0
(more than 100,000 sq. ft., 6+ stories)							
Office Park (400,000+ sq. ft.)		12/1000 sq.ft., 200/acre* **	13%	(9:1)	13%	(2:8)	
Single Tenant Office		14/1000 sq. ft., 180/acre*	15%	(9:1)	15%	(2:8)	8.8
Corporate Headquarters		7/1000 sq. ft., 110/acre*	17%	(9:1)	16%	(1:9)	
Government (Civic Center)	[50:34:16]	30/1000 sq. ft.**	9%	(9:1)	12%	(3:7)	6.0
Post Office							
Central/Walk-In Only		90/1000 sq. ft.**	3%		7%		
Community (not including mail drop lane)		200/1000 sq. ft., 1300/acre*	6%	(6:4)	9%	(5:5)	
Community (w/mail drop lane)		300/1000 sq. ft., 2000/acre*	7%	(5:5)	10%	(5:5)	
Mail Drop Lane only		1500 (750 one-way)/lane*	7%	(5:5)	12%	(5:5)	
Department of Motor Vehicles		180/1000 sq. ft., 900/acre**	6%	(6:4)	10%	(4:6)	
Medical-Dental	[60:30:10]	50/1000 sq. ft., 500/acre*	6%	(8:2)	11%	(3:7)	6.4
PARKS	[66:28:6]		4%		8%		5.4
City (developed w/meeting rooms and sports facilities)		50/acre*	13%	(5:5)	9%	(5:5)	
Regional (developed)		20/acre*					
Neighborhood/County (undeveloped)		5/acre (add for specific sport uses), 6/picnic site* **					
State (average 1000 acres)		1/acre, 10/picnic site**					
Amusement (Theme)		80/acre, 130/acre (summer only)**			6%	(6:4)	
San Diego Zoo		115/acre*					
Sea World		80/acre*					
RECREATION							
Beach, Ocean or Bay	[52:39:9]	600/1000 ft. shoreline, 60/acre*				6.3	
Beach, Lake (fresh water)		50/1000 ft. shoreline, 5/acre*					
Bowling Center		30/1000 sq. ft., 300/acre, 30/lane**	7%	(7:3)	11%	(4:6)	
Campground		4/campsite**	4%		8%		
Golf Course		7/acre, 40/hole, 700/course* **	7%	(8:2)	9%	(3:7)	
Driving Range only		70/acre, 14/tee box*	3%	(7:3)	9%	(5:5)	
Marinas		4/berth, 20/acre* **	3%	(3:7)	7%	(6:4)	
Multi-purpose (miniature golf, video arcade, batting cage, etc.)		90/acre	2%		6%		
Racquetball/Health Club		30/1000 sq. ft., 300/acre, 40/court*	4%	(6:4)	9%	(6:4)	
Tennis Courts		16/acre, 30/court**	9%		11%	(5:5)	
Sports Facilities							
Outdoor Stadium		50/acre, 0.2/seat*					
Indoor Arena		30/acre, 0.1/seat*					
Racetrack		40/acre, 0.6/seat*					
Theaters (multiplex w/matinee)	[66:17:17]	80/1000 sq. ft., 1.8/seat, 360/screen*	1/3%		8%	(6:4)	6.1
RESIDENTIAL	[86:11:3]					7.9	
Estate, Urban or Rural		12/dwelling unit**	6%	(3:7)	10%	(7:3)	
(average 1-2 DU/acre)							
Single Family Detached		10/dwelling unit**	6%	(3:7)	10%	(7:3)	
(average 3-6 DU/acre)							
Condominium		8/dwelling unit**	6%	(2:8)	10%	(7:3)	
(or any multi-family 6-20 DU/acre)							
Apartment		6/dwelling unit**	6%	(2:8)	9%	(7:3)	
(or any multi-family units more than 20 DU/acre)							
Military Housing (off-base, multi-family)							
(less than 6 DU/acre)		8/dwelling unit	7%	(3:7)	9%	(6:4)	
(6-20 DU/acre)		6/dwelling unit	7%	(3:7)	9%	(6:4)	
Mobile Home							
Family		5/dwelling unit, 40/acre*	6%	(3:7)	11%	(6:4)	
Adults Only		3/dwelling unit, 20/acre*	9%	(3:7)	10%	(6:4)	
Retirement Community		4/dwelling unit**	5%	(4:6)	7%	(6:4)	
Congregate Care Facility		2.5/dwelling unit**	4%	(6:4)	8%	(5:5)	
RESTAURANT ^s	[51:37:12]					4.7	
Quality		100/1000 sq. ft., 3/seat, 500/acre* **	7%	(6:4)	8%	(7:3)	
Sit-down, high turnover		160/1000 sq. ft., 6/seat, 1000/acre* **	8%	(5:5)	8%	(6:4)	
Fast Food (w/drive-through)		650/1000 sq. ft., 20/seat, 3000/acre* **	7%	(5:5)	7%	(5:5)	
Fast Food (without drive-through)		700/1000 sq. ft.* **	6%	(6:4)	7%	(5:5)	
Delicatessen (7am-4pm)		150/1000 sq. ft., 11/seat*	9%	(6:4)	3%	(3:7)	
TRANSPORTATION							
Bus Depot		25/1000 sq. ft.**					
Truck Terminal		10/1000 sq. ft., 7/bay, 80/acre**	9%	(4:6)	8%	(5:5)	
Waterport/Marine Terminal		170/berth, 12/acre**					
Transit Station (Light Rail w/parking)		300/acre, 2 ^{1/2} /parking space (4/occupied)**	14%	(7:3)	15%	(3:7)	
Park & Ride Lots		400/acre (600/paved acre), 5/parking space (8/occupied)* **	14%	(7:3)	15%	(3:7)	

* Primary source: San Diego Traffic Generators.

* Other sources: ITE Trip Generation Report [6th Edition], Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates.

^p Trip category percentage ratios are daily from local household surveys, often cannot be applied to very specific land uses, and do not include non-resident drivers (draft SANDAG Analysis of Trip Diversion, revised November, 1990):

PRIMARY - one trip directly between origin and primary destination.

DIVERTED - linked trip (having one or more stops along the way to a primary destination) whose distance compared to direct distance ≥ 1 mile.

PASS-BY - undiverted or diverted < 1 mile.

¹ Trip lengths are average weighted for all trips to and from general land use site. (All trips system-wide average length = 6.9 miles)

^c Fitted curve equation: $\ln(T) = 0.502 \ln(x) + 6.945$ } T = total trips, x = 1,000 sq. ft.

^d Fitted curve equation: $\ln(T) = 0.756 \ln(x) + 3.950$ }

^e Fitted curve equation: $t = -2.169 \ln(d) + 12.85$ } t = trips/DU, d = density (DU/acre), DU = dwelling unit

^s Suggested PASS-BY (undiverted or diverted < 1 mile) percentages for trip rate reductions only during P.M. peak period (based on combination of local data/review and Other sources**):

COMMERCIAL/RETAIL	
Regional Shopping Center	20%
Community	30%
Neighborhood "	40%
Specialty Retail/Strip Commercial (other)	10%
Supermarket	40%
Convenience Market	50%
Discount Club/Store	30%
FINANCIAL	
Bank	25%
AUTOMOBILE	
Gasoline Station	50%
RESTAURANT	
Quality	10%
Sit-down high turnover	20%
Fast Food	40%

¹ Trip Reductions - In order to help promote regional "smart growth" policies, and acknowledge San Diego's expanding mass transit system, consider vehicle trip rate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

[1] A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

[2] Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

APPENDIX D

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS EXISTING CONDITIONS

Scenario Report

Scenario: Existing AM
 Command: Default
 Volume: Existing AM
 Geometry: Existing
 Impact Fee: none
 Trip Generation: none
 Trip Distribution: none
 Paths: none
 Routes: none
 Configuration: Default

Impact Analysis Report
 Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 SR-78 & SR-79/Washington St	B	10.4	0.097	B	10.4	0.097	+ 0.000 D/V
# 2 Hoskings Ranch Rd & SR-78/79	A	9.0	0.003	A	9.0	0.003	+ 0.000 D/V
# 3 SR-78/79 & Pine Hills Rd	B	10.1	0.071	B	10.1	0.071	+ 0.000 D/V
# 4 Tenaya Rd & Pine Hills Rd	A	8.8	0.002	A	8.8	0.002	+ 0.000 D/V

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Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR-78 & SR-79/Washington St

Average Delay (sec/veh): 4.2 Worst Case Level Of Service: B[10.4]

Street Name:	SR-78 / Washington Street			
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include
Lanes:	0 0 1 0 0	0 1 0 0 1	1 0 0 1 0	1 0 0 1 0

Volume Module:

Base Vol:	1	1	3	58	3	56	38	84	5	0	80	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	1	3	58	3	56	38	84	5	0	80	39
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	1	3	58	3	56	38	84	5	0	80	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	1	3	61	3	59	40	88	5	0	84	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	1	3	61	3	59	40	88	5	0	84	41

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	327	316	111	298	298	125	135	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	626	600	942	654	614	926	1449	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	561	573	927	627	587	911	1437	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.10	0.01	0.06	0.03	xxxx	xxxx	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxxx xxxxx 5.2 2.1 xxxx xxxxx xxxxx xxxxx xxxxx

Control Del:xxxxx xxxxx xxxxx xxxxx xxxxx 9.2 7.6 xxxxx xxxxx xxxxx xxxxx xxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx 739 xxxxx 625 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue:xxxxx 0.0 xxxxx 0.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel:xxxxx 9.9 xxxxx 11.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: A * B * * * * * * * * *

ApproachDel: 9.9 10.4 xxxxxx xxxxxx

ApproachLOS: A B xxxxxx xxxxxx

Note: Queue reported is the distance per lane in feet.

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Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Hoskings Ranch Rd & SR-78/79

Average Delay (sec/veh): 0.2 Worst Case Level Of Service: A[9.0]

Street Name:	SR-78 / SR-79 Hoskings Ranch Road			
Approach:	North Bound	South Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include
Lanes:	0 1 0 0 0	0 0 0 1 0	0 0 0 0 1	0 0 0 0 0

Volume Module:

Base Vol:	4	137	0	0	116	1	0	0	2	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	137	0	0	116	1	0	0	2	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	137	0	0	116	1	0	0	2	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	4	144	0	0	122	1	0	0	2	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	144	0	0	122	1	0	0	2	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	133	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	133	xxxx	xxxx	xxxxx
Potent Cap.:	1452	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	917	xxxx	xxxx	xxxxx
Move Cap.:	1440	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	909	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.00	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ: 0.2 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.2 xxxx xxxxx xxxxx

Control Del: 7.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 9.0 xxxxx xxxxx xxxxx

LOS by Move: A * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

SharedQueue: 0.0 xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shrd ConDel: 7.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

Shared LOS: A * * * * * * * * * *

ApproachDel: xxxxxx xxxxxx 9.0 xxxxxx

ApproachLOS: * * A * *

Note: Queue reported is the distance per lane in feet.

 Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #3 SR-78/79 & Pine Hills Rd

 Average Delay (sec/veh): 3.2 Worst Case Level Of Service: B[10.1]

 Street Name: Pine Hills Road SR-78 / SR-79
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

 Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 0 0 1 0 0 0 0 0 0 0 0 0 1 0 1 0 0

 Volume Module:
 Base Vol: 29 0 61 0 0 0 0 117 11 35 118 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 29 0 61 0 0 0 0 117 11 35 118 0
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 29 0 61 0 0 0 0 117 11 35 118 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 31 0 64 0 0 0 0 123 12 37 124 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 FinalVolume: 31 0 64 0 0 0 0 123 12 37 124 0

 Critical Gap Module:
 Critical Gp: 6.4 6.5 6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 4.1 xxxx xxxxx
 FollowUpTim: 3.5 4.0 3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx 2.2 xxxx xxxxx

 Capacity Module:
 Cnflct Vol: 337 347 139 xxxx xxxx xxxxx xxxxx xxxx xxxxx 145 xxxx xxxxx
 Potent Cap.: 659 577 909 xxxx xxxx xxxxx xxxxx xxxx xxxxx 1438 xxxx xxxxx
 Move Cap.: 640 552 902 xxxx xxxx xxxxx xxxxx xxxx xxxxx 1426 xxxx xxxxx
 Volume/Cap: 0.05 0.00 0.07 xxxx xxxx xxxxx xxxxx xxxx xxxxx 0.03 xxxx xxxxx

 Level Of Service Module:
 2Way95thQ: xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 2.0 xxxxx xxxxx
 Control Del: xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx 7.6 xxxxx xxxxx
 LOS by Move: * * * * * * * * * * A * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: xxxxx 797 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
 SharedQueue: xxxxx 0.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
 Shrd ConDel: xxxxx 10.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
 Shared LOS: * B * * * * * * * * * * * * * *
 ApproachDel: 10.1 * xxxxxx * xxxxxx * xxxxxx *
 ApproachLOS: B * * * * *

 Note: Queue reported is the distance per lane in feet.

 Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

 Intersection #4 Tenaya Rd & Pine Hills Rd

 Average Delay (sec/veh): 0.2 Worst Case Level Of Service: A[8.8]

 Street Name: Pine Hills Road Tenaya Road / Van Duesan Road
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

 Control: Uncontrolled Uncontrolled Stop Sign Stop Sign
 Rights: Include Include Include Include
 Lanes: 0 0 1 0 0 0 1 0 0 0 0 0 1 0 0 0 1

 Volume Module:
 Base Vol: 0 89 0 1 44 0 0 0 0 0 0 0 2
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 0 89 0 1 44 0 0 0 0 0 0 0 2
 Added Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 PasserByVol: 0 0 0 0 0 0 0 0 0 0 0 0
 Initial Fut: 0 89 0 1 44 0 0 0 0 0 0 0 2
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 0 94 0 1 46 0 0 0 0 0 0 0 2
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 FinalVolume: 0 94 0 1 46 0 0 0 0 0 0 0 2

 Critical Gap Module:
 Critical Gp: xxxxx xxxx xxxxx 4.1 xxxx xxxxx 7.1 6.5 6.2 xxxxx xxxxx 6.2
 FollowUpTim: xxxxx xxxx xxxxx 2.2 xxxx xxxxx 3.5 4.0 3.3 xxxxx xxxxx 3.3

 Capacity Module:
 Cnflct Vol: xxxxx xxxx xxxxx 104 xxxx xxxxx 153 162 56 xxxxx xxxxx 104
 Potent Cap.: xxxxx xxxx xxxxx 1488 xxxx xxxxx 814 730 1010 xxxxx xxxxx 951
 Move Cap.: xxxxx xxxx xxxxx 1476 xxxx xxxxx 805 718 1002 xxxxx xxxxx 943
 Volume/Cap: xxxxx xxxx xxxxx 0.00 xxxx xxxxx 0.00 0.00 0.00 xxxxx xxxxx 0.00

 Level Of Service Module:
 2Way95thQ: xxxxx xxxx xxxxx 0.1 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.2
 Control Del: xxxxx xxxx xxxxx 7.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 8.8
 LOS by Move: * * * * * * * * * * A * * *
 Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
 Shared Cap.: xxxxx xxxx xxxxx xxxxx xxxxx xxxxx 0 xxxxx xxxxx xxxxx xxxxx
 SharedQueue: xxxxx xxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
 Shrd ConDel: xxxxx xxxx xxxxx 7.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
 Shared LOS: * * * * * A * * * * * * * * * *
 ApproachDel: xxxxxx * xxxxxx * xxxxxx * 8.8
 ApproachLOS: * * * * * A

 Note: Queue reported is the distance per lane in feet.

Scenario Report

Scenario: Existing PM
Command: Default
Volume: Existing PM
Geometry: Existing
Impact Fee: none
Trip Generation: none
Trip Distribution: none
Paths: none
Routes: none
Configuration: Default

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 SR-78 & SR-79/Washington St	B	13.0	0.101	B	13.0	0.101	+ 0.000 D/V
# 2 Hoskings Ranch Rd & SR-78/79	A	9.8	0.006	A	9.8	0.006	+ 0.000 D/V
# 3 SR-78/79 & Pine Hills Rd	B	10.4	0.042	B	10.4	0.042	+ 0.000 D/V
# 4 Tenaya Rd & Pine Hills Rd	A	8.6	0.002	A	8.6	0.002	+ 0.000 D/V

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Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR-78 & SR-79/Washington St

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: B[13.0]

Street Name:	SR-79 / Washington Street				SR-78			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign		Stop Sign		Uncontrolled		Uncontrolled	
Rights:	Include		Include		Include		Include	
Lanes:	0 1 0 0 0	0 1 0 0 1	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0	1 0 0 1 0

Volume Module:

Base Vol:	1	2	0	48	0	71	70	119	3	2	99	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	2	0	48	0	71	70	119	3	2	99	51
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	2	0	48	0	71	70	119	3	2	99	51
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	2	0	51	0	75	74	125	3	2	104	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	2	0	51	0	75	74	125	3	2	104	54

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	467	456	xxxx	431	431	151	168	xxxx	xxxxx	138	xxxx	xxxxx
Potent Cap.:	506	500	xxxx	535	517	895	1410	xxxx	xxxxx	1445	xxxx	xxxxx
Move Cap.:	437	465	xxxx	503	481	880	1398	xxxx	xxxxx	1433	xxxx	xxxxx
Volume/Cap:	0.00	0.00	xxxx	0.10	0.00	0.08	0.05	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx 6.9 4.2 xxxx xxxxx 0.1 xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx 9.5 7.7 xxxx xxxxx 7.5 xxxx xxxxx

LOS by Move: * * * * * A * * * A * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: 455 xxxx xxxxx 503 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

SharedQueue: 0.0 xxxx xxxxx 0.3 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel: 13.0 xxxx xxxxx 13.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: B * * B * * * * * * * * * *

ApproachDel: 13.0 10.9 xxxxxx xxxxxx

ApproachLOS: B B xxxxxx xxxxxx

Note: Queue reported is the distance per lane in feet.

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Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Hoskings Ranch Rd & SR-78/79

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: A[9.8]

Street Name:	SR-78 / SR-79				Hoskings Ranch Road			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign	
Rights:	Include		Include		Include		Include	
Lanes:	0 1 0 0 0	0 0 0 1 0	0 0 1 0 0	0 0 0 0 0	0 0 1 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 0 0

Volume Module:

Base Vol:	3	148	0	0	167	2	3	0	5	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	148	0	0	167	2	3	0	5	0	0	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	3	148	0	0	167	2	3	0	5	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	3	156	0	0	176	2	3	0	5	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	3	156	0	0	176	2	3	0	5	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	188	xxxx	xxxxx	xxxx	xxxx	xxxxx	349	359	187	xxxx	xxxx	xxxxx
Potent Cap.:	1386	xxxx	xxxxx	xxxx	xxxx	xxxxx	648	568	855	xxxx	xxxx	xxxxx
Move Cap.:	1375	xxxx	xxxxx	xxxx	xxxx	xxxxx	642	557	848	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxx	xxxx	xxxx	xxxxx	0.00	0.00	0.01	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ: 0.2 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

Control Del: 7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx

LOS by Move: A * * * * * * * * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx 757 xxxxx xxxx xxxx xxxxx

SharedQueue: 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxx xxxxx

Shrd ConDel: 7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 9.8 xxxxx xxxxx xxxx xxxxx

Shared LOS: A * * * * * * * * * * * *

ApproachDel: xxxxxx xxxxxx 9.8 xxxxxx

ApproachLOS: * * A * *

Note: Queue reported is the distance per lane in feet.

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Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 SR-78/79 & Pine Hills Rd

Average Delay (sec/veh): 2.4 Worst Case Level Of Service: B[10.4]

Street Name:	Pine Hills Road			SR-78 / SR-79		
Approach:	North Bound	South Bound	East Bound	West Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled	Uncontrolled	Uncontrolled
Rights:	Include	Include	Include	Include	Include	Include
Lanes:	0 0 1 0 0	0 0 0 0 0	0 0 0 1 0	1 0 1 0 0	1 0 1 0 0	1 0 1 0 0

Volume Module:

Base Vol:	19	0	32	0	0	0	0	142	29	55	126	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	0	32	0	0	0	0	142	29	55	126	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	19	0	32	0	0	0	0	142	29	55	126	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	20	0	34	0	0	0	0	149	31	58	133	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	20	0	34	0	0	0	0	149	31	58	133	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	4.1	xxxx	xxxx
FollowUpTim:	3.5	4.0	3.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	2.2	xxxx	xxxx

Capacity Module:

Cnflict Vol:	423	433	175	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	190	xxxx	xxxx
Potent Cap.:	587	516	869	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1384	xxxx	xxxx
Move Cap.:	564	486	861	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1372	xxxx	xxxx
Volume/Cap:	0.04	0.00	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.3	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	7.7	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	720	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	0.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	10.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	B		*	*	*	*	*	*	*	*	*	*
ApproachDel:	10.4		xxxxxx			xxxxxx			xxxxxx			
ApproachLOS:	B		*			*			*			

Note: Queue reported is the distance per lane in feet.

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Level Of Service Computation Report
 2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Tenaya Rd & Pine Hills Rd

Average Delay (sec/veh): 0.3 Worst Case Level Of Service: A[8.6]

Street Name:	Pine Hills Road			Tenaya Road / Van Duesan Road		
Approach:	North Bound	South Bound	East Bound	West Bound	East Bound	West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign	Stop Sign
Rights:	Include	Include	Include	Include	Include	Include
Lanes:	0 0 1 0 0	0 1 0 0 0	0 0 1 0 0	0 0 0 0 1	0 0 0 0 1	0 0 0 0 1

Volume Module:

Base Vol:	0	48	0	3	80	0	0	0	0	0	0	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	48	0	3	80	0	0	0	0	0	0	2
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	48	0	3	80	0	0	0	0	0	0	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	51	0	3	84	0	0	0	0	0	0	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	51	0	3	84	0	0	0	0	0	0	2

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	4.1	xxxx	xxxx	7.1	6.5	6.2	xxxx	xxxx	6.2
FollowUpTim:	xxxx	xxxx	xxxx	2.2	xxxx	xxxx	3.5	4.0	3.3	xxxx	xxxx	3.3

Capacity Module:

Cnflict Vol:	xxxx	xxxx	xxxx	61	xxxx	xxxx	152	161	94	xxxx	xxxx	61
Potent Cap.:	xxxx	xxxx	xxxx	1543	xxxx	xxxx	815	731	963	xxxx	xxxx	1005
Move Cap.:	xxxx	xxxx	xxxx	1530	xxxx	xxxx	805	718	955	xxxx	xxxx	996
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	0.00	0.00	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxx	0.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.2
Control Del:	xxxx	xxxx	xxxx	7.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	8.6
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	0.0	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	7.4	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	A	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			xxxxxx		8.6
ApproachLOS:	*			*			*			*		A

Note: Queue reported is the distance per lane in feet.

APPENDIX E

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS EXISTING WITH PROJECT CONDITIONS

Scenario Report
Ex plus Proj AM

Command: Default
Volume: Existing AM
Geometry: Existing
Impact Fee: none
Trip Generation: Project AM
Trip Distribution: Project
Paths: Project
Routes: none
Configuration: Default

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 SR-78 & SR-79/Washington St	B	10.4	0.097	B	10.5	0.101	+ 0.125 D/V
# 2 Hoskings Ranch Rd & SR-78/79	A	9.0	0.003	A	9.7	0.008	+ 0.703 D/V
# 3 SR-78/79 & Pine Hills Rd	B	10.1	0.071	B	10.3	0.074	+ 0.152 D/V
# 4 Tenaya Rd & Pine Hills Rd	A	8.8	0.002	A	9.5	0.008	+ 0.701 D/V

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR-78 & SR-79/Washington St

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: B[10.5]

Street Name:	SR-79 / Washington Street	SR-78
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign
Rights:	Include	Include
Lanes:	0 0 1! 0 0	0 1 0 0 1

Street Name:	SR-78 / Washington Street	SR-78
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign
Rights:	Include	Include
Lanes:	0 0 1! 0 0	0 1 0 0 1

Volume Module:

Base Vol:	1	1	3	58	3	56	38	84	5	0	80	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	1	3	58	3	56	38	84	5	0	80	39
Added Vol:	0	0	0	1	0	0	0	4	0	0	9	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	1	3	59	3	56	38	88	5	0	89	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	1	3	62	3	59	40	93	5	0	94	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	1	3	62	3	59	40	93	5	0	94	42

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	341	331	115	312	313	135	146	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	613	588	937	640	603	914	1436	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	549	562	922	613	576	899	1424	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.10	0.01	0.07	0.03	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx 5.3 2.2 xxxx xxxxx xxxx xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx 9.3 7.6 xxxx xxxxx xxxxx xxxx xxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx 729 xxxxx 611 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

SharedQueue:xxxxx 0.0 xxxxx 0.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel:xxxxx 10.0 xxxxx 11.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: * A * B * * * * *

ApproachDel: 10.0 10.5 xxxxxx xxxxxx

ApproachLOS: A B * * * * *

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Hoskings Ranch Rd & SR-78/79

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[9.7]

Street Name:	SR-78 / SR-79	Hoskings Ranch Road
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled
Rights:	Include	Include
Lanes:	0 1 0 0 0	0 0 0 1 0

Street Name:	SR-78 / SR-79	Hoskings Ranch Road
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled
Rights:	Include	Include
Lanes:	0 1 0 0 0	0 0 0 1 0

Volume Module:

Base Vol:	4	137	0	0	116	1	0	0	2	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	137	0	0	116	1	0	0	2	0	0	0
Added Vol:	1	5	0	0	2	3	5	0	3	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	142	0	0	118	4	5	0	5	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	149	0	0	124	4	5	0	5	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	5	149	0	0	124	4	5	0	5	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	138	xxxx	xxxxx	xxxxx	xxxx	xxxxx	296	306	136	xxxx	xxxx	xxxxx
Potent Cap.:	1445	xxxx	xxxxx	xxxxx	xxxx	xxxxx	695	607	912	xxxx	xxxx	xxxxx
Move Cap.:	1433	xxxx	xxxxx	xxxxx	xxxx	xxxxx	687	595	905	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.01	0.00	0.01	xxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ: 0.3 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

Control Del: 7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

LOS by Move: A * * * * * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx 781 xxxxx xxxx xxxx xxxxx

SharedQueue: 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxx xxxxx

Shrd ConDel: 7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 9.7 xxxxx xxxxx xxxx xxxxx

Shared LOS: A * * * * * A * * * * *

ApproachDel: xxxxxx xxxxxx 9.7 xxxxxx

ApproachLOS: * * * * * A * * * * *

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 SR-78/79 & Pine Hills Rd

Average Delay (sec/veh): 3.3 Worst Case Level Of Service: B[10.3]

Street Name:	Pine Hills Road				SR-78 / SR-79				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T - R	R	L - T - R	L	T - R	R	L - T - R	
Control:	Stop Sign		Stop Sign		Uncontrolled		Uncontrolled		
Rights:	Include		Include		Include		Include		
Lanes:	0	0	1! 0 0	0	0 0 0 0 0	0	0 0 1 0	1	0 1 0 0

Volume Module:

Base Vol:	29	0	61	0	0	0	0	117	11	35	118	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	29	0	61	0	0	0	0	117	11	35	118	0
Added Vol:	5	0	2	0	0	0	0	2	2	1	1	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	34	0	63	0	0	0	0	119	13	36	119	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	36	0	66	0	0	0	0	125	14	38	125	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	36	0	66	0	0	0	0	125	14	38	125	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	343	353	142	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	149	xxxx	xxxxx
Potent Cap.:	653	572	906	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1432	xxxx	xxxxx
Move Cap.:	635	547	898	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1421	xxxx	xxxxx
Volume/Cap:	0.06	0.00	0.07	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.03	xxxx	xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 2.1 xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.6 xxxx xxxxx

LOS by Move: * * * * * A * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx 784 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

SharedQueue:xxxxx 0.4 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel:xxxxx 10.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: * B * * * * *

ApproachDel: 10.3 xxxxxx xxxxxx xxxxxx

ApproachLOS: B * * *

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Tenaya Rd & Pine Hills Rd

Average Delay (sec/veh): 0.6 Worst Case Level Of Service: A[9.5]

Street Name:	Pine Hills Road				Tenaya Road / Van Duesan Road				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T - R	R	L - T - R	L	T - R	R	L - T - R	
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign		
Rights:	Include		Include		Include		Include		
Lanes:	0	0	1 0 0	0	0 0 1! 0 0	1	0 0 0 0	0	0 0 0 1

Volume Module:

Base Vol:	0	89	0	1	44	0	0	0	0	0	0	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	89	0	1	44	0	0	0	0	0	0	2
Added Vol:	0	1	0	0	0	3	6	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	90	0	1	44	3	6	0	0	0	0	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	95	0	1	46	3	6	0	0	0	0	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	95	0	1	46	3	6	0	0	0	0	2

Critical Gap Module:

Critical Gp:xxxxx xxxx xxxxx	4.1	xxxx	xxxxx	7.1	xxxx	xxxxx	xxxxx	xxxxx	6.2
FollowUpTim:xxxxx xxxx xxxxx	2.2	xxxx	xxxxx	3.5	xxxx	xxxxx	xxxxx	xxxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxxx	105	xxxx	xxxxx	156	xxxx	xxxxx	xxxx	xxxxx	105
Potent Cap.:	xxxx	xxxx	xxxxx	1487	xxxx	xxxxx	811	xxxx	xxxxx	xxxx	xxxxx	950
Move Cap.:	xxxx	xxxx	xxxxx	1474	xxxx	xxxxx	802	xxxx	xxxxx	xxxx	xxxxx	942
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxxx	0.00

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx 0.1 xxxx xxxxx 0.6 xxxx xxxxx xxxx xxxx 0.2

Control Del:xxxxx xxxx xxxxx 7.4 xxxx xxxxx 9.5 xxxx xxxxx xxxxx xxxx 8.8

LOS by Move: * * * * * A * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: * * * * *

ApproachDel: xxxxxx xxxxxx 9.5 8.8

ApproachLOS: * A *

Note: Queue reported is the distance per lane in feet.

Scenario Report
Ex plus Proj PM

Command: Default
Volume: Existing PM
Geometry: Existing
Impact Fee: none
Trip Generation: Project PM
Trip Distribution: Project
Paths: Project
Routes: none
Configuration: Default

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 SR-78 & SR-79/Washington St	B	13.0	0.101	B	13.2	0.108	+ 0.214 D/V
# 2 Hoskings Ranch Rd & SR-78/79	A	9.8	0.006	B	10.1	0.010	+ 0.272 D/V
# 3 SR-78/79 & Pine Hills Rd	B	10.4	0.042	B	10.6	0.045	+ 0.192 D/V
# 4 Tenaya Rd & Pine Hills Rd	A	8.6	0.002	A	9.5	0.004	+ 0.910 D/V

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR-78 & SR-79/Washington St

Average Delay (sec/veh): 4.0 Worst Case Level Of Service: B[13.2]

Street Name:	SR-79 / Washington Street			SR-78		
Approach:	North Bound		South Bound	East Bound		West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign	Uncontrolled	Uncontrolled		
Rights:	Include	Include	Include	Include		
Lanes:	0 1 0 0 0	0 1 0 0 1	1 0 0 1 0	1 0 0 1 0		

Volume Module:

Base Vol:	1	2	0	48	0	71	70	119	3	2	99	51
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	2	0	48	0	71	70	119	3	2	99	51
Added Vol:	0	0	0	2	0	0	0	12	0	0	5	1
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	2	0	50	0	71	70	131	3	2	104	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	2	0	53	0	75	74	138	3	2	109	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	2	0	53	0	75	74	138	3	2	109	55

Critical Gap Module:

Critical Gp:	7.1	6.5	xxxx	7.1	6.5	6.2	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	xxxx	3.5	4.0	3.3	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	485	475	xxxxx	449	449	157	174	xxxx	xxxxx	151	xxxx	xxxxx
Potent Cap.:	492	488	xxxxx	520	505	889	1402	xxxx	xxxxx	1430	xxxx	xxxxx
Move Cap.:	424	454	xxxxx	489	469	874	1391	xxxx	xxxxx	1418	xxxx	xxxxx
Volume/Cap:	0.00	0.00	xxxx	0.11	0.00	0.09	0.05	xxxx	xxxx	0.00	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	7.0	4.2	xxxx	xxxxx	0.1	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.5	7.7	xxxx	xxxxx	7.5	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	A	A	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT							
Shared Cap.:	444	xxxx	xxxxx	489	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	0.4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	13.2	xxxx	xxxxx	13.3	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	B	*	*	B	*	*	*	*	*	*	*	*
ApproachDel:	13.2			11.1			xxxxxxx			xxxxxxx		
ApproachLOS:	B			B			*			*		

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Hoskings Ranch Rd & SR-78/79

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: B[10.1]

Street Name:	SR-78 / SR-79			Hoskings Ranch Road		
Approach:	North Bound		South Bound	East Bound		West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled	Stop Sign	Stop Sign		
Rights:	Include	Include	Include	Include		
Lanes:	0 1 0 0 0	0 0 0 1 0	0 0 1! 0 0	0 0 0 0 0		

Volume Module:

Base Vol:	3	148	0	0	167	2	3	0	5	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	148	0	0	167	2	3	0	5	0	0	0
Added Vol:	4	3	0	0	6	7	3	0	2	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	7	151	0	0	173	9	6	0	7	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	7	159	0	0	182	9	6	0	7	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	7	159	0	0	182	9	6	0	7	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	202	xxxx	xxxxx	xxxx	xxxx	xxxxx	371	381	197	xxxx	xxxx	xxxxx
Potent Cap.:	1370	xxxx	xxxxx	xxxx	xxxx	xxxxx	630	552	844	xxxx	xxxx	xxxxx
Move Cap.:	1359	xxxx	xxxxx	xxxx	xxxx	xxxxx	622	540	837	xxxx	xxxx	xxxxx
Volume/Cap:	0.01	xxxx	xxxx	xxxx	xxxx	xxxx	0.01	0.00	0.01	xxxx	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	0.4	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	722	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.7	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	10.1	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			10.1			xxxxxx		
ApproachLOS:	*			*			B			*		

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 SR-78/79 & Pine Hills Rd

Average Delay (sec/veh): 2.5 Worst Case Level Of Service: B[10.6]

Street Name:	Pine Hills Road			SR-78 / SR-79		
Approach:	North Bound		South Bound	East Bound		West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign		Stop Sign	Uncontrolled		Uncontrolled
Rights:	Include		Include	Include		Include
Lanes:	0 0 1! 0 0	0 0 0 0 0	0 0 0 0 0	0 0 0 1 0	1 0 1 0 0	

Volume Module:

Base Vol:	19	0	32	0	0	0	0	142	29	55	126	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	0	32	0	0	0	0	142	29	55	126	0
Added Vol:	3	0	1	0	0	0	0	2	6	3	3	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	22	0	33	0	0	0	0	144	35	58	129	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	23	0	35	0	0	0	0	152	37	61	136	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	23	0	35	0	0	0	0	152	37	61	136	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	4.1	xxxx	xxxx
FollowUpTim:	3.5	4.0	3.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	2.2	xxxx	xxxx

Capacity Module:

Cnflct Vol:	438	448	180	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	198	xxxx	xxxx
Potent Cap.:	576	506	863	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1374	xxxx	xxxx
Move Cap.:	552	475	856	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1363	xxxx	xxxx
Volume/Cap:	0.04	0.00	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.04	xxxx	xxxx

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	3.5	xxxx	xxxx
Control Del:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	7.8	xxxx	xxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	A	*	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT			
Shared Cap.:	xxxx	701	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	0.3	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	10.6	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	10.6		xxxxxx		xxxxxx		xxxxxx		xxxxxx			
ApproachLOS:		B										

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Tenaya Rd & Pine Hills Rd

Average Delay (sec/veh): 0.5 Worst Case Level Of Service: A[9.5]

Street Name:	Pine Hills Road			Tenaya Road / Van Duesan Road		
Approach:	North Bound		South Bound	East Bound		West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled		Uncontrolled	Stop Sign		Stop Sign
Rights:	Include		Include	Include		Include
Lanes:	0 0 1 0 0	0 0 1! 0 0	0 0 1! 0 0	1 0 0 0 0	0 0 0 0 1	

Volume Module:

Base Vol:	0	48	0	3	80	0	0	0	0	0	0	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	48	0	3	80	0	0	0	0	0	0	2
Added Vol:	0	2	0	0	0	8	3	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	50	0	3	80	8	3	0	0	0	0	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	0	53	0	3	84	8	3	0	0	0	0	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	53	0	3	84	8	3	0	0	0	0	2

Critical Gap Module:

Critical Gp:	xxxx	xxxx	xxxx	4.1	xxxx	xxxx	7.1	xxxx	xxxx	xxxx	xxxx	6.2
FollowUpTim:	xxxx	xxxx	xxxx	2.2	xxxx	xxxx	3.5	xxxx	xxxx	xxxx	xxxx	3.3

Capacity Module:

Cnflct Vol:	xxxx	xxxx	xxxx	63	xxxx	xxxx	158	xxxx	xxxx	xxxx	xxxx	63
Potent Cap.:	xxxx	xxxx	xxxx	1540	xxxx	xxxx	807	xxxx	xxxx	xxxx	xxxx	1002
Move Cap.:	xxxx	xxxx	xxxx	1527	xxxx	xxxx	798	xxxx	xxxx	xxxx	xxxx	994
Volume/Cap:	xxxx	xxxx	xxxx	0.00	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ:	xxxx	xxxx	xxxx	0.2	xxxx	xxxx	0.3	xxxx	xxxx	xxxx	xxxx	0.2
Control Del:	xxxx	xxxx	xxxx	7.4	xxxx	xxxx	9.5	xxxx	xxxx	xxxx	xxxx	8.6
LOS by Move:	*	*	*	A	*	*	A	*	*	*	*	A
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	
Shared Cap.:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
SharedQueue:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shrd ConDel:	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx		xxxxxx		xxxxxx		9.5		xxxxxx		8.6	
ApproachLOS:							A				A	

Note: Queue reported is the distance per lane in feet.

APPENDIX F

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS EXISTING WITH CONSOLIDATED PROJECT ALTERNATIVE CONDITIONS

Scenario Report
Ex plus Alt AM

Command: Default
Volume: Existing AM
Geometry: Existing
Impact Fee: none
Trip Generation: Alternative AM
Trip Distribution: Project
Paths: Project
Routes: none
Configuration: Default

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 SR-78 & SR-79/Washington St	B	10.4	0.097	B	10.6	0.102	+ 0.179 D/V
# 2 Hoskings Ranch Rd & SR-78/79	A	9.0	0.003	A	9.6	0.005	+ 0.627 D/V
# 3 SR-78/79 & Pine Hills Rd	B	10.1	0.071	B	10.5	0.078	+ 0.332 D/V
# 4 Tenaya Rd & Pine Hills Rd	A	8.8	0.002	A	9.6	0.020	+ 0.725 D/V

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR-78 & SR-79/Washington St

Average Delay (sec/veh): 4.1 Worst Case Level Of Service: B[10.6]

Street Name:	SR-79 / Washington Street	SR-78
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign
Rights:	Include	Include
Lanes:	0 0 1! 0 0	0 1 0 0 1

Street Name:	SR-78 / Washington Street	SR-78
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign
Rights:	Include	Include
Lanes:	0 0 1! 0 0	0 1 0 0 1

Volume Module:

Base Vol:	1	1	3	58	3	56	38	84	5	0	80	39
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	1	3	58	3	56	38	84	5	0	80	39
Added Vol:	0	0	0	1	0	0	0	6	0	0	13	2
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	1	3	59	3	56	38	90	5	0	93	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	1	3	62	3	59	40	95	5	0	98	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	1	3	62	3	59	40	95	5	0	98	43

Critical Gap Module:

Critical Gp:	7.1	6.5	6.2	7.1	6.5	6.2	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	3.5	4.0	3.3	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	348	338	117	319	319	139	151	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Potent Cap.:	607	583	935	634	597	909	1430	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Move Cap.:	543	557	919	607	571	894	1418	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.00	0.10	0.01	0.07	0.03	xxxx	xxxxx	xxxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx 5.3 2.2 xxxx xxxxx xxxx xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx 9.3 7.6 xxxx xxxxx xxxxx xxxx xxxxx

LOS by Move: * * * * * A * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx 725 xxxxx 605 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

SharedQueue:xxxxx 0.0 xxxxx 0.4 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel:xxxxx 10.0 xxxxx 11.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: * B * B * * * * *

ApproachDel: 10.0 10.6 xxxxxx xxxxxx

ApproachLOS: B B * * * * *

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Hoskings Ranch Rd & SR-78/79

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: A[9.6]

Street Name:	SR-78 / SR-79	Hoskings Ranch Road
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled
Rights:	Include	Include
Lanes:	0 1 0 0 0	0 0 0 1 0

Street Name:	SR-78 / SR-79	Hoskings Ranch Road
Approach:	North Bound	South Bound
Movement:	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled
Rights:	Include	Include
Lanes:	0 1 0 0 0	0 0 0 1 0

Volume Module:

Base Vol:	4	137	0	0	116	1	0	0	2	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	4	137	0	0	116	1	0	0	2	0	0	0
Added Vol:	1	12	0	0	5	1	3	0	2	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	5	149	0	0	121	2	3	0	4	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	157	0	0	127	2	3	0	4	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	5	157	0	0	127	2	3	0	4	0	0	0

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2	xxxxx	xxxx	xxxxx
FollowUpTim:	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	139	xxxx	xxxxx	xxxxx	xxxx	xxxxx	306	316	138	xxxx	xxxx	xxxxx
Potent Cap.:	1444	xxxx	xxxxx	xxxxx	xxxx	xxxxx	686	600	910	xxxx	xxxx	xxxxx
Move Cap.:	1432	xxxx	xxxxx	xxxxx	xxxx	xxxxx	679	588	902	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.00	0.00	0.00	xxxx	xxxx	xxxxx

Level Of Service Module:

2Way95thQ: 0.3 xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

Control Del: 7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx

LOS by Move: A * * * * * * * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx 791 xxxxx xxxx xxxx xxxxx

SharedQueue: 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxx xxxxx

Shrd ConDel: 7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 9.6 xxxxx xxxxx xxxx xxxxx

Shared LOS: A * * * * * A * * * * *

ApproachDel: xxxxxx xxxxxx 9.6 xxxxxx

ApproachLOS: * * * * * A * * * * *

Note: Queue reported is the distance per lane in feet.

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
*****
Intersection #3 SR-78/79 & Pine Hills Rd
*****
Average Delay (sec/veh):      3.5      Worst Case Level Of Service: B[ 10.5]
*****
Street Name:      Pine Hills Road      SR-78 / SR-79
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Stop Sign      Stop Sign      Uncontrolled      Uncontrolled
Rights:      Include      Include      Include      Include
Lanes:      0 0 1! 0 0      0 0 0 0 0 0      0 0 0 1 0      1 0 1 0 0
-----|-----|-----|-----|
Volume Module:
Base Vol:      29 0 61      0 0 0 0      0 117 11      35 118 0
Growth Adj:      1.00 1.00 1.00      1.00 1.00 1.00      1.00 1.00 1.00      1.00 1.00 1.00
Initial Bse:      29 0 61      0 0 0 0      0 117 11      35 118 0
Added Vol:      12 0 5      0 0 0 0      0 2 5      2 1 0
PasserByVol:      0 0 0      0 0 0 0      0 0 0      0 0 0
Initial Fut:      41 0 66      0 0 0 0      0 119 16      37 119 0
User Adj:      1.00 1.00 1.00      1.00 1.00 1.00      1.00 1.00 1.00      1.00 1.00 1.00
PHF Adj:      0.95 0.95 0.95      0.95 0.95 0.95      0.95 0.95 0.95      0.95 0.95 0.95
PHF Volume:      43 0 69      0 0 0 0      0 125 17      39 125 0
Reduct Vol:      0 0 0      0 0 0 0      0 0 0      0 0 0
FinalVolume:      43 0 69      0 0 0 0      0 125 17      39 125 0
-----|-----|-----|-----|
Critical Gap Module:
Critical Gp:      6.4 6.5 6.2 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      4.1 xxxxx xxxxx
FollowUpTim:      3.5 4.0 3.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      2.2 xxxxx xxxxx
-----|-----|-----|-----|
Capacity Module:
Cnflct Vol:      347 357 144 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      152 xxxxx xxxxx
Potent Cap.:      650 569 904 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      1429 xxxxx xxxxx
Move Cap.:      631 544 896 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      1417 xxxxx xxxxx
Volume/Cap:      0.07 0.00 0.08 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      0.03 xxxxx xxxxx
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ:      xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      2.1 xxxxx xxxxx
Control Del:      xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      7.6 xxxxx xxxxx
LOS by Move:      * * * * * * * * * * * * * * * * * * * * * * * * * * * *
Movement:      LT - LTR - RT      LT - LTR - RT      LT - LTR - RT      LT - LTR - RT
Shared Cap.:      xxxxx 772 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx
SharedQueue:      xxxxx 0.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx
Shrd ConDel:      xxxxx 10.5 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx
Shared LOS:      * B * * * * * * * * * * * * * * * * * * * * * * * * * * * *
ApproachDel:      10.5      xxxxxx      xxxxxx      xxxxxx
ApproachLOS:      B * * * * *
*****
Note: Queue reported is the distance per lane in feet.
*****
```

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Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)
*****
Intersection #4 Tenaya Rd & Pine Hills Rd
*****
Average Delay (sec/veh):      1.1      Worst Case Level Of Service: A[ 9.6]
*****
Street Name:      Pine Hills Road      Tenaya Road / Van Duesan Road
Approach:      North Bound      South Bound      East Bound      West Bound
Movement:      L - T - R      L - T - R      L - T - R      L - T - R
-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Rights:      Include      Include      Include      Include
Lanes:      0 0 1 0 0      0 0 1! 0 0      0 0 1! 0 0      0 0 0 0 1
-----|-----|-----|-----|
Volume Module:
Base Vol:      0 89 0      1 44 0      0 0 0 0      0 0 0 2
Growth Adj:      1.00 1.00 1.00      1.00 1.00 1.00      1.00 1.00 1.00      1.00 1.00 1.00
Initial Bse:      0 89 0      1 44 0      0 0 0 0      0 0 0 2
Added Vol:      0 1 0      0 1 7      15 0 1      0 0 0
PasserByVol:      0 0 0      0 0 0      0 0 0      0 0 0
Initial Fut:      0 90 0      1 45 7      15 0 1      0 0 2
User Adj:      1.00 1.00 1.00      1.00 1.00 1.00      1.00 1.00 1.00      1.00 1.00 1.00
PHF Adj:      0.95 0.95 0.95      0.95 0.95 0.95      0.95 0.95 0.95      0.95 0.95 0.95
PHF Volume:      0 95 0      1 47 7      16 0 1      0 0 2
Reduct Vol:      0 0 0      0 0 0      0 0 0      0 0 0
FinalVolume:      0 95 0      1 47 7      16 0 1      0 0 2
-----|-----|-----|-----|
Critical Gap Module:
Critical Gp:      xxxxx xxxxx xxxxx      4.1 xxxxx xxxxx      7.1 6.5 6.2 xxxxx xxxxx      6.2
FollowUpTim:      xxxxx xxxxx xxxxx      2.2 xxxxx xxxxx      3.5 4.0 3.3 xxxxx xxxxx      3.3
-----|-----|-----|-----|
Capacity Module:
Cnflct Vol:      xxxxx xxxxx xxxxx      105 xxxxx xxxxx      159 168 61 xxxxx xxxxx      105
Potent Cap.:      xxxxx xxxxx xxxxx      1487 xxxxx xxxxx      807 725 1004 xxxxx xxxxx      950
Move Cap.:      xxxxx xxxxx xxxxx      1474 xxxxx xxxxx      798 712 996 xxxxx xxxxx      942
Volume/Cap:      xxxxx xxxxx xxxxx      0.00 xxxxx xxxxx      0.02 0.00 0.00 xxxxx xxxxx      0.00
-----|-----|-----|-----|
Level Of Service Module:
2Way95thQ:      xxxxx xxxxx xxxxx      0.1 xxxxx xxxxx      xxxxx xxxxx xxxxx      xxxxx xxxxx      0.2
Control Del:      xxxxx xxxxx xxxxx      7.4 xxxxx xxxxx      xxxxx xxxxx xxxxx      xxxxx xxxxx      8.8
LOS by Move:      * * * * * * * * * * * * * * * * * * * * * * * * * * * *
Movement:      LT - LTR - RT      LT - LTR - RT      LT - LTR - RT      LT - LTR - RT
Shared Cap.:      xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx      xxxxx 808 xxxxx      xxxxx xxxxx xxxxx
SharedQueue:      xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx      xxxxx xxxxx      0.1 xxxxx xxxxx xxxxx xxxxx
Shrd ConDel:      xxxxx xxxxx xxxxx      xxxxx xxxxx xxxxx      xxxxx 9.6 xxxxx      xxxxx xxxxx xxxxx
Shared LOS:      * * * * * * * * * * * * * * * * * * * * * * * * * * * *
ApproachDel:      xxxxxx      xxxxxx      9.6      8.8
ApproachLOS:      * * * * * A * * * * *
*****
Note: Queue reported is the distance per lane in feet.
*****
```

Scenario Report
Ex plus Alt PM

Command: Default
Volume: Existing PM
Geometry: Existing
Impact Fee: none
Trip Generation: Alternative PM
Trip Distribution: Project
Paths: Project
Routes: none
Configuration: Default

Impact Analysis Report
Level Of Service

Intersection	Base			Future			Change in
	LOS	Del/ Veh	V/ C	LOS	Del/ Veh	V/ C	
# 1 SR-78 & SR-79/Washington St	B	13.0	0.101	B	13.3	0.109	+ 0.300 D/V
# 2 Hoskings Ranch Rd & SR-78/79	A	9.8	0.006	B	10.1	0.009	+ 0.289 D/V
# 3 SR-78/79 & Pine Hills Rd	B	10.4	0.042	B	10.8	0.049	+ 0.353 D/V
# 4 Tenaya Rd & Pine Hills Rd	A	8.6	0.002	A	9.6	0.011	+ 0.998 D/V

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #1 SR-78 & SR-79/Washington St

Average Delay (sec/veh): 3.9 Worst Case Level Of Service: B[13.3]

Street Name:	SR-79 / Washington Street				SR-78			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L	T	R	L	T	R	L	T
Control:	Stop Sign		Stop Sign		Uncontrolled		Uncontrolled	
Rights:	Include		Include		Include		Include	
Lanes:	0	1	0	0	0	1	0	0

Volume Module:	SR-79 / Washington Street				SR-78			
Base Vol:	1	2	0	48	0	71	70	119
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1	2	0	48	0	71	70	119
Added Vol:	0	0	0	2	0	0	0	17
PasserByVol:	0	0	0	0	0	0	0	0
Initial Fut:	1	2	0	50	0	71	70	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	2	0	53	0	75	74	143
Reduct Vol:	0	0	0	0	0	0	0	0
FinalVolume:	1	2	0	53	0	75	74	143

Critical Gap Module:
Critical Gp: 7.1 6.5 xxxxx 7.1 6.5 6.2 4.1 xxxxx xxxxx 4.1 xxxxx xxxxx
FollowUpTim: 3.5 4.0 xxxxx 3.5 4.0 3.3 2.2 xxxxx xxxxx 2.2 xxxxx xxxxx

Capacity Module:
Cnflct Vol: 493 483 xxxxx 456 457 159 176 xxxxx xxxxx 156 xxxxx xxxxx
Potent Cap.: 487 484 xxxxx 514 500 886 1400 xxxxx xxxxx 1424 xxxxx xxxxx
Move Cap.: 419 450 xxxxx 483 465 872 1388 xxxxx xxxxx 1412 xxxxx xxxxx
Volume/Cap: 0.00 0.00 xxxxx 0.11 0.00 0.09 0.05 xxxxx xxxxx 0.00 xxxxx xxxxx

Level Of Service Module:
2Way95thQ: xxxxx xxxxx xxxxx xxxxx xxxxx 7.0 4.2 xxxxx xxxxx 0.1 xxxxx xxxxx
Control Del: xxxxx xxxxx xxxxx xxxxx xxxxx 9.5 7.7 xxxxx xxxxx 7.6 xxxxx xxxxx
LOS by Move: * * * * * A * * * * * A * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: 439 xxxxx xxxxx 483 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.0 xxxxx xxxxx 0.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 13.3 xxxxx xxxxx 13.4 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Shared LOS: B * * * * * B * * * * * * * * * *
ApproachDel: 13.3 * * * * * 11.1 * * * * * xxxxxxx xxxxxxx
ApproachLOS: B * * * * * B * * * * * * * * * *

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Hoskings Ranch Rd & SR-78/79

Average Delay (sec/veh): 0.4 Worst Case Level Of Service: B[10.1]

Street Name:	SR-78 / SR-79				Hoskings Ranch Road			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L	T	R	L	T	R	L	T
Control:	Uncontrolled		Uncontrolled		Stop Sign		Stop Sign	
Rights:	Include		Include		Include		Include	
Lanes:	0	1	0	0	0	0	1	0

Volume Module:	SR-78 / SR-79				Hoskings Ranch Road			
Base Vol:	3	148	0	0	167	2	3	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	3	148	0	0	167	2	3	0
Added Vol:	2	6	0	0	14	5	2	0
PasserByVol:	0	0	0	0	0	0	0	0
Initial Fut:	5	154	0	0	181	7	5	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	5	162	0	0	191	7	5	0
Reduct Vol:	0	0	0	0	0	0	0	0
FinalVolume:	5	162	0	0	191	7	5	0

Critical Gap Module:
Critical Gp: 4.1 xxxxx xxxxx xxxxx xxxxx xxxxx 6.4 6.5 6.2 xxxxx xxxxx xxxxx
FollowUpTim: 2.2 xxxxx xxxxx xxxxx xxxxx xxxxx 3.5 4.0 3.3 xxxxx xxxxx xxxxx

Capacity Module:
Cnflct Vol: 208 xxxxx xxxxx xxxxx xxxxx xxxxx 377 387 204 xxxxx xxxxx xxxxx
Potent Cap.: 1363 xxxxx xxxxx xxxxx xxxxx xxxxx 625 548 836 xxxxx xxxxx xxxxx
Move Cap.: 1352 xxxxx xxxxx xxxxx xxxxx xxxxx 618 536 829 xxxxx xxxxx xxxxx
Volume/Cap: 0.00 xxxxx xxxxx xxxxx xxxxx xxxxx 0.01 0.00 0.01 xxxxx xxxxx xxxxx

Level Of Service Module:
2Way95thQ: 0.3 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
Control Del: 7.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx
LOS by Move: A * * * * * * * * * * * * * * *
Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT
Shared Cap.: xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 718 xxxxx xxxxx xxxxx xxxxx
SharedQueue: 0.0 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 0.0 xxxxx xxxxx xxxxx xxxxx
Shrd ConDel: 7.7 xxxxx xxxxx xxxxx xxxxx xxxxx xxxxx 10.1 xxxxx xxxxx xxxxx xxxxx
Shared LOS: A * * * * * * * * * * * B * * * * *
ApproachDel: xxxxxx xxxxxx xxxxxx 10.1 xxxxxx
ApproachLOS: * * * * * B * * * * *

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 SR-78/79 & Pine Hills Rd

Average Delay (sec/veh): 2.6 Worst Case Level Of Service: B[10.8]

Street Name:	Pine Hills Road			SR-78 / SR-79		
Approach:	North Bound		South Bound	East Bound		West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Stop Sign	Stop Sign		Uncontrolled	Uncontrolled	
Rights:	Include	Include		Include	Include	
Lanes:	0 0 1! 0 0	0 0 0 0 0		0 0 0 1 0	1 0 1 0 0	

Volume Module:

Base Vol:	19	0	32	0	0	0	0	142	29	55	126	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	19	0	32	0	0	0	0	142	29	55	126	0
Added Vol:	6	0	3	0	0	0	0	1	14	7	2	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	25	0	35	0	0	0	0	143	43	62	128	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	26	0	37	0	0	0	0	151	45	65	135	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	26	0	37	0	0	0	0	151	45	65	135	0

Critical Gap Module:

Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx

Capacity Module:

Cnflct Vol:	448	458	183	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	206	xxxx	xxxxx
Potent Cap.:	568	499	859	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1366	xxxx	xxxxx
Move Cap.:	543	467	852	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1354	xxxx	xxxxx
Volume/Cap:	0.05	0.00	0.04	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.05	xxxx	xxxx

Level Of Service Module:

2Way95thQ: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx 3.8 xxxx xxxxx

Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx 7.8 xxxx xxxxx

LOS by Move: * * * * * A * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx 688 xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

SharedQueue:xxxxx 0.3 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel:xxxxx 10.8 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: * B * * * * *

ApproachDel: 10.8 xxxxxx xxxxxx xxxxxx

ApproachLOS: B * * *

Note: Queue reported is the distance per lane in feet.

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #4 Tenaya Rd & Pine Hills Rd

Average Delay (sec/veh): 0.8 Worst Case Level Of Service: A[9.6]

Street Name:	Pine Hills Road			Tenaya Road / Van Duesan Road		
Approach:	North Bound		South Bound	East Bound		West Bound
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Control:	Uncontrolled	Uncontrolled		Stop Sign	Stop Sign	
Rights:	Include	Include		Include	Include	
Lanes:	0 1 0 0 0	0 0 1! 0 0		1 0 0 0 0	0 0 0 0 1	

Volume Module:

Base Vol:	0	48	0	3	80	0	0	0	0	0	0	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	48	0	3	80	0	0	0	0	0	0	2
Added Vol:	1	1	0	0	1	19	8	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	49	0	3	81	19	8	0	0	0	0	2
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
PHF Volume:	1	52	0	3	85	20	8	0	0	0	0	2
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	52	0	3	85	20	8	0	0	0	0	2

Critical Gap Module:

Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	xxxx	xxxxx	xxxxx	xxxx	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	xxxx	xxxxx	xxxxx	xxxx	3.3

Capacity Module:

Cnflct Vol:	115	xxxx	xxxxx	62	xxxx	xxxxx	166	xxxx	xxxxx	xxxx	xxxx	62
Potent Cap.:	1474	xxxx	xxxxx	1542	xxxx	xxxxx	798	xxxx	xxxxx	xxxx	xxxx	1003
Move Cap.:	1461	xxxx	xxxxx	1529	xxxx	xxxxx	788	xxxx	xxxxx	xxxx	xxxx	995
Volume/Cap:	0.00	xxxx	xxxx	0.00	xxxx	xxxx	0.01	xxxx	xxxx	xxxx	xxxx	0.00

Level Of Service Module:

2Way95thQ: 0.1 xxxx xxxxx 0.2 xxxx xxxxx 0.8 xxxx xxxxx xxxx xxxx 0.2

Control Del: 7.5 xxxx xxxxx 7.4 xxxx xxxxx 9.6 xxxx xxxxx xxxxx xxxx 8.6

LOS by Move: A * * * A * * A * * *

Movement: LT - LTR - RT LT - LTR - RT LT - LTR - RT LT - LTR - RT

Shared Cap.: xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx xxxx xxxx xxxxx

SharedQueue: 0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shrd ConDel: 7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx

Shared LOS: A * * * * *

ApproachDel: xxxxxx xxxxxx 9.6 8.6

ApproachLOS: * * A A

Note: Queue reported is the distance per lane in feet.

APPENDIX G

SIGHT DISTANCE WORKSHEETS

Radar Speed Survey Data Collection Form

Jurisdiction: County of San Diego
 Street: Pine Hills Road
 Location: at Tenaya Rd
 Posted Speed: unposted 55 mph (regulatory or warning speed)
 Direction: Southbound (Southbound or Westbound)
 Observer: Keith Feura
 Road Conditions: Sunny (weather, visibility, accidents, other)
 Date: 10/24/03

Note Time:	Veh.	Speed (mph)	Note Time:	Veh.	Speed (mph)	Note Time:	Veh.	Speed (mph)
12:50	1	38	13:24	36	35	13:54	71	34
12:51	2	36	13:25	37	42	13:54	72	41
12:52	3	39	13:25	38	37	13:54	73	37
12:53	4	45	13:27	39	33	13:56	74	46
12:53	5	40	13:30	40	38	13:58	75	35
12:54	6	34	13:31	41	51	13:58	76	32
12:55	7	38	13:32	42	48	13:59	77	40
12:56	8	44	13:32	43	41	13:59	78	34
12:57	9	44	13:33	44	41	13:59	79	43
12:57	10	45	13:33	45	42	14:00	80	41
12:58	11	49	13:34	46	35	14:02	81	40
12:59	12	39	13:34	47	46	14:05	82	39
12:59	13	40	13:35	48	37	14:06	83	41
12:59	14	38	13:35	49	37	14:06	84	45
13:00	15	46	13:37	50	45	14:06	85	52
13:01	16	35	13:38	51	39	14:07	86	45
13:02	17	34	13:38	52	38	14:07	87	43
13:04	18	40	13:40	53	41	14:11	88	37
13:06	19	42	13:40	54	32	14:12	89	47
13:06	20	44	13:41	55	38	14:12	90	45
13:09	21	41	13:43	56	34	14:13	91	46
13:10	22	40	13:44	57	38	14:14	92	45
13:11	23	42	13:44	58	39	14:15	93	40
13:13	24	35	13:45	59	40	14:16	94	42
13:13	25	37	13:46	60	40	14:16	95	40
13:13	26	45	13:46	61	45	14:17	96	38
13:14	27	37	13:47	62	42	14:20	97	47
13:16	28	42	13:47	63	36	14:20	98	38
13:17	29	35	13:48	64	34	14:21	99	42
13:19	30	35	13:48	65	41	14:21	100	41
13:20	31	41	13:49	66	39			
13:20	32	44	13:49	67	37			
13:22	33	38	13:51	68	48			
13:22	34	35	13:52	69	36			
13:23	35	39	13:53	70	46			

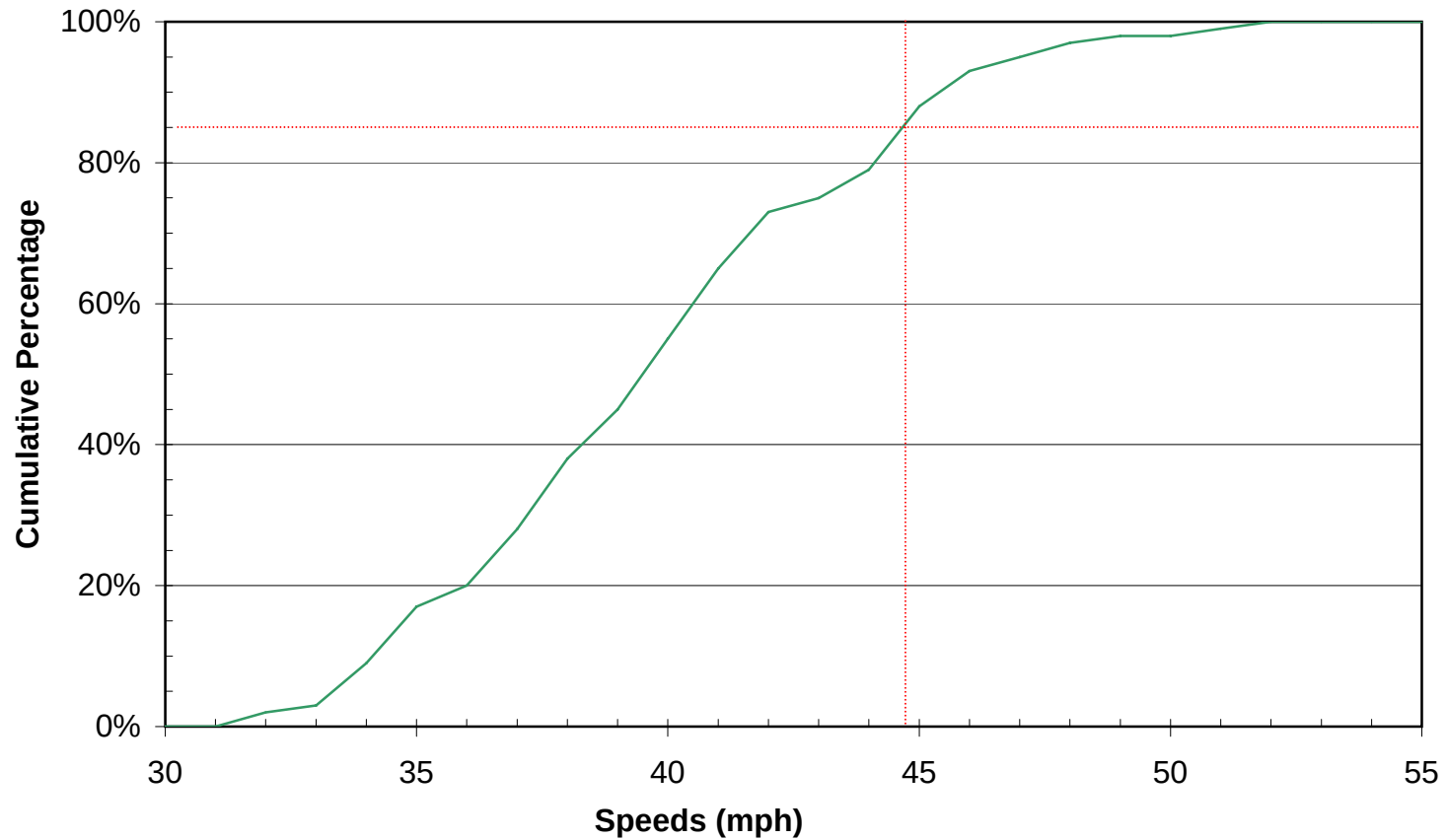

KOA CORPORATION
 PLANNING & ENGINEERING
 5095 Murphy Canyon Road, Suite 330
 San Diego, CA 92123

Average = 40.2 mph
 Standard Deviation = 4.3 mph
 85th Percentile = 45.0 mph
 10 mph Pace = 35 - 45 mph
 Current Posting = (unposted) mph

[illegible]

Cumulative Frequency Distribution Curve

Pine Hills Road at Tenaya Road
(Southbound)



Below 10mph Pace: 9
Percentage: 9%

In 10mph Pace: 79
Percentage: 79%

Above 10mph Pace: 12
Percentage: 12%

APPENDIX H

TRIP GENERATION DISCUSSION OF AGRICULTURE

MEMORANDUM

To: File JA82033/ Appendix H
From: Arnold Torma, P.E., Senior Traffic Engineer
Re: Agricultural Trip Generation
Project: Hoskings Ranch re: A82033
Date: November 14, 2014

Although the Traffic Impact Study shows 1278 daily trips for the 24-lot Proposed Project and 728 daily trips for the 34 lot project these numbers are based on SANDAG data. We have asked SANDAG for clarification but received no response yet. These numbers are theoretical with the actual trips being a fraction of these amounts. Earlier studies determined that cattle breeding was the only economically viable agriculture on the land. Presently there is agriculture (cattle breeding) on the land, the rancher lives off site. He makes on average two trips per week to the site for agricultural purposes. Based on these actual numbers agricultural trips are not included in the determination that no or minimum impact to the state highways is anticipated.

See example below of existing traffic use - We have doubled it to be conservative.

Existing cattle breeding	Day	Weekl y	Monthly	Yearly
Rancher	0.57	4.00	17.33	208
Vet	0.13	0.92	4.00	48
Delivery of cattle	0.01	0.08	0.33	4
Pickup of cattle	0.01	0.08	0.33	4
Fence mending	0.03	0.23	1.00	12
Food delivery	0.13	0.92	4.00	48
Well maintenance	0.07	0.46	2.00	24
Biologist	0.07	0.46	2.00	24
Range Manager	0.07	0.46	2.00	24
Totals	1.08	6.69	29.00	396

The standard SANDAG ADT generation rates for agriculture are for properties that are only used for agricultural product and not necessarily related to combined residential and agricultural uses on the same property. The SANDAG traffic numbers do not represent the existing actual cattle breeding operation as shown above.

The property (1,416.5 ac.) is presently being grazed in a cattle breeding operation which is an agricultural use. After the Proposed Project's approval, agricultural acreage will be reduced to approximately 495 acres. Whatever modest level of traffic that is currently associated with the existing use has been determined by consultation with the local rancher currently using the site. This estimate puts the agricultural traffic at approximately 1 ADT (See example above). This very low level of traffic would not significantly change the counts used for existing traffic. Therefore, the result of the traffic analysis is very conservative. Peak period percentages were not included since SANDAG did not identify any peak period percentages in the "San Diego Traffic Generators" publication we do not find any further agricultural information available from ITE or other publications.

Noting the points above, we believe the more likely and reasonable Proposed Project traffic circumstances are represented by simply looking at the residential contribution only.

AT