

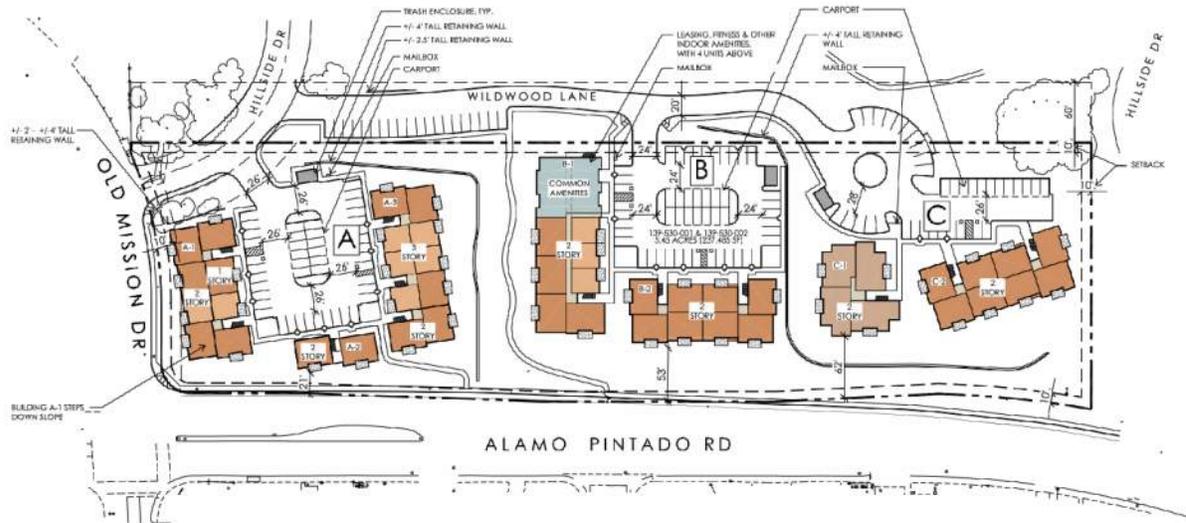
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**CITY OF SOLVANG
PLANNING & BUILDING**

**WILDWOOD PROJECT
CITY OF SOLVANG, CALIFORNIA**

TRAFFIC AND VMT STUDY



November 26, 2024

ATE #23080.01

Josh Richman
Lots on Alamo Pintado, LLC



ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110-1686 * (805) 687-4418 * FAX (805) 682-8509



ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805)687-4418 • FAX (805)682-8509 • main@atesb.com

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Richard L. Pool, P.E.
Scott A. Schell

November 26, 2024

23080.01R03

Josh Richman
Lots on Alamo Pintado, LLC
Submitted via email: jjrichman@gmail.com

***TRAFFIC AND VMT STUDY
FOR THE WILDWOOD PROJECT, CITY OF SOLVANG***

Associated Transportation Engineers (ATE) has prepared the following traffic and VMT study for the Wildwood Project, proposed in the City of Solvang.

Associated Transportation Engineers

Scott A. Schell
Principal Transportation Planner

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INTRODUCTION

The following report presents ATE's traffic and Vehicle Miles Traveled (VMT) study for the Wildwood Project (the "Project"), proposed in the City of Solvang. The report evaluates existing and future traffic operations within the Project study area and determines the Project's consistency with the City's transportation policies. The roadways and intersections analyzed in the study were determined based on input provided by City of Solvang staff. An evaluation of the Project's potential CEQA impacts based on the State's new VMT requirements adopted under Senate Bill 743 is also provided.

PROJECT DESCRIPTION

The Project site is located on the northwest corner of the Alamo Pintado Road/Old Mission Drive intersection in the City of Solvang, as shown on Figure 1. The Project is proposing to develop the currently vacant site with 100 multi-family residential units, with 20% of the units (20 units) designated as affordable housing. Figure 2 presents the Project site plan. As shown on the plan, access to the Project site is proposed via one existing driveway and one new driveway connection to Hillside Drive north of Old Mission Drive. The Project is proposing to implement frontage improvements on Alamo Pintado Road which include new curb, gutter and sidewalk facilities. The frontage improvements include two options:

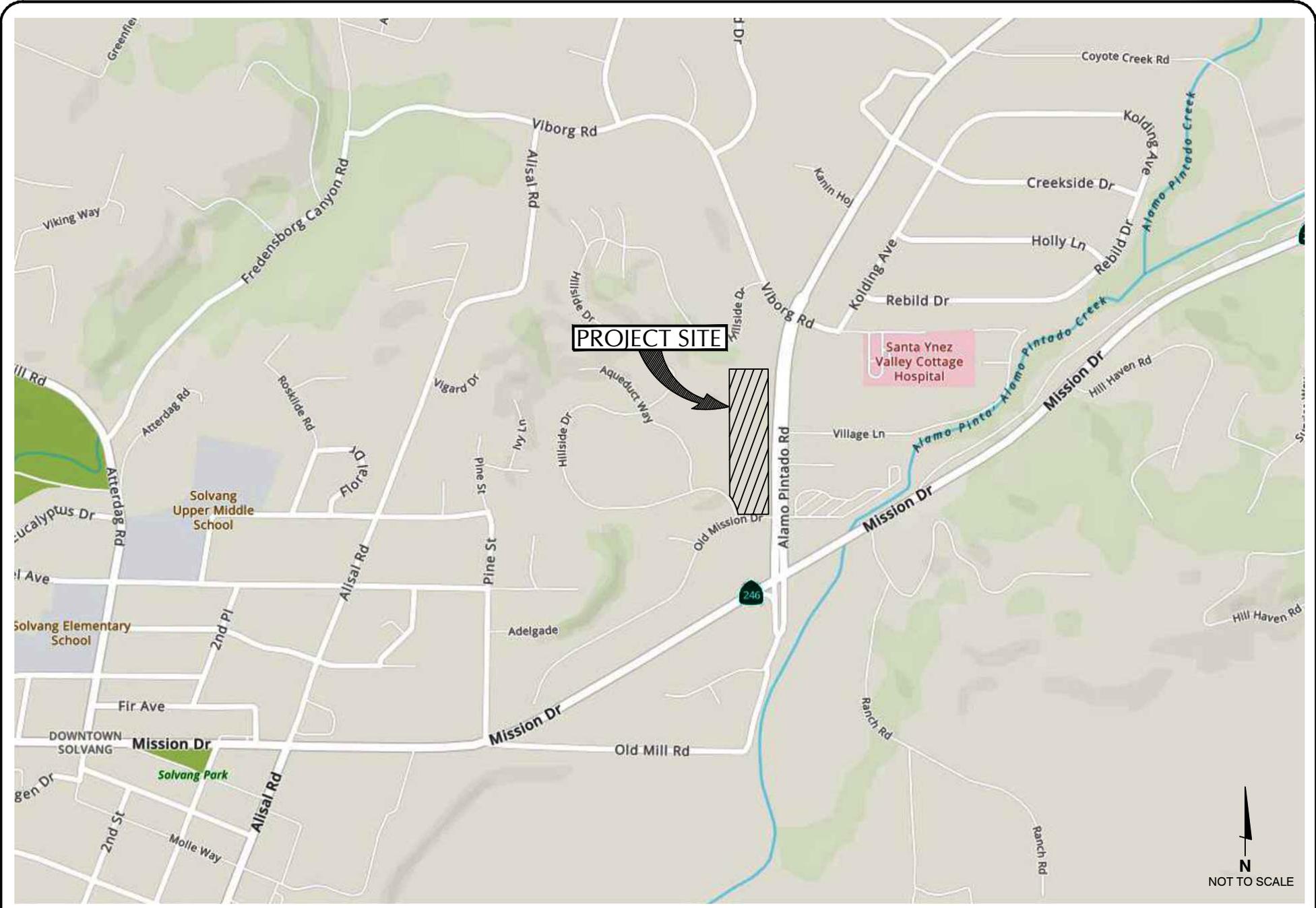
1. Widening on the west side of Alamo Pintado Road to add a second southbound through lane and a Class II bike lane from the northern site boundary to Old Mission Drive.
2. Widening on the west side of Alamo Pintado Road to add a Class I multi-purpose trail from the northern site boundary to Old Mission Drive with a 5' landscape buffer.

EXISTING CONDITIONS

Street Network

The Project site is served by a network of highways, arterial, collector, and local streets. Figure 3 illustrates the study-area street network, including the traffic controls and lane geometries at the key study-area intersections identified for analysis. The following text provides a brief discussion of the existing street network.

Mission Drive (SR 246), located south of the Project site, is classified as a Major Arterial in the 2008 City of Solvang Circulation Element, and serves as the major east-west route through the City of Solvang and the Santa Ynez Valley. Within the Project vicinity, Mission Drive is a two-lane facility with a center left-turn lane and is signalized at major cross street intersections.

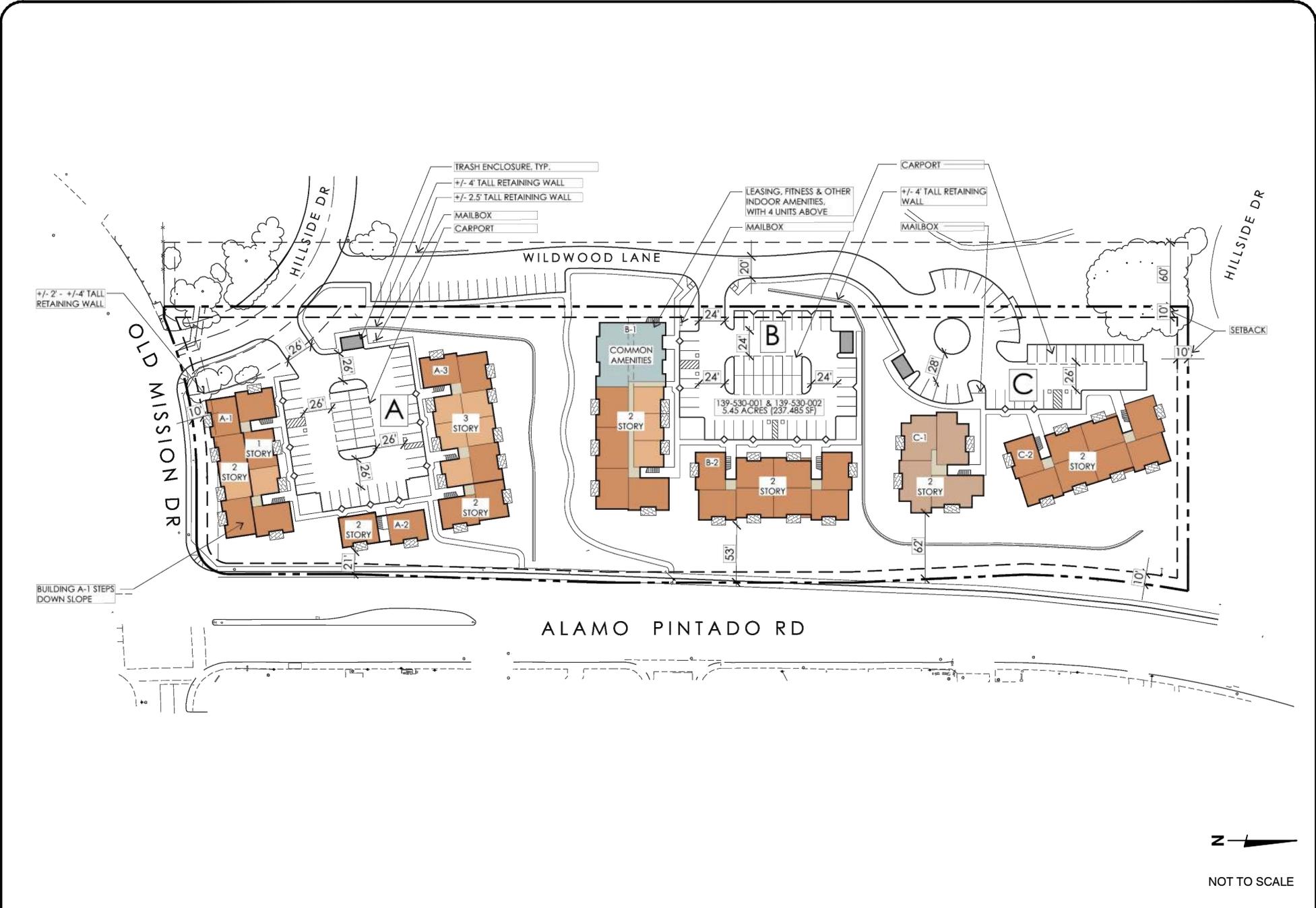


PROJECT SITE LOCATION

FIGURE 1



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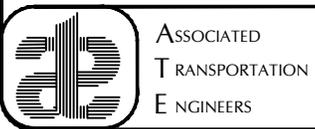
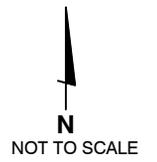
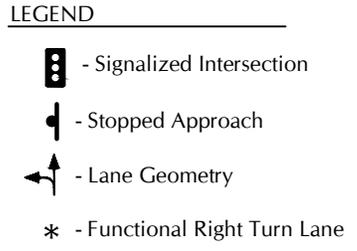
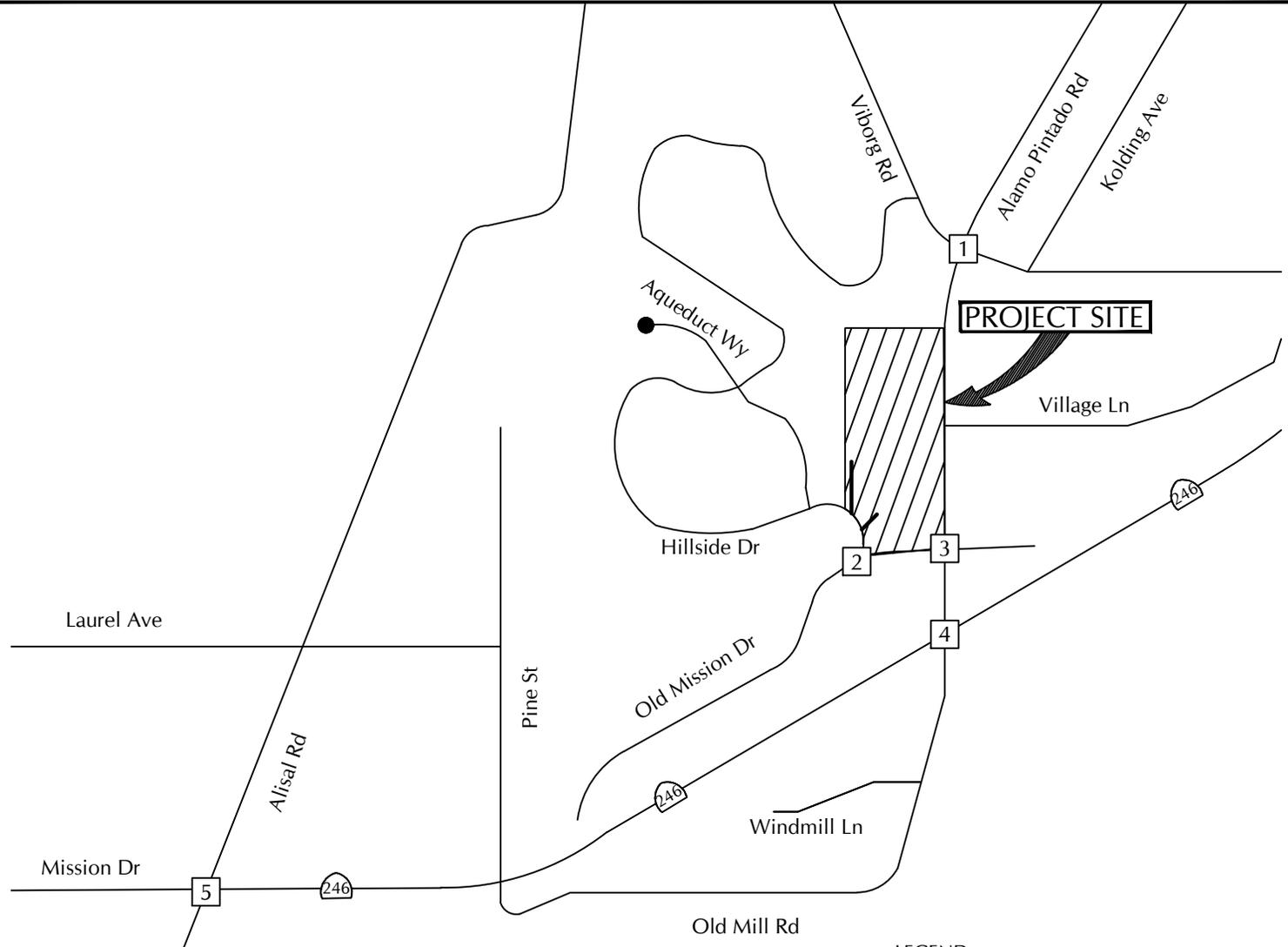
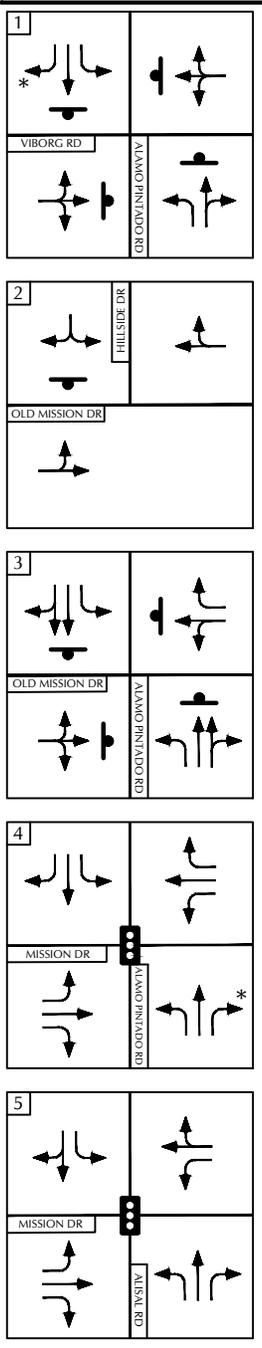


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PROJECT SITE PLAN

FIGURE 2

GM- ATE#23080.01



EXISTING STREET NETWORK

FIGURE 3

GM- ATE#23080.01

Alamo Pintado Road, located on the east side of the Project site, is a major north-south arterial which intersects Mission Drive at a signalized intersection on the eastern edge of the City. Alamo Pintado Road extends north of Mission Drive and provides access to the communities north of the City. The roadway has been fully improved as a four-lane road south of Village Lane but narrows to a two-lane facility north of Village Lane. Alamo Pintado extends south of Mission Drive and transitions to Windmill Lane. A discussion of the Project's frontage improvements on Alamo Pintado Road is provided in the Site Access and Circulation section of this report.

Alisal Road, located west of the Project site, is classified as a Secondary Arterial north of Mission Drive. Alisal Road extends north from Mission Drive as a two-lane road with on-street parking to its terminus at Viborg Road. South of Mission Drive, Alisal Road is classified as a Major Arterial and provides access to the Village area of the City.

Viborg Drive, located north of the Project site, is a two-lane residential collector street extending in an east-west direction between Fredensborg Canyon Road and Alamo Pintado Road. It provides access to the residential areas in the northern portion of the City. Viborg Drive is used as an alternative east-west travel route through the City (Viborg Drive to Fredensborg Canyon Road to Chalk Hill Road to Ballard Canyon Road).

Old Mission Drive, located on the south side of the Project site, is a two-lane residential collector street and extending west from Alamo Pintado Road to its terminus as a cul-de-sac. It provides access to the Project site via its connection to Hillside Drive.

Hillside Drive, located on the west side of the Project site, is a private two-lane residential collector street extending in a north-south direction between Old Mission Drive and Viborg Road. It is maintained by the Mission Oaks Homeowners Association (HOA) and provides access to the Project site via one existing and one new driveway.

Existing Pedestrian Facilities

Within the Project study area, sidewalks are currently provided on the east side of Hillside Drive, both sides of Old Mission Drive, and both sides of Alamo Pintado Road south of Old Mission Drive. No sidewalks are provided on the west side of Alamo Pintado Road north of Old Mission Drive. As noted previously, the Project proposes to implement frontage improvements, including a new curb, gutter and sidewalk on the west side of Alamo Pintado Road. ADA accessible crosswalks are provided on three of the four legs of the Old Mission Drive/Alamo Pintado Road intersection. It is noted that this intersection is all-way stop controlled, therefore pedestrians are able to cross both Alamo Pintado Road and Old Mission Drive. Pedestrian counts conducted at the adjacent intersection (see Technical Appendix) show pedestrian volumes of 17 AM trips and 4 PM trips on all legs during the AM and PM peak commute periods. This level of pedestrian activity does not measurably affect the intersection operations and levels of service (a significant pedestrian presence would range from 50-100 in an hour).

Intersection Operations

Because traffic flow on urban arterials is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions of critical intersections during peak travel periods. "Levels of Service" (LOS) A through F are used to rate intersection operations, with LOS A indicating very good operation and LOS F indicating poor operation (more complete definitions are contained in the Technical Appendix for reference). Pursuant to the 2008 Circulation Element, the City of Solvang considers LOS D as the performance standard for intersections (maintain LOS D or better) during normal weekday peak hours to ensure that traffic delays are kept to a minimum.

New traffic counts were conducted at the study-area intersections in July of 2024 (see Technical Appendix for count data). City staff requested this Summer time frame to capture the traffic flows related to the economic conditions of the City and Valley as a tourist destination. Counts were conducted during the AM and PM peak 2-hour commuter periods. The peak 1-hour volumes within those periods were then identified for the analysis. Figure 4 presents the existing peak hour traffic volumes for the study-area intersections.

The Project consists of multi-family residential units, which do generate approximately 30% less traffic during the mid-day peak hour compared to the AM peak hour and 50% less traffic compared to the PM peak hour. Traffic counts data presented in the Santa Ynez Valley Traffic Circulation & Safety Study also show that mid-day volumes are approximately 6% lower than PM peak hour volumes, therefore the AM and PM peak hour analyses capture the peak travel periods in the study area.

As required by City policy set forth in the 2008 Circulation Element, levels of service were calculated for the study-area intersections using the operations methodology outlined in the Highway Capacity Manual (HCM).¹ Levels of service are based on the average number of seconds of delay per vehicle during the peak one-hour period. Table 1 lists the Existing levels of service during the AM and PM peak hour periods using the Highway Capacity Software (HCS) and the Synchro Traffic Software (levels of service calculation worksheets are contained in the Technical Appendix for reference).

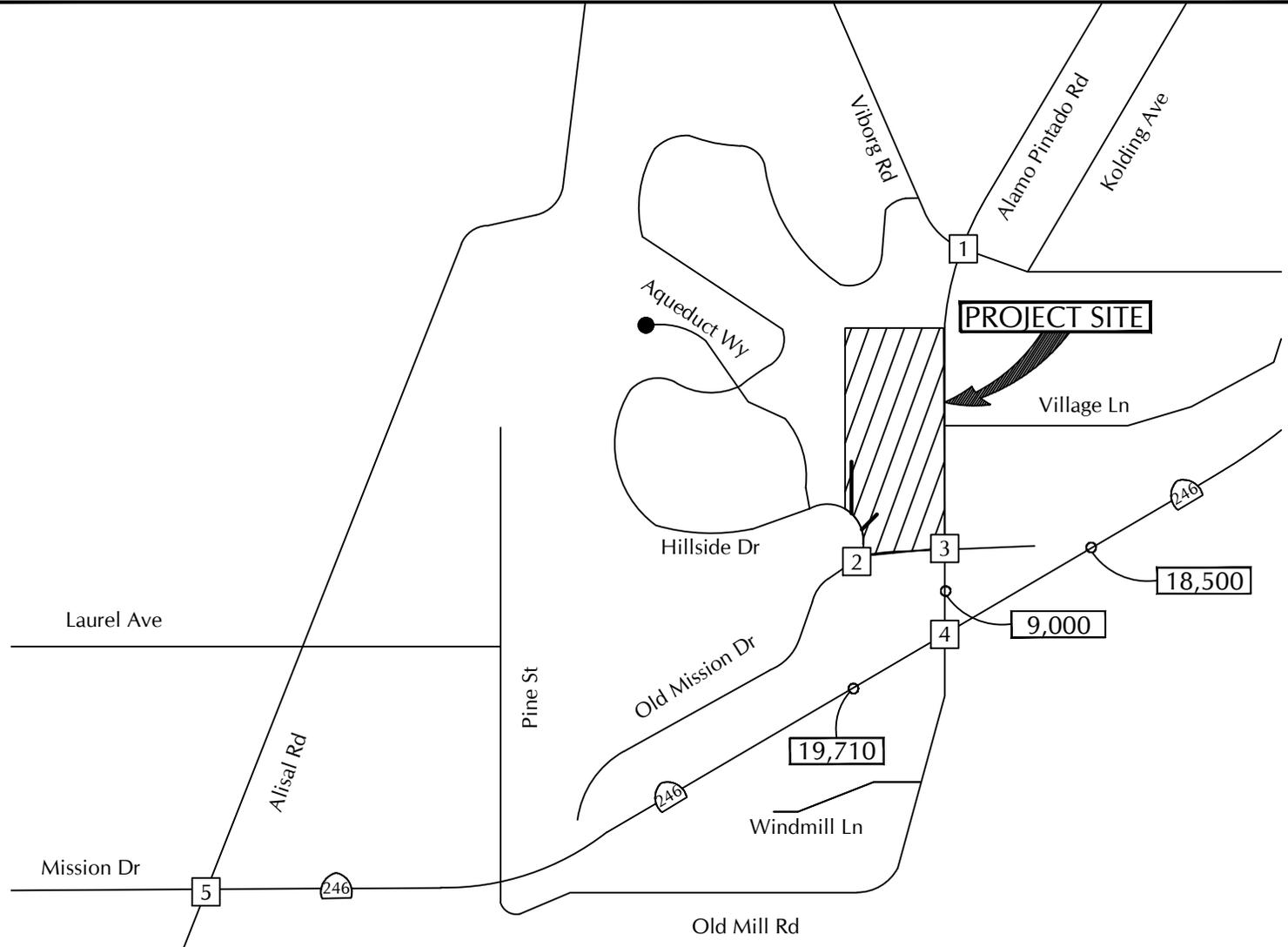
Table 1
Existing Levels of Service

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Viborg Road/Alamo Pintado Road	Stop-Sign	10.0 Sec.	LOS B	11.8 Sec.	LOS B
Old Mission Drive/Hillside Drive	Stop-Sign	8.9 Sec.	LOS A	9.5 Sec.	LOS A
Old Mission Drive/Alamo Pintado Road	Stop-Sign	10.3 Sec.	LOS B	12.6 Sec.	LOS B
Mission Drive/Alamo Pintado Road	Signal	19.5 Sec.	LOS B	22.5 Sec.	LOS C
Mission Drive/Alisal Road	Signal	21.3 Sec.	LOS C	18.7 Sec.	LOS B

The data presented in Table 1 show that the study-area intersections currently operate in the LOS A-C range during the AM and PM peak hours, which meet the City's LOS D standard.

¹ Highway Capacity Manual, Transportation Research Board, 6th Edition, 2016.

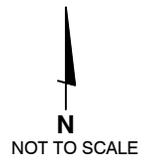
1	0(9) 167(127) 87(33)	(4)14 (14)51 (32)67
	52(59) 11(19) 62(62)	(68)35 (111)189 (33)102
2	9(4) 1(1)	(4)5 (46)101
	2(0) 93(24)	
3	72(45) 243(170) 27(9)	(28)79 (4)12 (43)116
	46(14) 15(3) 44(13)	(63)134 (255)182 (65)106
4	156(100) 16(10) 260(140)	(99)173 (360)470 (3)15
	225(271) 449(490) 19(13)	(3)19 (5)21 (8)26
5	47(64) 42(31) 13(14)	(14)17 (373)507 (99)159
	14(11) 465(546) 32(26)	(155)195 (27)44 (41)64



LEGEND

(XX)XX - (AM)PM Peak Hour Volume

X - Average Daily Traffic Volume



EXISTING TRAFFIC VOLUMES

FIGURE 4



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CITY OF SOLVANG TRANSPORTATION POLICIES

The 2008 City of Solvang Circulation Element contains the following policy regarding intersection levels of service:

Policy 1.1

Maintain a minimum level of service D at all intersections during normal peak hours and level of service E during “average tourist season peak hours” to ensure that traffic delays are kept to a minimum.

EXISTING + PROJECT ANALYSIS

Project Trip Generation

Trip generation estimates were calculated for the Project using rates presented in the Institute of Transportation Engineers (ITE) Trip Generation Manual (11th Edition).² The rates for Multi-Family Housing – Low Rise (Land Use Code #220) were used for the analysis (ITE data contained in Technical Appendix). To be conservative, the analysis used the Multi-Family Housing – Low Rise rates for both the multi-family residential units and the affordable housing units.

Table 2 shows the trip generation estimates developed for the Project (a detailed calculation worksheet is contained in the Technical Appendix for reference).

Table 2
Project Trip Generation Estimates

Land Use	Size	ADT		AM Peak Hour		PM Peak Hour	
		Rate	Trips	Rate	Trips	Rate	Trips
Multi-Family Residential (a)	80 Units	6.74	539	0.40	32	0.51	41
Affordable Housing (a)	20 Units	6.74	135	0.40	8	0.51	10
Total	100 Units		674		40		51

(a) Trip generation based on ITE rates for Multi-Family Housing – Low Rise (ITE #220).

As shown in Table 2, the Project is forecast to generate 674 average daily trips (ADT), 40 AM peak hour trips (PHT) and 51 PM peak hour trips.

Trip generation estimates were also calculated for a second scenario assuming the rates for Affordable Housing (Land Use Code #223). Table 3 shows the trip generation estimates developed for the Project with the affordable housing rates.

² Trip Generation Manual, Institute of Transportation Engineers, 11th Edition, 2021.

**Table 3
Project Trip Generation Estimates – With Affordable Housing Rates**

Land Use	Size	ADT		AM Peak Hour		PM Peak Hour	
		Rate	Trips	Rate	Trips	Rate	Trips
Multi-Family Residential (a)	80 Units	6.74	539	0.40	32	0.51	41
Affordable Housing (a)	20 Units	4.81	96	0.50	10	0.46	9
Total	100 Units		635		42		50

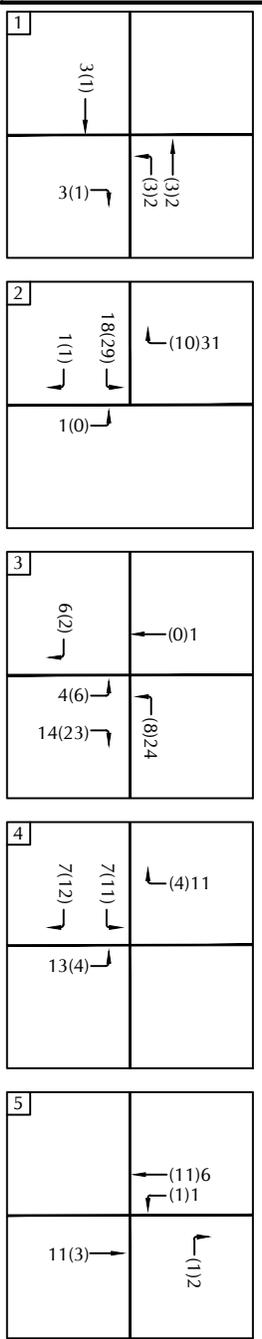
(a) Trip generation based on ITE rates for Multi-Family Housing – Low Rise (ITE #220).

(b) Trip generation based on ITE rates for Affordable Housing (ITE #223).

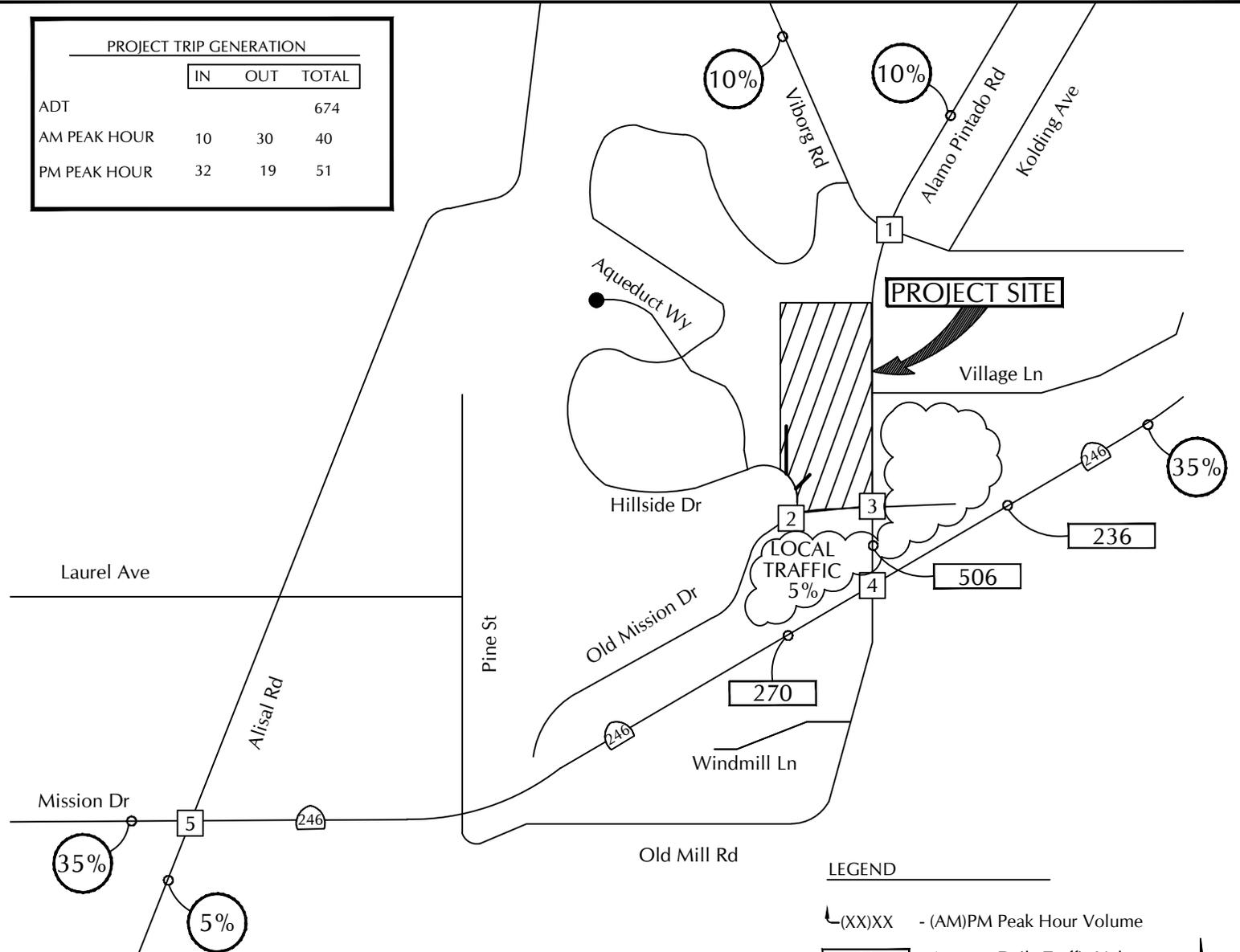
As shown in Table 3, the Project is forecast to generate 635 ADT, 42 AM peak hour trips and 50 PM peak hour trips. Based on the City’s current Development Impact Fee (DIF), the Project would be required to pay \$153,350 in fees. As noted previously, the analysis conservatively used the trip generation estimates using the Multi-Family Housing Low-Rise rates for both the multi-family residential units and the affordable housing units.

Project Trip Distribution

The traffic generated by the Project was distributed and assigned to the study-area street network based on knowledge of the local roadway system, existing travel patterns, consideration of land uses in the Solvang area, and input provided by City staff. Table 4 presents the trip distribution percentages developed for the Project. Figure 5 illustrates the trip distribution and assignment of Project traffic at the study-area intersections.

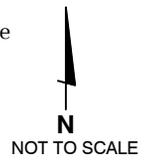


PROJECT TRIP GENERATION			
	IN	OUT	TOTAL
ADT			674
AM PEAK HOUR	10	30	40
PM PEAK HOUR	32	19	51



LEGEND

- ↳(XX)XX - (AM)PM Peak Hour Volume
- ▭ X - Average Daily Traffic Volume
- % - Distribution Percentage



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PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

FIGURE 5

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**Table 4
Project Trip Distribution**

Origin/Destination	Direction	Distribution %
SR 246	East	35%
SR 246	West	35%
Alamo Pintado Road	North	10%
Viborg Road	North	10%
Alisal Road	South	5%
Local Area	South/East	5%
Total		100%

Existing + Project Intersection Operations

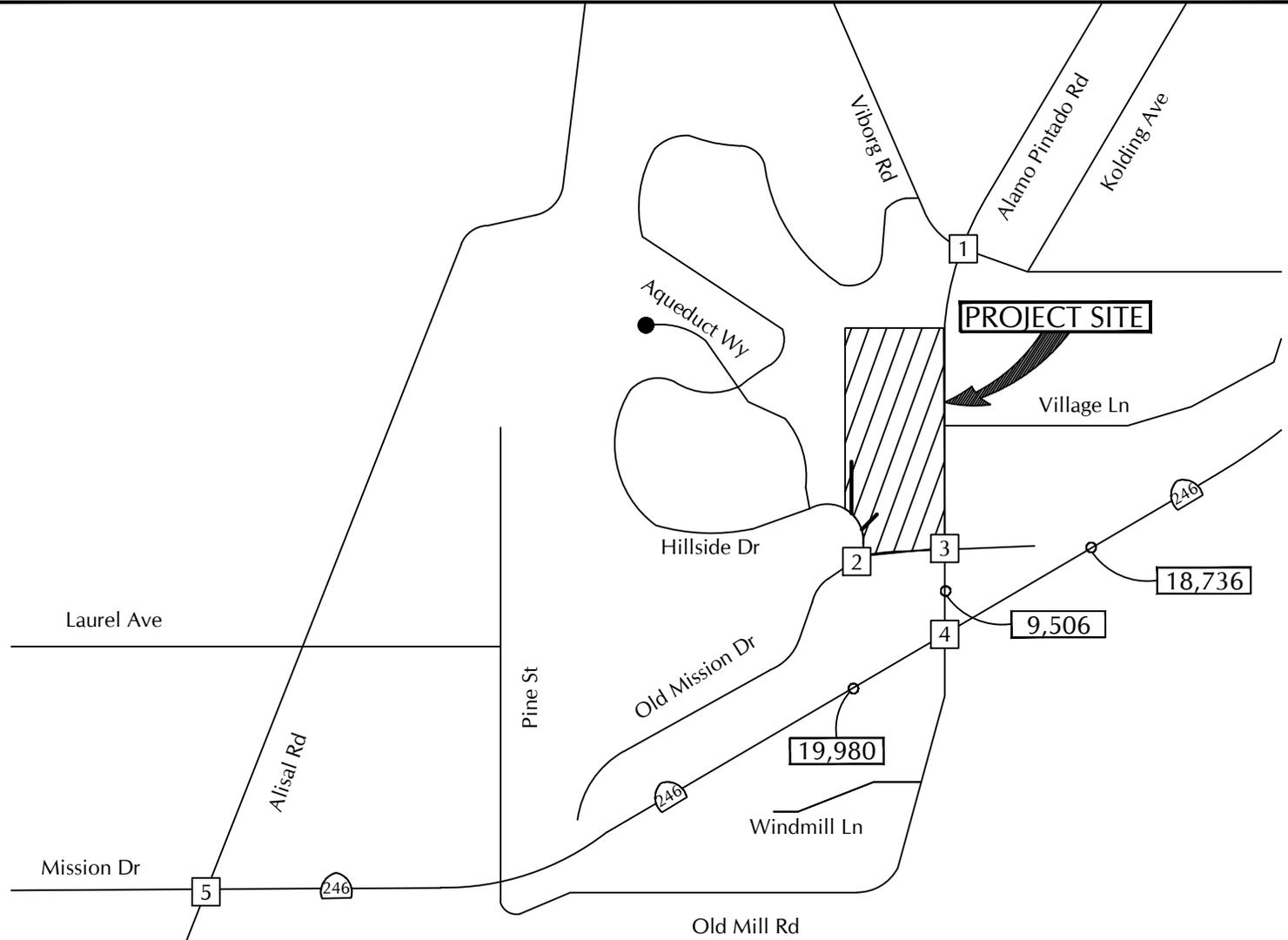
Levels of service were calculated for the study-area intersections assuming the Existing + Project traffic volumes shown on Figure 6. Tables 5 and 6 compare the Existing and Existing + Project levels of service and identify locations that are forecast to exceed the City’s LOS D policy standard. The LOS calculations completed for the Old Mission Drive/Alamo Pintado Road intersection account for the increased pedestrian volumes that would be generated by the Project at the intersection (noted on LOS worksheets). The pedestrian flows were estimated using the ITE NCHRP 684 model (contained in the Technical Appendix), which showed how many pedestrians would travel between the residential uses for the Project and the shopping center east of the Project on the east side Alamo Pintado Road. The model showed 8 pedestrian trips in the AM peak hour and 18 pedestrian trips in the PM peak hour. To be conservative, the analysis assumed that the Project generated 18 pedestrian trips for both the AM and PM peak hour.

**Table 5
Existing + Project Levels of Service – AM Peak Hour**

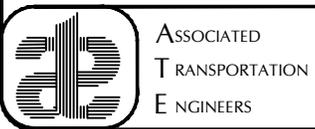
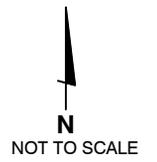
Intersection	Delay / LOS		Project-Added	
	Existing	Existing + Project	Trips	Exceed LOS D Standard?
Viborg Road/Alamo Pintado Road	10.0 Sec./LOS B	10.1 Sec./LOS B	8	No
Old Mission Drive/Hillside Drive	8.9 Sec./LOS A	9.2 Sec./LOS A	40	No
Old Mission Drive/Alamo Pintado Road (a)	10.3 Sec./LOS B	10.8 Sec./LOS B	39	No
Mission Drive/Alamo Pintado Road	19.5 Sec./LOS B	19.5 Sec./LOS B	31	No
Mission Drive/Alisal Road	21.3 Sec./LOS C	21.4 Sec./LOS C	16	No

(a) LOS calculations account for increased pedestrian volumes (18 trips) generated by the Project.

1	0(9) 170(128) 87(33)	(4)14 (14)51 (32)67
	52(59) 11(19) 65(63)	(68)35 (114)191 (36)104
2	27(33) 2(2)	(14)36 (46)101
	3(0) 93(24)	
3	72(45) 243(170) 33(11)	(28)79 (4)13 (43)116
	50(20) 15(3) 58(36)	(63)134 (255)182 (73)130
4	163(111) 16(10) 267(152)	(103)184 (360)470 (3)15
	238(275) 449(490) 19(13)	(3)19 (5)21 (8)26
5	47(64) 42(31) 13(14)	(14)17 (384)513 (100)160
	14(11) 476(549) 32(26)	(156)197 (21)44 (41)64



LEGEND
 (XX)XX - (AM)PM Peak Hour Volume
 X - Average Daily Traffic Volume



EXISTING + PROJECT TRAFFIC VOLUMES

FIGURE 6

**Table 6
Existing + Project Levels of Service – PM Peak Hour**

Intersection	Delay / LOS		Project-Added	
	Existing	Existing + Project	Trips	Exceed LOS D Standard?
Viborg Road/Alamo Pintado Road	11.8 Sec./LOS B	12.0 Sec./LOS B	10	No
Old Mission Drive/Hillside Drive	9.5 Sec./LOS A	10.1 Sec./LOS B	51	No
Old Mission Drive/Alamo Pintado Road (a)	12.6 Sec./LOS B	13.5 Sec./LOS B	49	No
Mission Drive/Alamo Pintado Road	22.5 Sec./LOS C	22.8 Sec./LOS C	38	No
Mission Drive/Alisal Road	18.7 Sec./LOS B	18.8 Sec./LOS B	20	No

(a) LOS calculations account for increased pedestrian volumes (18 trips) generated by the Project.

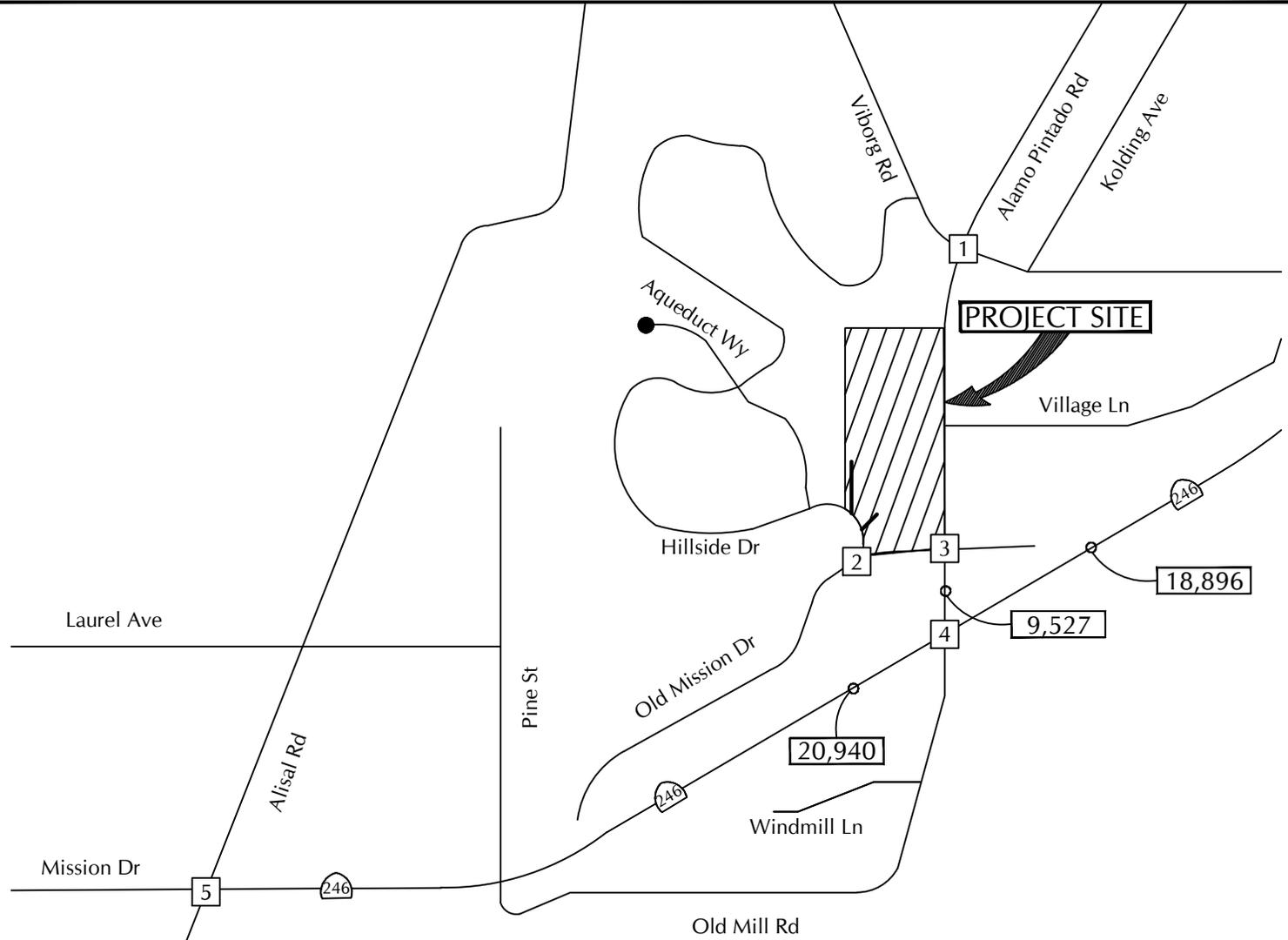
The data presented in Tables 5 and 6 show that the study-area intersections are forecast to operate in the LOS A-C range during the AM and PM peak hours with Existing + Project traffic, which meet the City’s LOS D standard.

CUMULATIVE ANALYSIS

Traffic Forecasts

Cumulative conditions were forecast assuming the addition of traffic generated by approved and pending development projects located in the Project study-area (projects located in both the City and the County were included). The list of approved and pending projects was provided by City staff and is contained in the Technical Appendix. The Cumulative traffic forecasts are shown in Figure 7 and the Cumulative + Project forecasts are shown in Figure 8.

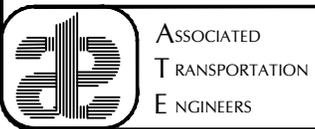
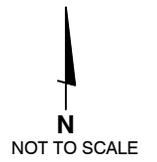
1	0(9) 177(142) 87(33)	(4)14 (14)51 (32)67
	52(59) 11(19) 65(66)	(68)35 (116)208 (35)107
2	9(4) 1(1)	(4)5 (47)103
	2(0) 94(25)	
3	72(45) 259(197) 27(9)	(28)79 (4)12 (43)116
	46(14) 15(3) 45(14)	(63)134 (263)213 (66)108
4	158(103) 25(26) 266(149)	(100)177 (367)487 (26)28
	234(275) 461(498) 40(52)	(8)49 (9)41 (18)77
5	49(7)1 39(30) 3(10)	(10)28 (402)572 (103)169
	10(5) 513(595) 35(27)	(162)202 (19)46 (45)67



LEGEND

↳(XX)XX - (AM)PM Peak Hour Volume

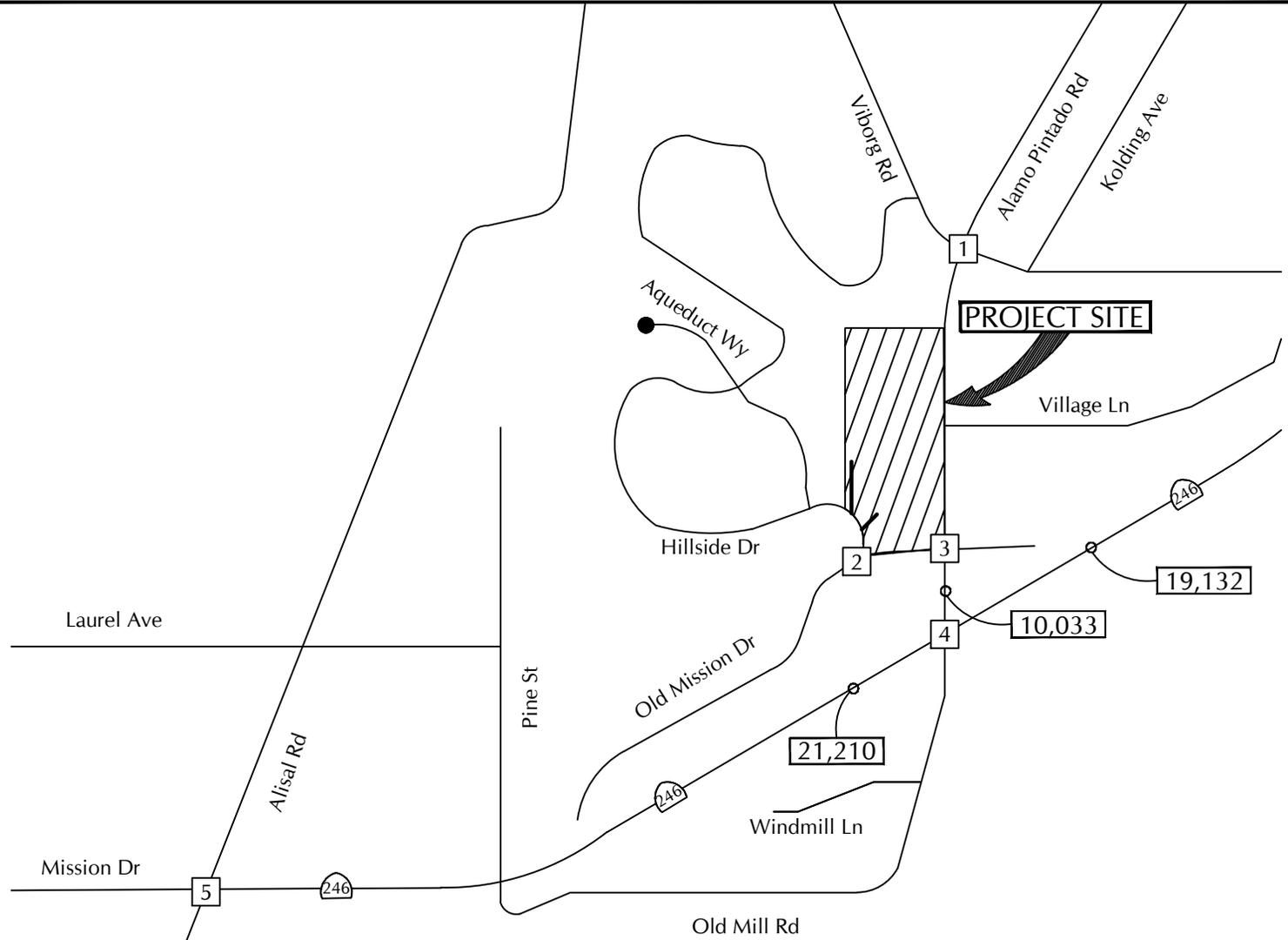
☐ X ☐ - Average Daily Traffic Volume



CUMULATIVE TRAFFIC VOLUMES

FIGURE 7

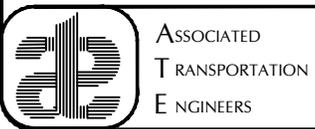
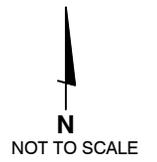
1	0(9) 180(143) 87(33)	(4)14 (14)51 (32)67
	52(59) 11(19) 68(67)	(68)35 (119)210 (38)109
2	27(33) 2(2)	(14)36 (47)103
	3(0) 94(25)	
3	72(45) 259(197) 33(11)	(28)79 (4)13 (43)116
	50(20) 15(3) 59(37)	(63)134 (263)213 (74)132
4	165(114) 257(6)	(104)188 (367)487 (26)28
	247(279) 461(498) 40(52)	(8)49 (9)41 (18)77
5	49(71) 39(30) 3(10)	(10)28 (413)578 (104)170
	10(5) 524(598) 35(27)	(163)204 (19)46 (45)67



LEGEND

↳(XX)XX - (AM)PM Peak Hour Volume

☐ X ☐ - Average Daily Traffic Volume



CUMULATIVE + TRAFFIC VOLUMES

FIGURE 8

Cumulative Intersection Operations

Tables 7 and 8 compare the Cumulative and Cumulative + Project levels of service for the study-area intersections and identify locations that are forecast to exceed the City's LOS D standard. As noted previously, the LOS calculations completed for the Old Mission Drive/Alamo Pintado Road intersection account for the increased pedestrian volumes that would be generated by the Project at the intersection (noted on LOS worksheets).

Table 7
Cumulative + Project Levels of Service – AM Peak Hour

Intersection	Delay / LOS		Project-Added	
	Cumulative	Cumulative + Project	Trips	Exceed LOS D Standard?
Viborg Road/Alamo Pintado Road	10.3 Sec./LOS B	10.3 Sec./LOS B	8	No
Old Mission Drive/Hillside Drive	8.9 Sec./LOS A	9.2 Sec./LOS A	40	No
Old Mission Drive/Alamo Pintado Road (a)	10.5 Sec./LOS B	11.0 Sec./LOS B	39	No
Mission Drive/Alamo Pintado Road	20.0 Sec./LOS C	20.0 Sec./LOS C	31	No
Mission Drive/Alisal Road	22.3 Sec./LOS C	22.4 Sec./LOS C	16	No

(a) LOS calculations account for increased pedestrian volumes (18 trips) generated by the Project.

Table 8
Cumulative + Project Levels of Service – PM Peak Hour

Intersection	Delay / LOS		Project-Added	
	Cumulative	Cumulative + Project	Trips	Exceed LOS D Standard?
Viborg Road/Alamo Pintado Road	12.3 Sec./LOS B	12.3 Sec./LOS B	10	No
Old Mission Drive/Hillside Drive	9.5 Sec./LOS A	9.8 Sec./LOS A	51	No
Old Mission Drive/Alamo Pintado Road (a)	13.1 Sec./LOS B	14.0 Sec./LOS B	49	No
Mission Drive/Alamo Pintado Road	23.0 Sec./LOS C	23.4 Sec./LOS C	38	No
Mission Drive/Alisal Road	19.4 Sec./LOS B	19.5 Sec./LOS B	20	No

(a) LOS calculations account for increased pedestrian volumes (18 trips) generated by the Project.

The data presented in Tables 7 and 8 show that the study-area intersections are forecast to operate in the LOS A-C range during the AM and PM peak hours with Cumulative and Cumulative + Project traffic, which meet the City's LOS D standard.

ROADWAY ANALYSIS

The Project would add traffic to Mission Drive – the main arterial within Solvang – as well as the sections of Alamo Pintado Road north of Mission Drive. Existing “Average Daily Traffic” (ADT) volumes were obtained for these streets from the Santa Ynez Valley Traffic Circulation & Safety Study and the counts conducted in July of 2024.

Table 9 lists the roadway classification and the “Desired Maximum ADT” for each roadway segment, as taken from the City’s Circulation Element.³ As stated in the Circulation Element, the “Desired Maximum ADT” is not determined by the physical road capacity, but by the desire to maintain an acceptable level of traffic in some cases. The table also shows the Existing ADT volumes.

**Table 9
Existing Roadway Operations**

Roadway Segment	Classification	Average Daily Traffic (ADT)		Above Desired Capacity?
		Desired Maximum(a)	Existing	
Mission Dr w/o Alamo Pintado	Major Arterial	19,000	19,710	Yes
Mission Dr e/o Alamo Pintado	Highway	26,500	18,500	No
Alamo Pintado n/o Mission Dr	Major Arterial	19,000	9,000	No

(a) Desired Maximum ADT from City Circulation Element, which in some cases is not determined by the physical road capacity, but by the desire to maintain an acceptable level of traffic.

As shown in Table 9, most of the study-area roadway segments are forecast to carry ADT volumes that are less than their Desired Maximum ADT outlined in the Circulation Element under Existing conditions. The segment of Mission Drive west of Alamo Pintado currently carries 19,710 ADT, which exceeds the Desired Maximum ADT.

The study-area roadway segments were analyzed assuming the Existing + Project ADT volumes shown on Figure 6. Table 10 compares the Existing and Existing + Project ADT volumes.

³ City of Solvang Circulation Element, City of Solvang-Firma-Penfield & Smith, June 2008.

**Table 10
Existing + Project Roadway Operations**

Roadway Segment	Classification	Average Daily Traffic (ADT)				Above Desired Capacity?
		Desired Maximum(a)	Existing	Project Added	Existing + Project	
Mission Dr w/o Alamo Pintado	Major Arterial	19,000	19,710	270	19,980	Yes
Mission Dr e/o Alamo Pintado	Highway	26,500	18,500	236	18,736	No
Alamo Pintado n/o Mission Dr	Major Arterial	19,000	9,000	506	9,506	No

(a) Desired Maximum ADT from City Circulation Element, which in some cases is not determined by the physical road capacity, but by the desire to maintain an acceptable level of traffic.

As shown in Table 10, most of the study-area roadway segments are forecast to carry ADT volumes that are less than their Desired Maximum ADT outlined in the Circulation Element under Existing + Project conditions. The segment of Mission Drive west of Alamo Pintado currently carries 19,710 ADT, which exceeds the Desired Maximum ADT. The Project is forecast to add 270 ADT to this roadway segment (1.36% increase from Existing conditions), which would not significantly affect traffic operations.

Table 11 shows the same information for the Cumulative and Cumulative + Project scenarios.

**Table 11
Cumulative + Project Roadway Operations**

Roadway Segment	Classification	Average Daily Traffic (ADT)				Above Desired Capacity?
		Desired Maximum(a)	Cumulative	Project Added	Cumulative + Project	
Mission Dr w/o Alamo Pintado	Major Arterial	19,000	20,940	270	21,210	Yes
Mission Dr e/o Alamo Pintado	Highway	26,500	18,896	236	19,132	No
Alamo Pintado n/o Mission Dr	Major Arterial	19,000	9,527	506	10,033	No

(a) Desired Maximum ADT from City Circulation Element, which in some cases is not determined by the physical road capacity, but by the desire to maintain an acceptable level of traffic.

As shown in Table 11, most of the study-area roadway segments are forecast to carry ADT volumes that are less than their Desired Maximum ADT outlined in the Circulation Element under Cumulative and Cumulative + Project conditions. The segment of Mission Drive west of Alamo Pintado is forecast to carry about 21,210 ADT under Cumulative + Project conditions, which exceeds the Desired Maximum ADT. The Project is forecast to add 270 ADT to this roadway segment (1.29% increase from Cumulative conditions), which would not significantly affect traffic operations.

It is noted that the LOS analysis completed for the Mission Drive/Alamo Pintado Road intersection found that the intersection would operate acceptably in the LOS C range with Cumulative + Project traffic. This indicates acceptable operations along this this section of Mission Drive.

SITE ACCESS AND CIRCULATION

As shown on Figure 2 (Project Site Plan), access to the site is proposed via one existing driveway and one new driveway on Hillside Drive. The southerly driveway would provide access to the 44 units on Pad A. The northerly driveway would provide access to Wildwood Lane and the remaining 56 units in Pads B and C.

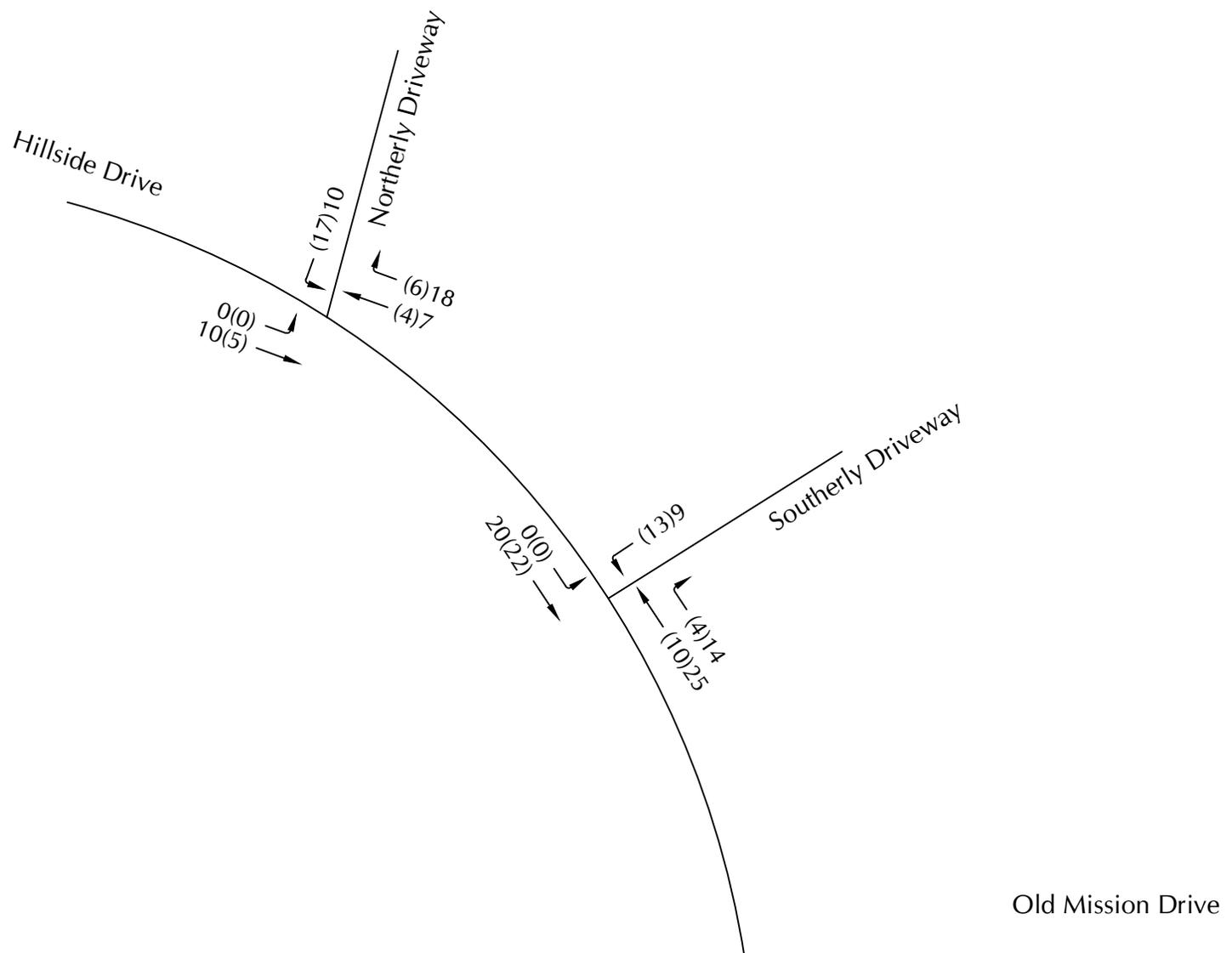
Driveway Operations

Levels of service were calculated for the two Project driveways assuming the Cumulative + Project volumes shown on Figure 9. Table 12 presents the vehicle delays and levels of service for the Project driveways (LOS worksheets contained in the Technical Appendix).

Table 12
Cumulative + Project Driveway Levels of Service

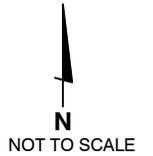
Intersection	Delay / LOS	
	AM Peak Hour	PM Peak Hour
Hillside Drive/Northerly Driveway		
SB Left	0.0 Sec./LOS A	0.0 Sec./LOS A
WB Driveway Left + Right	8.7 Sec./LOS A	8.7 Sec./LOS A
Average Weighted Delay	8.7 Sec./LOS A	8.7 Sec./LOS A
Hillside Drive/Southerly Driveway		
SB Left	0.0 Sec./LOS A	0.0 Sec./LOS A
WB Driveway Left + Right	8.8 Sec./LOS A	8.8 Sec./LOS A
Average Weighted Delay	8.8 Sec./LOS A	8.8 Sec./LOS A

As shown in Table 12, delays for vehicles entering and exiting the site at both driveways are forecast to operate at LOS A during the AM and PM peak hours under Cumulative + Project conditions, which meet the City's LOS D standard.



LEGEND

↳(XX)XX - (AM)PM Peak Hour Volume



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CUMULATIVE + PROJECT DRIVEWAY TRAFFIC VOLUMES

FIGURE 9

GM- ATE#23080.01

Northerly Driveway Sight Distance Analysis

The existing northerly driveway on Hillside Drive is located adjacent to a horizontal and vertical curve where Hillside Drive transitions from a north-south to an east-west orientation. A sight distance analysis was completed for the existing northerly driveway on Hillside Drive to determine if there would be adequate inter-visibility between a driver exiting the driveway and a vehicle traveling on Hillside Drive. Floating car surveys found that vehicles travel in the 5-10 MPH range adjacent to the driveway due to the gated entry configuration of the adjacent Mission Oaks subdivision. To be conservative, the analysis assumes a 15 MPH design speed. The Caltrans Highway Design Manual indicates that the minimum stopping sight distance for a 15 MPH design speed is 100 feet. As shown on Figure 10, the sight distance looking to the west extends approximately 180 feet and the sight distance looking to the south extends approximately 195 feet. These sight distances meet the Caltrans minimum standards for the 15 MPH design speed. It is noted that red-curb currently exists on both sides of Hillside Drive.

Southerly Driveway Sight Distance Analysis

The proposed southerly driveway on Hillside Drive would be located adjacent to a horizontal and vertical curve where Hillside Drive transitions from a north-south to an east-west orientation. A sight distance analysis was completed for the proposed southerly driveway location on Hillside Drive to determine if there would be adequate inter-visibility between a driver exiting the driveway and a vehicle traveling on Hillside Drive. As mentioned previously, floating car surveys found that vehicles travel in the 5-10 MPH range adjacent to the driveway due to the gated entry configuration of the adjacent Mission Oaks subdivision. To be conservative, the analysis assumes a 15 MPH design speed. The Caltrans Highway Design Manual indicates that the minimum stopping sight distance for a 15 MPH design speed is 100 feet. As shown on Figure 11, the sight distance looking to the west extends approximately 200 feet and the sight distance looking to the south extends approximately 125 feet to the Old Mission Drive/Hillside Drive intersection. These sight distances meet the Caltrans minimum standards for the 15 MPH design speed. It is noted that red-curb currently exists on both sides of Hillside Drive.

Sight Distance Between Project Driveways

The proposed northerly driveway on Hillside Drive is located approximately 50 feet away from the proposed southerly driveway. In order to ensure that a vehicle exiting the northerly driveway is visible to a vehicle exiting the southerly driveway, it is recommended that the landscaping vegetation on the east side of Hillside Drive between the two driveways be maintained at a height of 3.5 feet or less, as shown on Figure 12. Additionally, it is recommended that the existing trees within the sight triangles be trimmed and maintained to allow a 3.5 foot high sight triangle between the driveways.



Looking South

Looking West



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NORTHERLY DRIVEWAY SIGHT DISTANCES

FIGURE 10

GM- ATE#23080.01



Looking South

Looking West



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SOUTHERLY DRIVEWAY SIGHT DISTANCES

FIGURE 11

GM- ATE#23080.01

Hillside Drive Sight Distance Analysis

As requested by City staff, a sight distance analysis was completed for Hillside drive at Old Mission Drive to determine if there would be adequate inter-visibility between a driver exiting Hillside Drive and a vehicle traveling on Old Mission Drive. No speed limit is posted on Old Mission Drive. Floating car surveys found that vehicles travel in the 15-20 MPH range adjacent to the intersection due to the proximity to the all-way stop controlled Alamo Pintado Road/Old Mission Drive intersection to the east. The analysis therefore assumes a 20 MPH design speed. The Caltrans Highway Design Manual indicates that the minimum stopping sight distance for a 20 MPH design speed is 125 feet. As shown on Figure 13, the sight distance looking to the west extends approximately 275 feet and the sight distance looking to the east extends approximately 215 feet. These sight distances meet the Caltrans minimum standards for the 20 MPH design speed. It is noted that approximately 20 feet of red-curb currently exists on the north side of Old Mission Drive west and east of Hillside Drive.

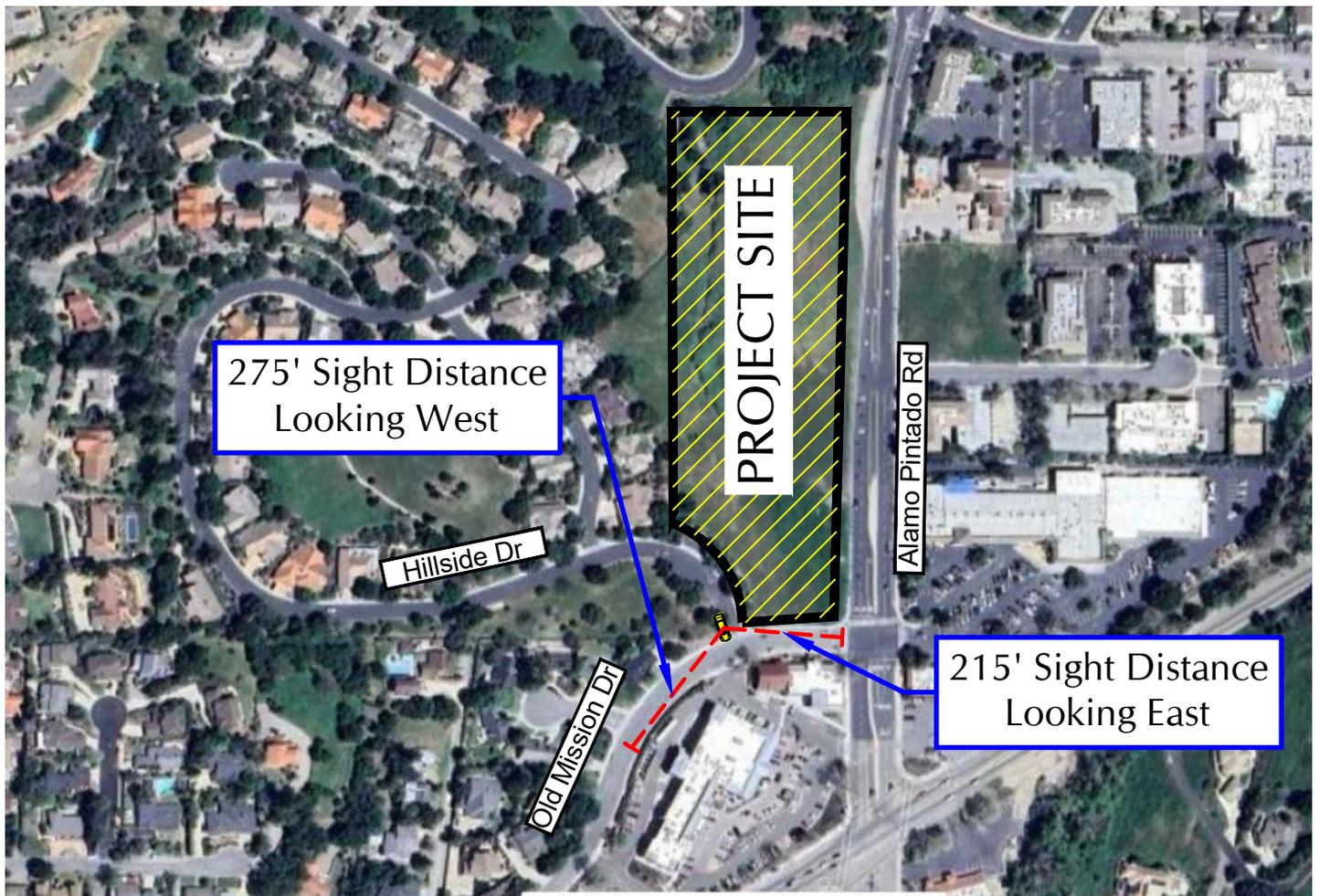
Alamo Pintado Road Frontage Improvements

As noted previously, Alamo Pintado Road currently narrows down to a two-lane facility north of Village Lane. The Project is proposing to implement frontage improvements on Alamo Pintado Road which include new curb, gutter and sidewalk facilities. The frontage improvements include two options:

1. Widening on the west side of Alamo Pintado Road to add a second southbound through lane and a Class II bike lane from the northern site boundary to Old Mission Drive as shown on Figure 14.
2. Widening on the west side of Alamo Pintado Road to add a Class I multi-purpose trail from the northern site boundary to Old Mission Drive with a 5' landscape buffer as shown on Figure 15.

City staff indicated the desire for a Class I multi-purpose trail as part of the City's Active Transportation Plan. Staff indicated that a similar multi-purpose trail is planned (in design) for Vyborg and Fredensborg Canyon to the northwest. Additionally, with the upcoming Alamo Pintado overlay project from Vyborg to the City limits, the City will be reinstalling the bike lanes on both sides of the roadway. The City is also planning a connection to the multi-purpose trail on Mission Drive across the bridge which is to be widened by Caltrans located to the southeast. Other potential trails south of the site connecting Solvang's downtown with the Mission Santa Ynez trail network are in the early planning stages.

Construction of the multi-purpose trail along the Project's frontage without connections to other multi-purpose trails could create potential vehicle-bicycle conflicts. For instance, the multi-purpose trail could lead to a northbound bicyclist crossing Alamo Pintado Road at Old Mission Drive to access the trail. The bicyclist would then have to cross Alamo Pintado Road at Viborg Road to get back to the east side of the road to continue travelling northbound. This option would also introduce bicycle/pedestrian conflicts at the Alamo Pintado Road/Viborg Road and Alamo Pintado road/Old Mission Road when bicycles transition from the Class II on street bike lanes to the multi-purpose path at the intersection corners.



Looking East

Looking West

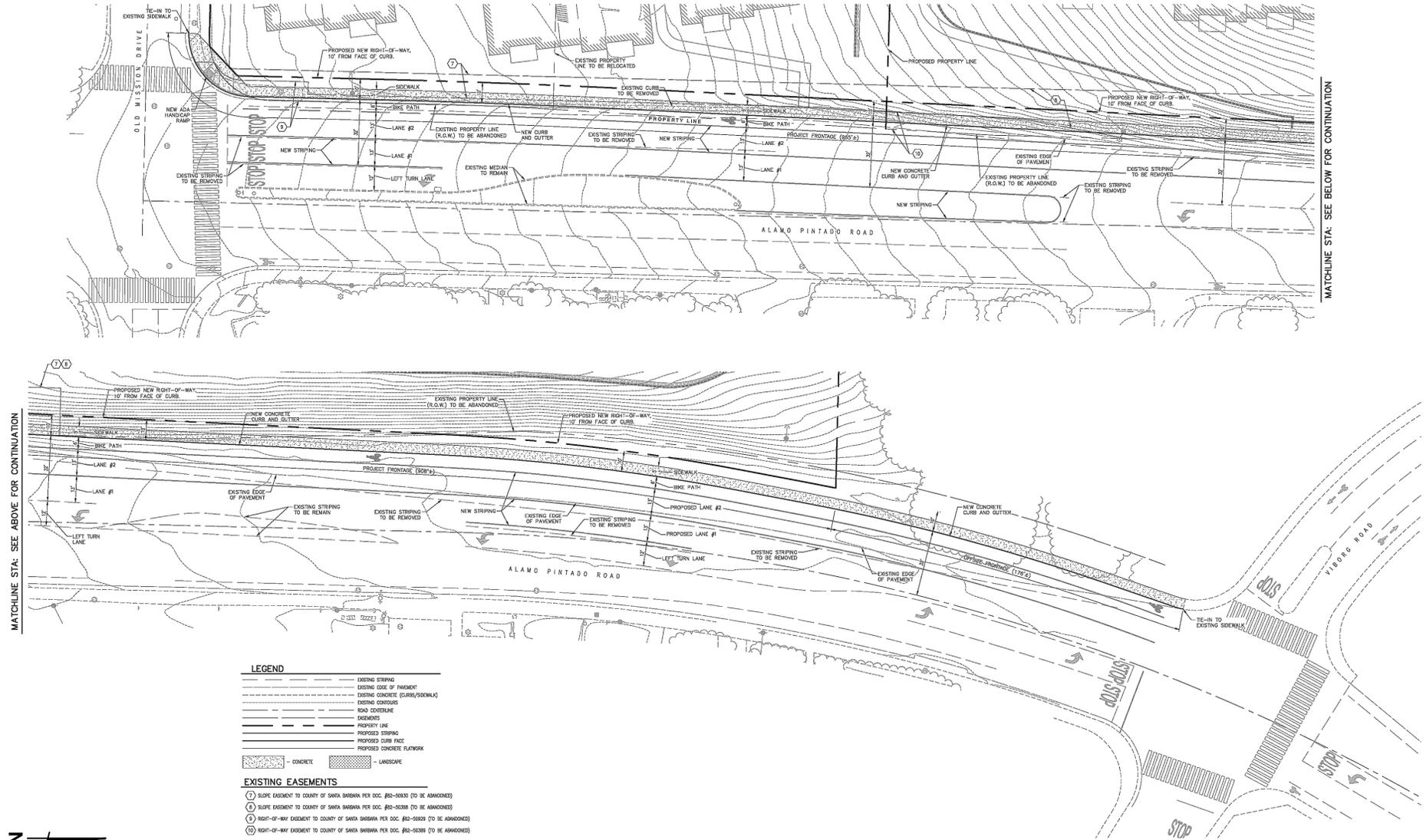


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HILLSIDE DRIVE SIGHT DISTANCES

FIGURE 13

GM- ATE#23080.01



LEGEND

	EXISTING STRIPING
	EXISTING EDGE OF PAVEMENT
	EXISTING CONCRETE (CURB/SIDWALK)
	EXISTING CURBLINE
	ROAD CENTERLINE
	BOUNDARIES
	PROPERTY LINE
	PROPOSED STRIPING
	PROPOSED CURB LINE
	PROPOSED CONCRETE FOOTING
	CONCRETE
	LANDSCAPE

- EXISTING EASEMENTS**
- ① SLOPE EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #62-5093 (TO BE ABANDONED)
 - ② SLOPE EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #62-0038 (TO BE ABANDONED)
 - ③ RIGHT-OF-WAY EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #62-5093 (TO BE ABANDONED)
 - ④ RIGHT-OF-WAY EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #62-5098 (TO BE ABANDONED)



NOT TO SCALE

MATCHLINE STA: SEE ABOVE FOR CONTINUATION

MATCHLINE STA: SEE BELOW FOR CONTINUATION

ALAMO PINTADO ROAD FRONTAGE IMPROVEMENTS - OPTION 1

FIGURE 14

GM- ATE#23080.01



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ACCIDENT ANALYSIS

An accident analysis was completed to evaluate the accident rates at the Old Mission Drive/Alamo Pintado Road and Mission Drive/Alamo Pintado Road intersections. Accident data was obtained from California Highway Patrol (CHP) for the most current 7-year period of accident records. The CHP data includes all reported accidents during the period (rather than the Caltrans data which might not include all reported accidents).

It is important to note that accident data is used as a screening tool to identify potential safety problems. The rate of accidents was calculated for each intersection and then compared to California statewide averages for similar facilities to identify potential safety issues. By nature, accident rates experienced on a facility are often higher than the statewide average rate for similar facilities since the statewide averages are comprised of lower-than-average rates + higher-than-average rates (lower + higher = average).

If the accident rate experienced on a facility is higher than the statewide average, the Caltrans significance test is performed to determine if the number of accidents that occurred on the facility is statistically significant. If the number of accidents experienced is statistically significant, more detailed safety investigations are performed to determine if there are accident patterns that can be corrected by changing design features of the facility (e.g., widen traffic lanes, widen roadway shoulders, change roadway curvatures, add signs, install traffic signals, etc.).

Accident rates were calculated for the two intersections adjacent to the Project site using the 7-year accident history. The “area of influence” for each intersection is defined as within 250 feet of the intersection. The rate of accidents was calculated and then compared to California statewide average for similar facilities. Table 13 lists the actual rate of accidents for the 7-year period and compares the rates to the California statewide averages for similar intersections (see accident rate calculations contained in the Technical Appendix for more details).

Table 13
Project Intersections - Accident Rates

Location	# Accidents	Accident Rate(a)	Statewide Average Rate(a)
Old Mission Drive/Alamo Pintado Road	4 Accidents	0.15 per mev	0.39 per mev
Mission Drive/Alamo Pintado Road	15 Accidents	0.32 per mev	0.55 per mev

(a) Accident rates per million entering vehicles (mev).

Old Mission Drive/Alamo Pintado Road. As shown in Table 13, there were 4 accidents reported at this intersection within the 7-year period. The rate of accidents was 0.15 accidents per million entering vehicles and the California statewide average for similar intersections is 0.39 accidents per million entering vehicles. Thus, the rate of accidents is well below the statewide average and further investigation is not required.

Mission Drive/Alamo Pintado Road. As shown in Table 13, there were 15 accidents reported at this intersection within the 7-year period. The rate of accidents was 0.32 accidents per million entering vehicles and the California statewide average for similar intersections is 0.55 accidents per million entering vehicles. Thus, the rate of accidents is below the statewide average and further investigation is not required.

POTENTIAL CEQA IMPACTS - VEHICLE MILES TRAVELLED

The California Governor’s Office of Planning and Research (OPR) published a technical advisory that includes recommendations regarding assessment of VMT, thresholds of significance, and mitigation measures.⁴ Per the State’s Natural Resource Agency Updated Guidelines for the Implementation of the CEQA adopted in 2018, VMT has been designated as the most appropriate measure of transportation impacts. “Vehicle Miles Traveled” refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. For land use projects, vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact.

The City of Solvang has not yet developed VMT criteria and thresholds for evaluating potential VMT impacts. The City of Solvang retained DKS Associates to prepare a VMT and Traffic Analysis for the EIR prepared for the Solvang General Plan Update (GPU) Project using the SBCAG model.⁵ The SBCAG model is considered the most appropriate tool for the analysis given that the Santa Barbara County thresholds were developed using the SBCAG baseline.

⁴ Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor’s Office of Planning and Research, December 2018.

⁵ Solvang GPU – EIR Traffic Analysis Data, DKS Associates, December 2023.

VMT Impact Analysis

The VMT analysis completed by DKS includes citywide existing and net VMT for the proposed General Plan Update GPU, the Wildwood Project (previously known as the Alamo Pintado Project⁶) and the Old Lumberyard Project. DKS presented the data from the model runs for the following scenarios:

- Existing – 2015 SBCAG Model Scenario
- Proposed Project – GPU + Wildwood + Lumberyard Projects
- Alternative 1 – 2050 With No Projects
- Alternative 2 – GPU + Wildwood Project
- Alternative 3 – GPU + Lumberyard Project
- Alternative 4 – GPU Project Only

Table 14 presents the results of the model runs and shows the VMT per capita associated with the Alternatives 2 (with Wildwood Project and Alternative 4 (no Wildwood Project).

Table 14
Citywide Home Based VMT Per Capita

Scenario	VMT Per Capita
Alternative 2 GPU + Wildwood Project	22.19/Capita
Alternative 4 GPU No Wildwood Project	22.21/Capita
Net Change	-0.02/Capita

The data presented in Table 14 show that the citywide VMT per capita is 22.21 in Alternative 4 with just the GPU Project. Based on the results from the DKS study, implementing the Wildwood Project would result in a decrease of VMT per capita from 22.21 to 22.19. The Wildwood Project would therefore reduce the VMT per capita in the City and would have a less than significant VMT impact.

MITIGATION MEASURES

As noted previously, in order to ensure that a vehicle exiting the northerly driveway is visible to a vehicle exiting the southerly driveway, it is recommended that the landscaping vegetation on the east side of Hillside Drive between the two driveways be maintained at a height of 3.5 feet or less, as shown on Figure 12. Additionally, it is recommended that the existing trees within the sight triangles be trimmed and maintained to allow a 3.5 foot high sight triangle between the driveways.



⁶ It is noted that the GPU analyzed the Alamo Pintado Project with 109 residential units. The Project, now known as the Wildwood Project, consists of 100 residential units.

STUDY PARTICIPANTS AND REFERENCES

Associated Transportation Engineers

Dick Pool, PE, Principal Engineer
Scott A. Schell, Principal Transportation Planner
Glenn Manaois, Transportation Engineer I
Ashlyn Bell, Transportation Planner I

Persons Contacted

Rafael Castillo, City of Solvang
Laurie Tamura, City of Solvang
Rodger Olds, City of Solvang

References

Highway Capacity Manual, Transportation Research Board, 2016.

Trip Generation Manual, Institute of Transportation Engineers, 11th Edition, 2021.

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Technical Advisory on Evaluating Transportation Impacts in CEQA, Governor's Office of Planning and Research, December 2018.

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Solvang GPU – EIR Traffic Analysis Data, DKS Associates, December 2023.

TECHNICAL APPENDIX

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LEVEL OF SERVICE DEFINITIONS

INTERSECTION TURNING MOVEMENTS COUNTS

PROJECT TRIP GENERATION CALCULATIONS

CUMULATIVE PROJECT INFORMATION

PROJECT FRONTAGE IMPROVEMENT PLANS

ALAMO PINTADO CREEK BRIDGE REPLACEMENT PLANS

ACCIDENT RATE WORKSHEETS

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

- Reference 1 - Viborg Road/Alamo Pintado Road
- Reference 2 - Old Mission Drive/Hillside Drive
- Reference 3 - Old Mission Drive/Alamo Pintado Road
- Reference 4 - Mission Drive/Alamo Pintado Road
- Reference 5 - Mission Drive/Alisal Road

PROJECT DRIVEWAYS - LEVEL OF SERVICE CALCULATION WORKSHEETS

LEVEL OF SERVICE DEFINITIONS



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100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805)687-4418 • FAX (805)682-8509 • main@atesb.com

Since 1978

Richard L. Pool, P.E.
Scott A. Schell

Signalized Intersection Level of Service Definitions

LOS	Delay (a)	V/C Ratio	Definition
A	< 10.0	< 0.60	Progression is extremely favorable. Most vehicles arrive during the green phase. Many vehicles do not stop at all.
B	10.1 - 20.0	0.61 - 0.70	Good progression, short cycle lengths, or both. More vehicles stop than with LOS A, causing higher levels of delay.
C	20.1 - 35.0	0.71 - 0.80	Only fair progression, longer cycle lengths, or both, result in higher cycle lengths. Cycle lengths may fail to serve queued vehicles, and overflow occurs. Number of vehicles stopped is significant, though many still pass through intersection without stopping.
D	35.1 - 55.0	0.81 - 0.90	Congestion becomes more noticeable. Unfavorable progression, long cycle lengths and high v/c ratios result in longer delays. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	55.1 - 80.0	0.91 - 1.00	High delay values indicate poor progression, long cycle lengths and high v/c ratios. Individual cycle failures are frequent
F	> 80.0	> 1.00	Considered unacceptable for most drivers, this level occurs when arrival flow rates exceed the capacity of lane groups, resulting in many individual cycle failures. Poor progression and long cycle lengths may also contribute to high delay levels.

(a) Average control delay per vehicle in seconds.

Unsignalized Intersection Level of Service Definitions

The HCM¹ uses *control delay* to determine the level of service at unsignalized intersections. Control delay is the difference between the travel time actually experienced at the control device and the travel time that would occur in the absence of the traffic control device. Control delay includes deceleration from free flow speed, queue move-up time, stopped delay and acceleration back to free flow speed.

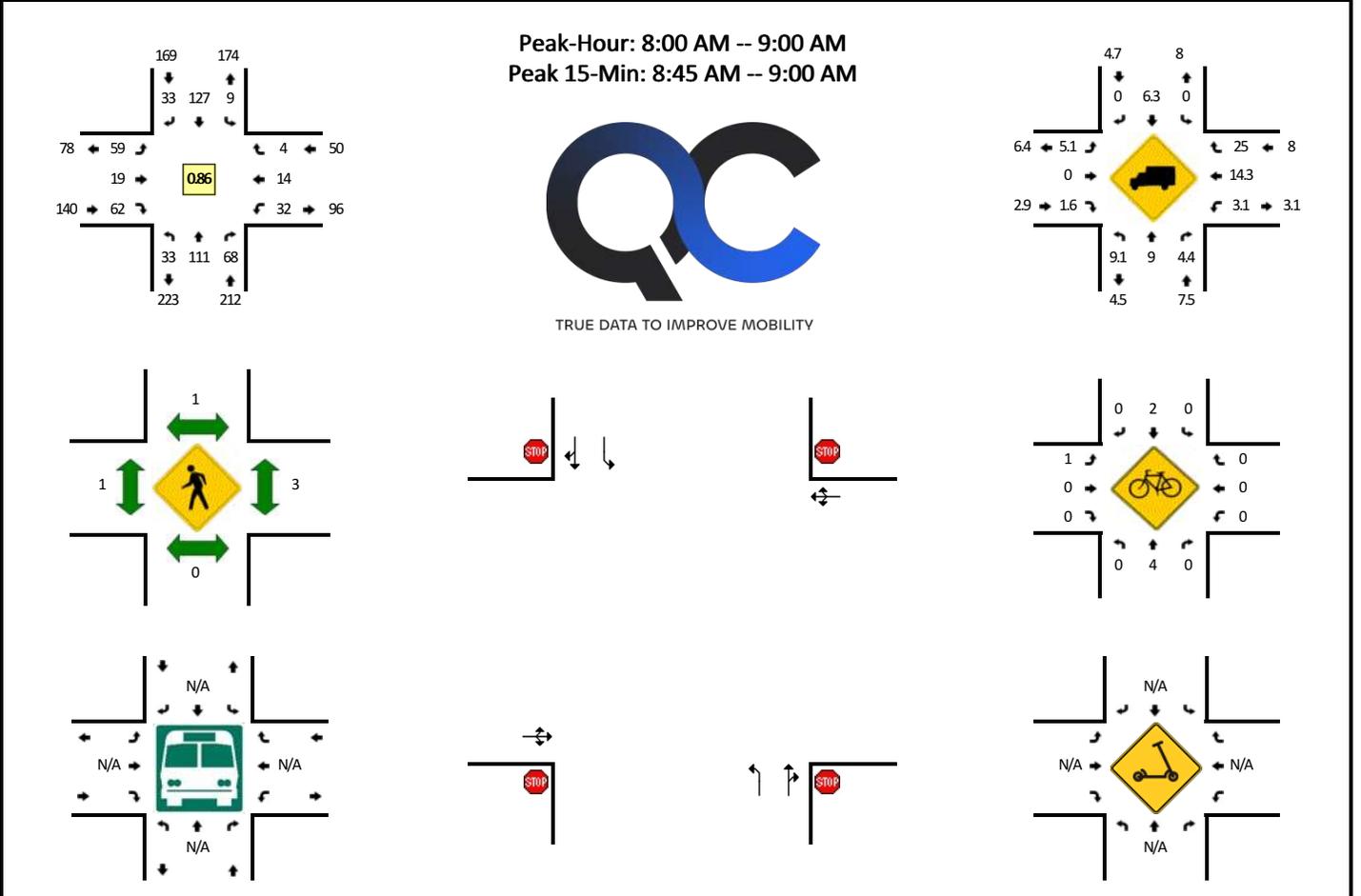
LOS	Control Delay Seconds per Vehicle
A	< 10.0
B	10.1 - 15.0
C	15.1 - 25.0
D	25.1 - 35.0
E	35.1 - 50.0
F	> 50.0

¹ Highway Capacity Manual, National Research Board, 2016.

INTERSECTION TURNING MOVEMENT COUNTS

LOCATION: Alamo Pintado Rd -- Viborg Rd
CITY/STATE: Solvang, CA

QC JOB #: 16654101
DATE: Tue, Jul 16 2024

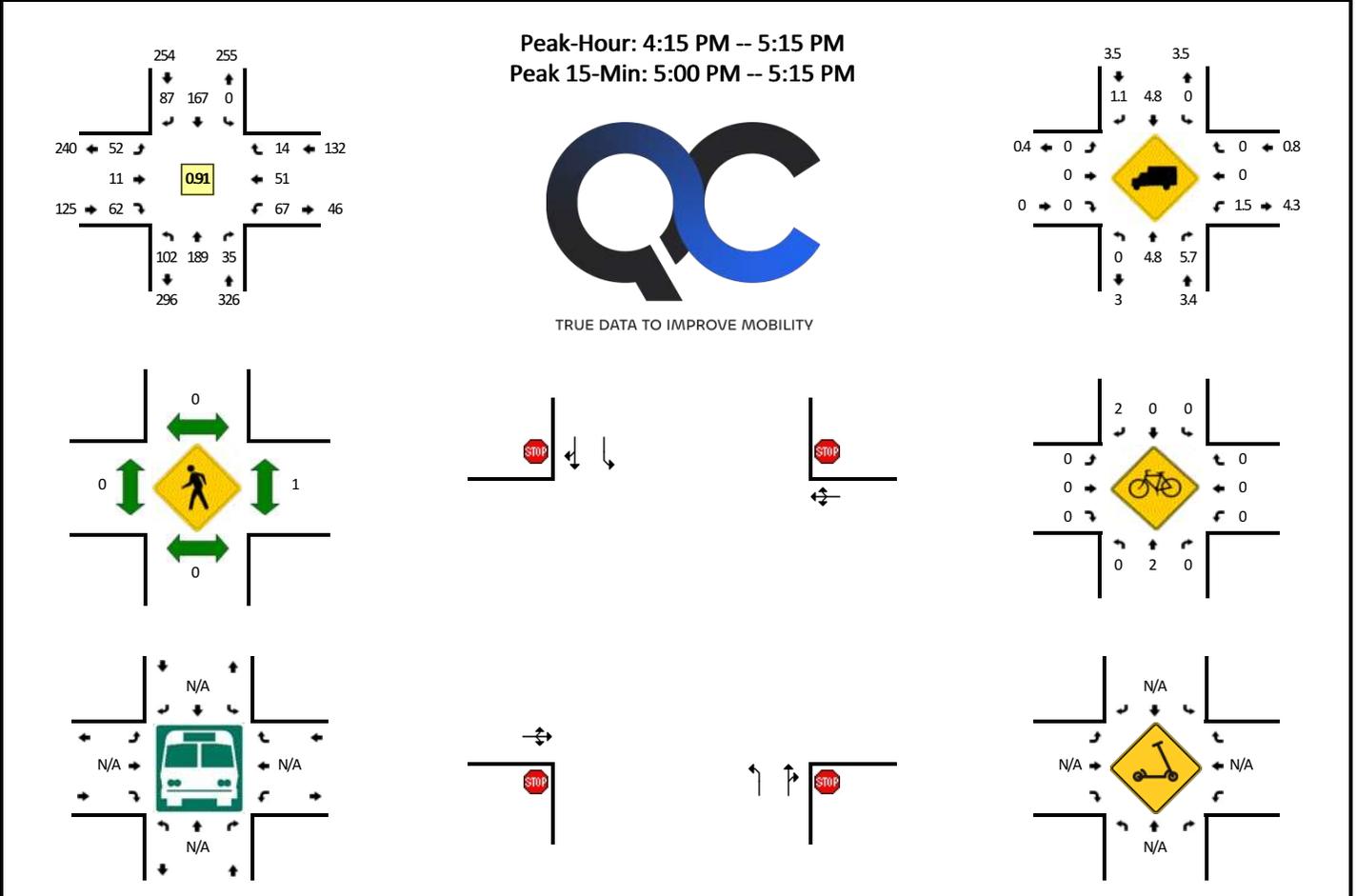


15-Min Count Period Beginning At	Alamo Pintado Rd (Northbound)				Alamo Pintado Rd (Southbound)				Viborg Rd (Eastbound)				Viborg Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	21	3	0	0	21	3	0	5	1	6	0	6	1	1	0	69	
7:15 AM	5	31	5	0	5	28	7	0	3	3	5	0	3	1	0	0	96	
7:30 AM	8	16	11	0	2	25	6	0	9	5	15	0	10	1	1	0	109	
7:45 AM	10	21	12	0	3	40	9	0	15	9	14	0	7	1	0	0	141	415
8:00 AM	6	32	15	0	0	32	6	0	6	6	16	0	1	3	1	0	124	470
8:15 AM	8	23	19	2	3	33	7	0	12	2	11	0	7	4	1	0	132	506
8:30 AM	8	18	20	0	2	27	10	0	24	6	16	0	13	3	2	0	149	546
8:45 AM	9	38	14	0	4	35	10	0	17	5	19	0	11	4	0	0	166	571
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	36	152	56	0	16	140	40	0	68	20	76	0	44	16	0	0	664	
Heavy Trucks	0	12	4		0	16	0		0	0	4		0	0	0		36	
Buses																	0	
Pedestrians		0				0				0				0			0	
Bicycles	0	4	0		0	4	0		4	0	0		0	0	0		12	
Scooters																		

Comments:

LOCATION: Alamo Pintado Rd -- Viborg Rd
CITY/STATE: Solvang, CA

QC JOB #: 16654102
DATE: Tue, Jul 16 2024

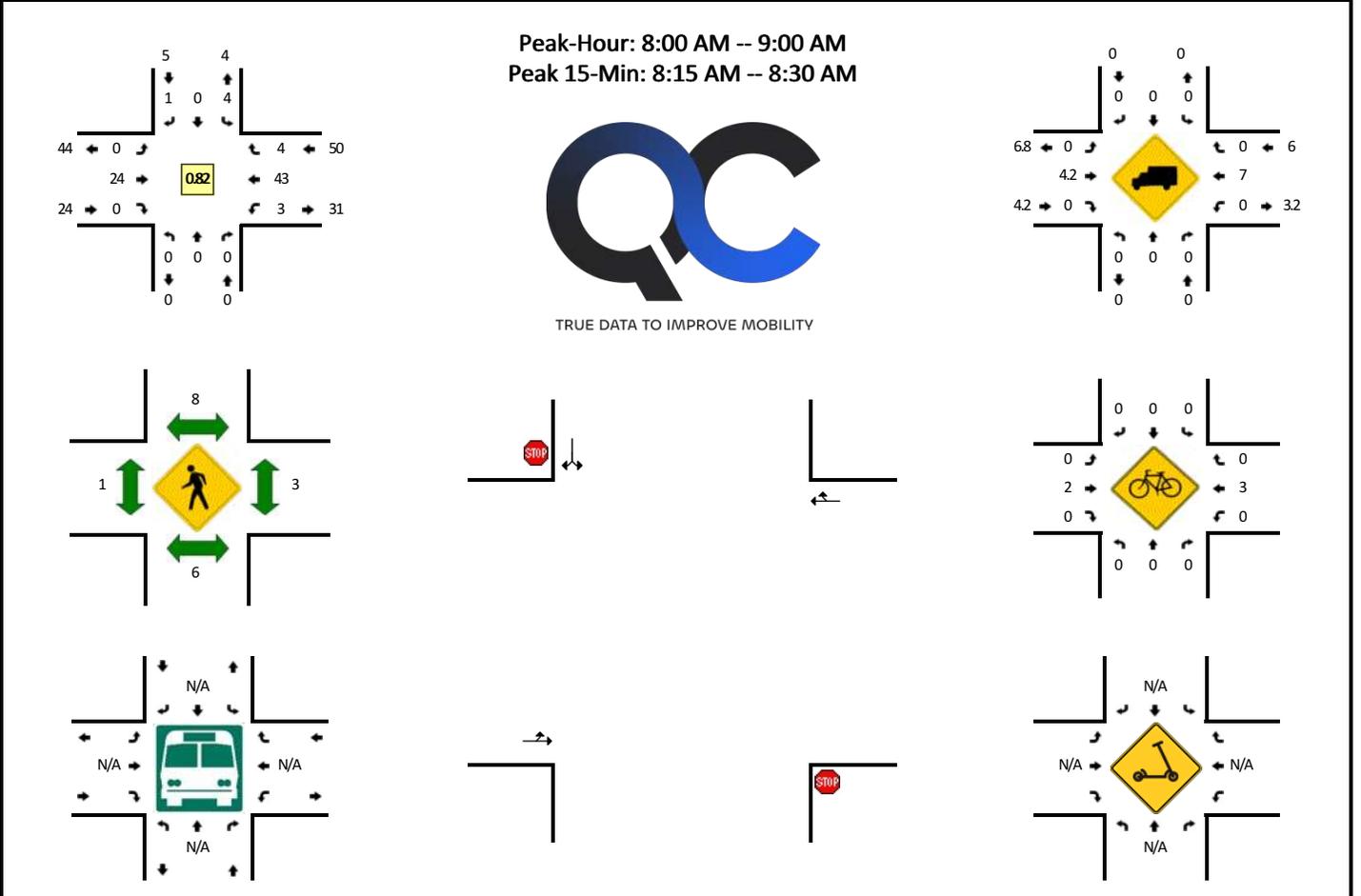


15-Min Count Period Beginning At	Alamo Pintado Rd (Northbound)				Alamo Pintado Rd (Southbound)				Viborg Rd (Eastbound)				Viborg Rd (Westbound)				Total	Hourly Totals	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
4:00 PM	26	34	11	0	5	41	22	0	17	1	24	0	11	8	2	0	202		
4:15 PM	32	44	10	0	0	40	22	0	19	5	14	0	18	10	3	0	217		
4:30 PM	28	48	5	0	0	37	17	0	9	2	12	0	12	17	5	0	192		
4:45 PM	18	47	9	0	0	51	19	0	11	2	19	0	13	5	3	0	197	808	
5:00 PM	24	50	11	0	0	39	29	0	13	2	17	0	24	19	3	0	231	837	
5:15 PM	20	53	5	0	1	27	19	0	13	2	12	0	10	6	5	0	173	793	
5:30 PM	18	31	7	0	0	36	13	0	7	1	15	0	10	2	1	0	141	742	
5:45 PM	16	43	7	0	0	21	13	0	16	0	16	0	7	3	2	0	144	689	
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total		
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U			
All Vehicles	96	200	44	0	0	156	116	0	52	8	68	0	96	76	12	0	924		
Heavy Trucks	0	8	4		0	8	0		0	0	0		0	0	0		20		
Buses																			
Pedestrians		0				0				0				0				0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0		
Scoters																		0	

Comments:

LOCATION: Hillside Dr -- Old Mission Dr
CITY/STATE: Solvang, CA

QC JOB #: 16654103
DATE: Tue, Jul 16 2024



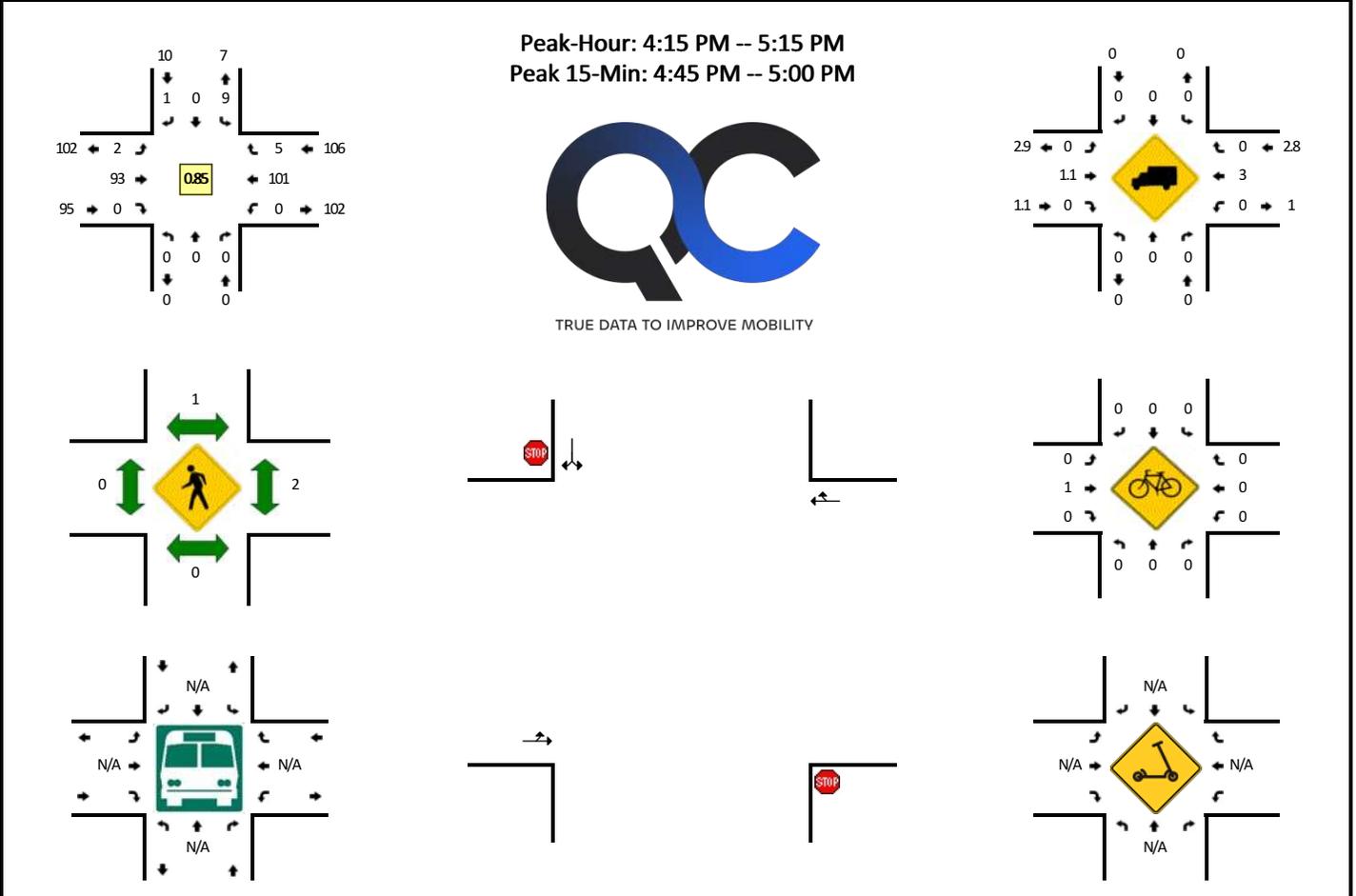
15-Min Count Period Beginning At	Hillside Dr (Northbound)				Hillside Dr (Southbound)				Old Mission Dr (Eastbound)				Old Mission Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	3	0	1	0	1	3	0	0	0	4	1	0	13	
7:15 AM	0	0	0	0	3	0	0	0	0	4	0	0	0	3	2	0	12	
7:30 AM	0	0	0	0	1	0	0	0	0	8	0	0	0	4	0	0	13	
7:45 AM	0	0	0	0	4	0	1	0	0	5	0	0	0	6	0	0	16	54
8:00 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	11	1	0	18	59
8:15 AM	0	0	0	0	1	0	0	0	0	7	0	0	0	13	1	2	24	71
8:30 AM	0	0	0	0	2	0	1	0	0	7	0	0	0	5	1	1	17	75
8:45 AM	0	0	0	0	1	0	0	0	0	4	0	0	0	14	1	0	20	79

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	0	0	4	0	0	0	0	28	0	0	0	52	4	8	96
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses																	
Pedestrians		4				4				0				4			12
Bicycles	0	0	0		0	0	0		0	4	0		0	0	0		4
Scoters																	

Comments:

LOCATION: Hillside Dr -- Old Mission Dr
CITY/STATE: Solvang, CA

QC JOB #: 16654104
DATE: Tue, Jul 16 2024

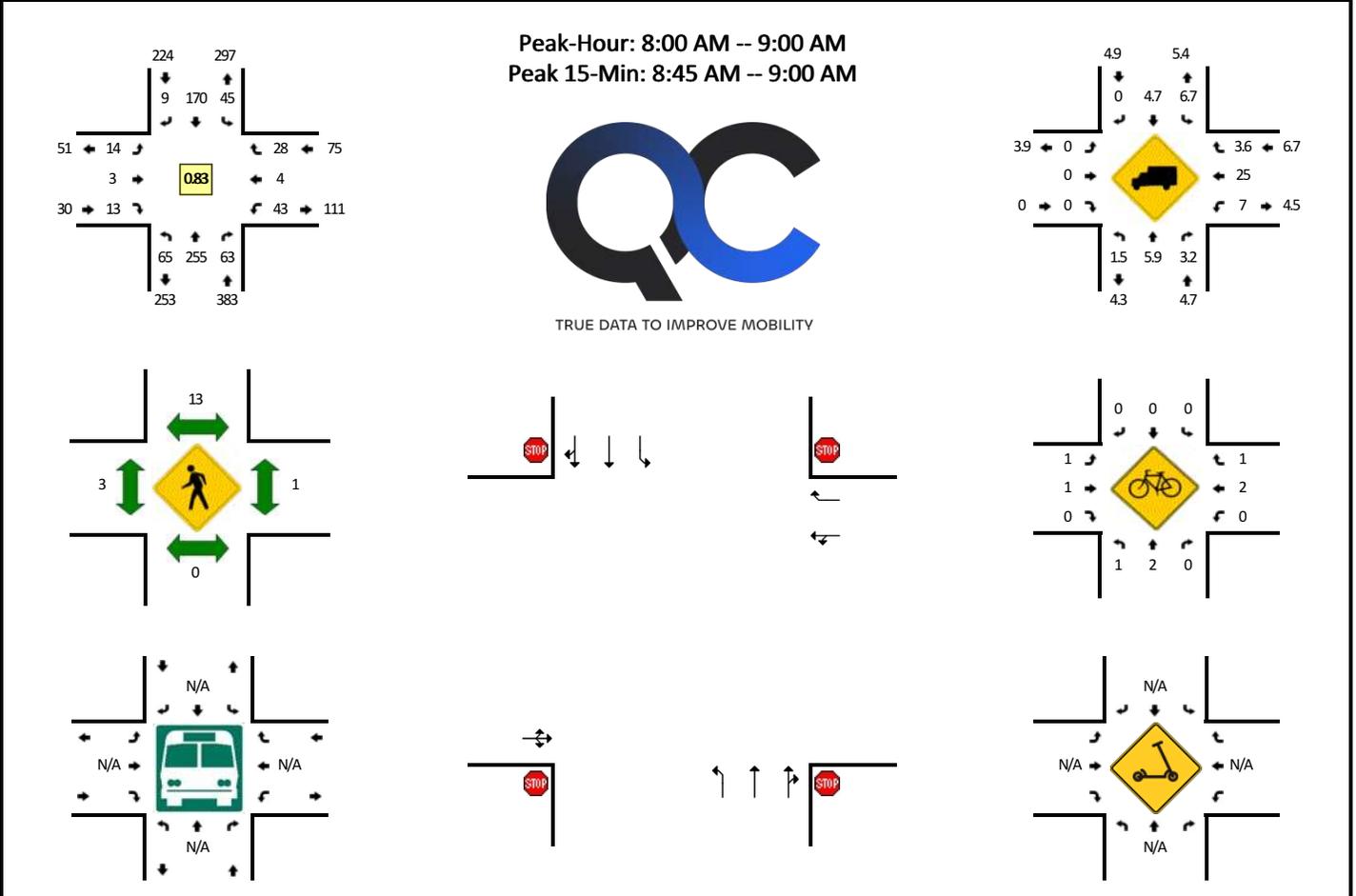


15-Min Count Period Beginning At	Hillside Dr (Northbound)				Hillside Dr (Southbound)				Old Mission Dr (Eastbound)				Old Mission Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	19	0	0	0	12	2	0	33	
4:15 PM	0	0	0	0	1	0	1	0	0	25	0	0	0	28	1	0	56	
4:30 PM	0	0	0	0	2	0	0	0	0	23	0	0	0	21	0	0	46	
4:45 PM	0	0	0	0	3	0	0	0	1	22	0	0	0	32	4	0	62	197
5:00 PM	0	0	0	0	3	0	0	0	1	23	0	0	0	20	0	0	47	211
5:15 PM	0	0	0	0	2	0	0	0	0	20	0	0	0	26	2	0	50	205
5:30 PM	0	0	0	0	1	0	0	0	0	23	0	0	0	18	1	0	43	202
5:45 PM	0	0	0	0	3	0	0	0	0	19	0	0	0	14	1	0	37	177
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	12	0	0	0	4	88	0	0	0	128	16	0	248	
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	4	0		4	
Buses																		
Pedestrians		0				0				0				8			8	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

LOCATION: Alamo Pintado Rd -- Old Mission Dr
CITY/STATE: Solvang, CA

QC JOB #: 16654105
DATE: Tue, Jul 16 2024

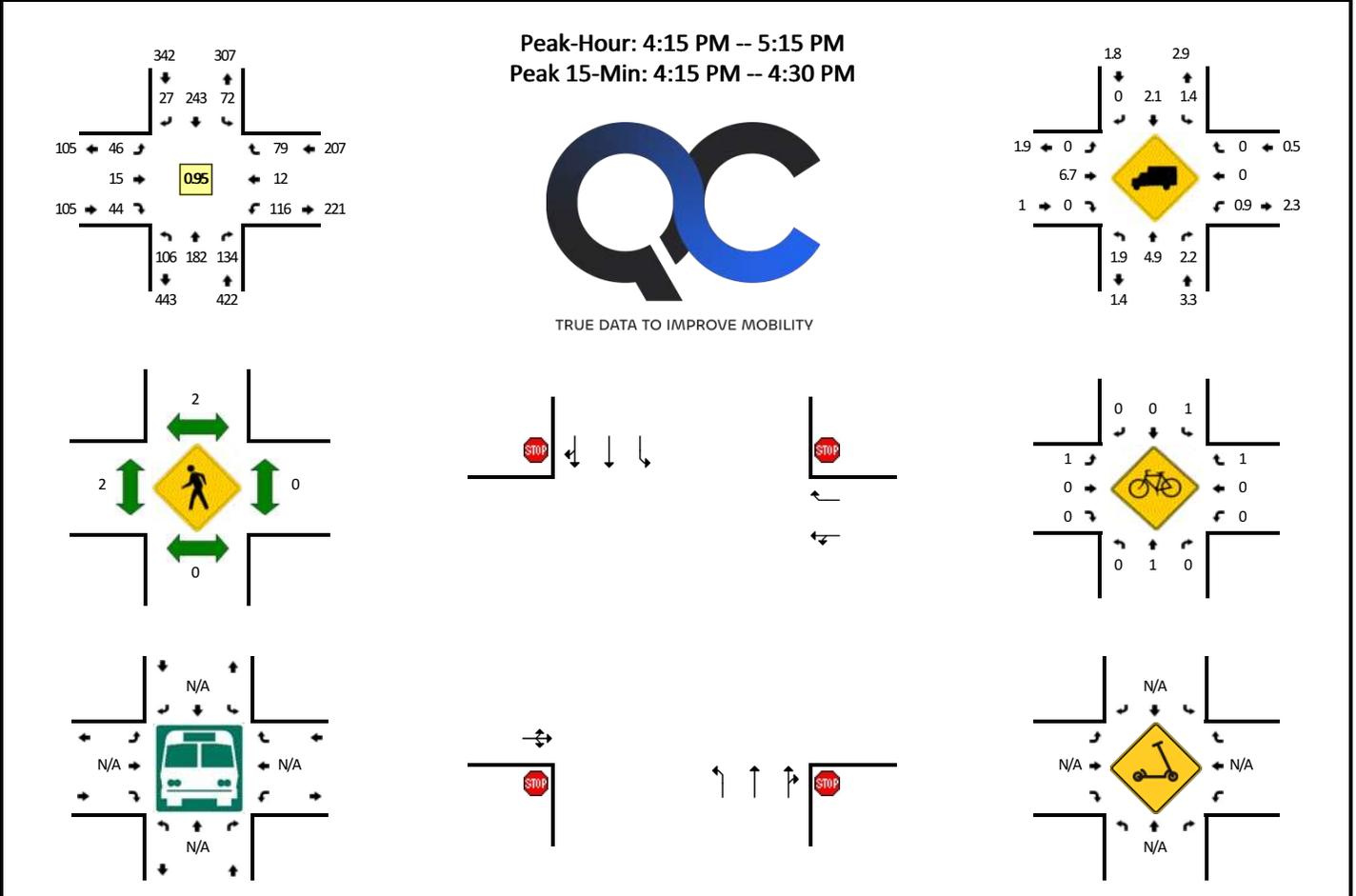


15-Min Count Period Beginning At	Alamo Pintado Rd (Northbound)				Alamo Pintado Rd (Southbound)				Old Mission Dr (Eastbound)				Old Mission Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	25	10	2	8	27	1	0	0	1	5	0	2	0	3	0	88	
7:15 AM	3	38	9	2	7	30	2	0	2	1	4	0	4	0	7	0	109	
7:30 AM	4	44	13	2	5	45	0	0	2	1	6	0	7	0	5	0	134	
7:45 AM	4	65	15	5	11	42	1	0	2	0	6	0	8	1	10	0	170	501
8:00 AM	9	57	18	7	12	36	1	0	4	1	2	0	6	2	5	0	160	573
8:15 AM	12	71	13	10	9	37	5	0	4	1	3	0	6	0	10	0	181	645
8:30 AM	6	56	11	5	11	42	1	0	5	1	4	0	11	0	3	0	156	667
8:45 AM	11	71	21	5	13	55	2	0	1	0	4	0	20	2	10	0	215	712
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	44	284	84	20	52	220	8	0	4	0	16	0	80	8	40	0	860	
Heavy Trucks	0	12	0		4	8	0		0	0	0		8	0	0		32	
Buses																		
Pedestrians		0				28				8				4			40	
Bicycles	0	4	0		0	0	0		0	0	0		0	0	0		4	
Scooters																		

Comments:

LOCATION: Alamo Pintado Rd -- Old Mission Dr
CITY/STATE: Solvang, CA

QC JOB #: 16654106
DATE: Tue, Jul 16 2024

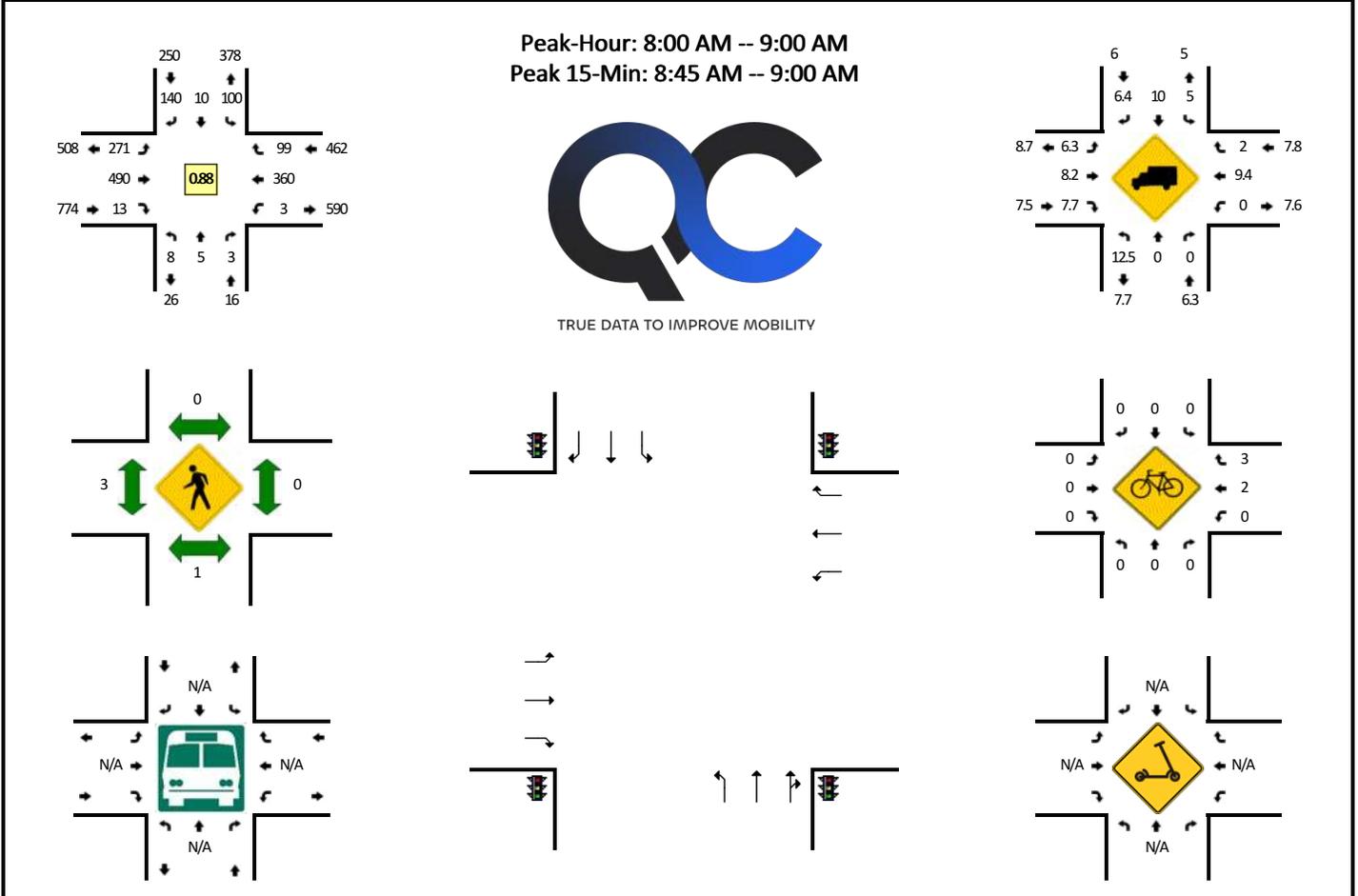


15-Min Count Period Beginning At	Alamo Pintado Rd (Northbound)				Alamo Pintado Rd (Southbound)				Old Mission Dr (Eastbound)				Old Mission Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	8	46	44	10	25	56	3	0	8	5	7	0	32	2	22	0	268	
4:15 PM	19	52	35	13	19	52	8	0	12	3	10	0	35	2	23	0	283	
4:30 PM	14	42	31	12	17	50	4	0	11	5	10	0	29	3	22	0	250	
4:45 PM	22	42	29	9	19	69	10	0	11	2	11	0	24	3	19	0	270	1071
5:00 PM	11	46	39	6	17	72	5	0	12	5	13	0	28	4	15	0	273	1076
5:15 PM	21	35	26	7	16	40	4	0	12	0	9	0	26	4	22	0	222	1015
5:30 PM	14	35	30	8	22	37	3	0	8	6	10	0	34	2	9	0	218	983
5:45 PM	10	38	26	7	12	39	2	0	11	3	8	0	24	1	15	0	196	909
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	76	208	140	52	76	208	32	0	48	12	40	0	140	8	92	0	1132	
Heavy Trucks	4	12	0		0	4	0		0	0	0		0	0	0		20	
Buses																		
Pedestrians		0				4				4				0				8
Bicycles	0	0	0		4	0	0		0	0	0		0	0	0			4
Scooters																		

Comments:

LOCATION: Alamo Pintado Rd -- Mission Dr
CITY/STATE: Solvang, CA

QC JOB #: 16654107
DATE: Tue, Jul 16 2024



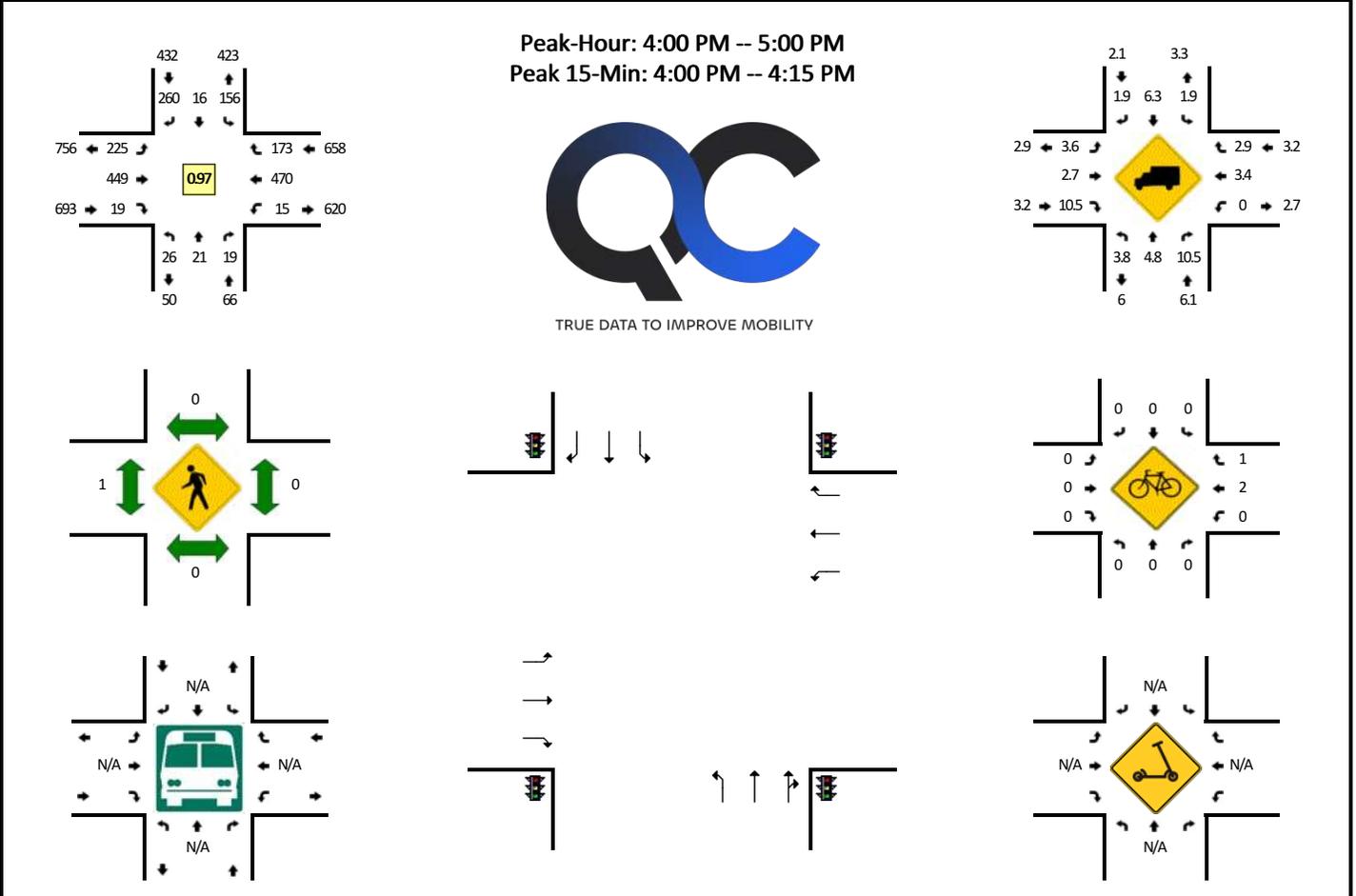
15-Min Count Period Beginning At	Alamo Pintado Rd (Northbound)				Alamo Pintado Rd (Southbound)				Mission Dr (Eastbound)				Mission Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	1	0	9	0	24	0	29	98	0	0	1	47	10	0	219	
7:15 AM	0	3	1	0	9	2	27	0	42	106	1	0	0	64	9	0	264	
7:30 AM	0	1	2	0	20	0	37	2	43	110	1	0	1	61	18	0	296	
7:45 AM	1	0	3	0	14	1	38	2	58	117	2	0	0	87	25	0	348	1127
8:00 AM	1	0	1	0	28	1	29	1	68	123	3	0	0	79	25	0	359	1267
8:15 AM	2	3	1	0	22	2	24	1	70	123	2	0	1	93	27	0	371	1374
8:30 AM	3	0	0	0	23	2	40	0	59	121	2	0	2	78	17	0	347	1425
8:45 AM	2	2	1	0	24	5	47	1	74	123	6	0	0	110	30	0	425	1502

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	8	4	0	96	20	188	4	296	492	24	0	0	440	120	0	1700
Heavy Trucks	4	0	0		4	0	12		8	44	4		0	48	0		124
Buses																	
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	4		4
Scoters																	

Comments:

LOCATION: Alamo Pintado Rd -- Mission Dr
CITY/STATE: Solvang, CA

QC JOB #: 16654108
DATE: Tue, Jul 16 2024



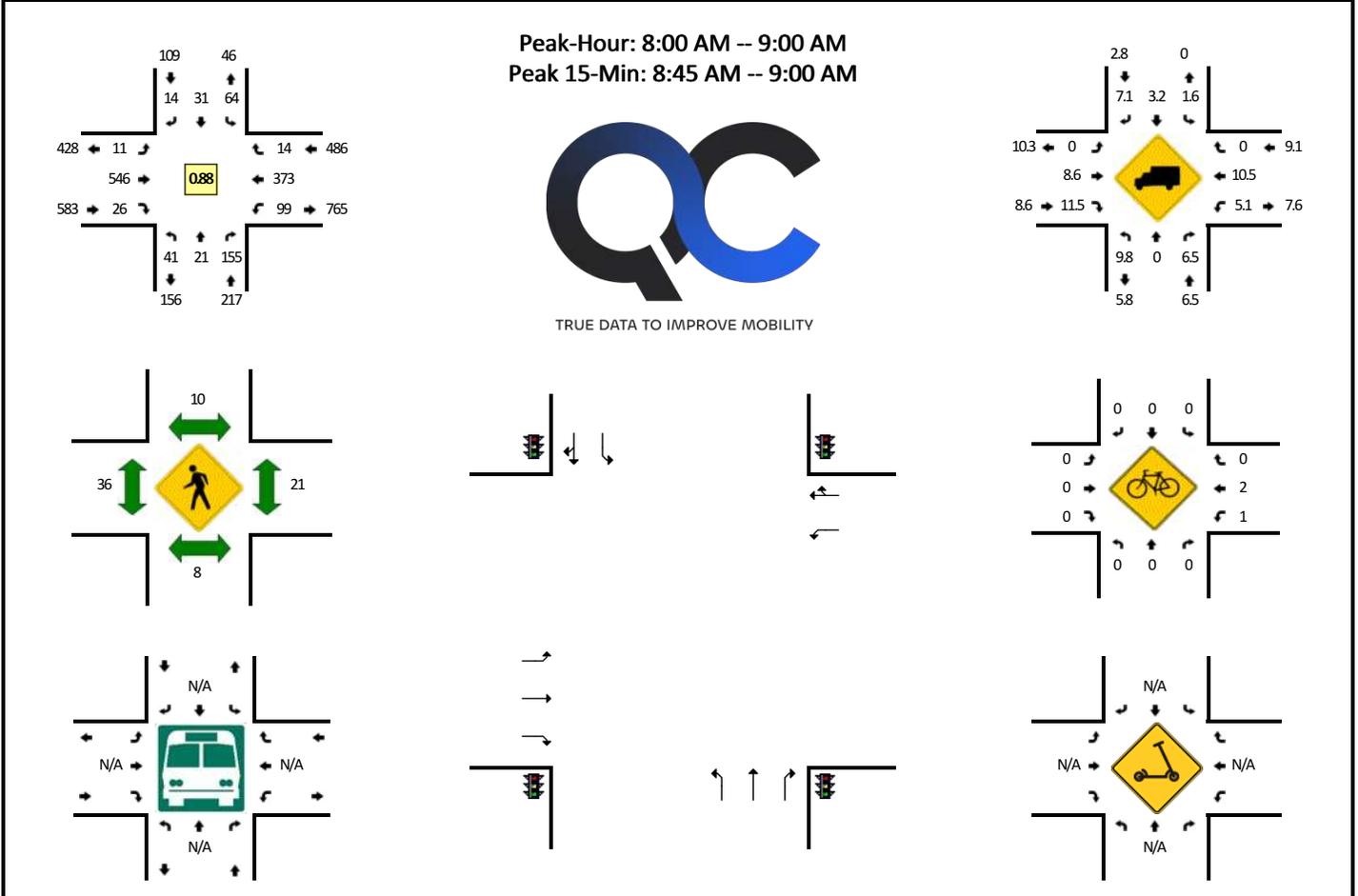
15-Min Count Period Beginning At	Alamo Pintado Rd (Northbound)				Alamo Pintado Rd (Southbound)				Mission Dr (Eastbound)				Mission Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	4	6	0	32	3	65	1	59	119	7	0	4	133	46	0	479	
4:15 PM	9	6	3	0	34	6	69	0	54	122	2	0	5	115	51	0	476	
4:30 PM	7	4	4	0	35	4	55	2	56	113	6	0	1	125	39	0	451	
4:45 PM	10	7	6	0	51	3	71	1	56	95	4	0	5	97	37	0	443	1849
5:00 PM	3	6	5	0	40	4	81	3	60	112	4	0	2	120	37	0	477	1847
5:15 PM	10	3	2	0	28	1	58	0	51	131	4	0	0	107	28	0	423	1794
5:30 PM	4	3	1	0	38	0	49	2	52	112	0	0	3	108	29	0	401	1744
5:45 PM	0	1	2	0	21	1	56	2	50	102	0	0	1	72	25	0	333	1634

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	16	24	0	128	12	260	4	236	476	28	0	16	532	184	0	1916
Heavy Trucks	0	4	0		0	0	8		12	16	0		0	8	0		48
Buses																	
Pedestrians		0				0				4				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	

Comments:

LOCATION: Alisal Rd -- Mission Dr
CITY/STATE: Solvang, CA

QC JOB #: 16654109
DATE: Tue, Jul 16 2024



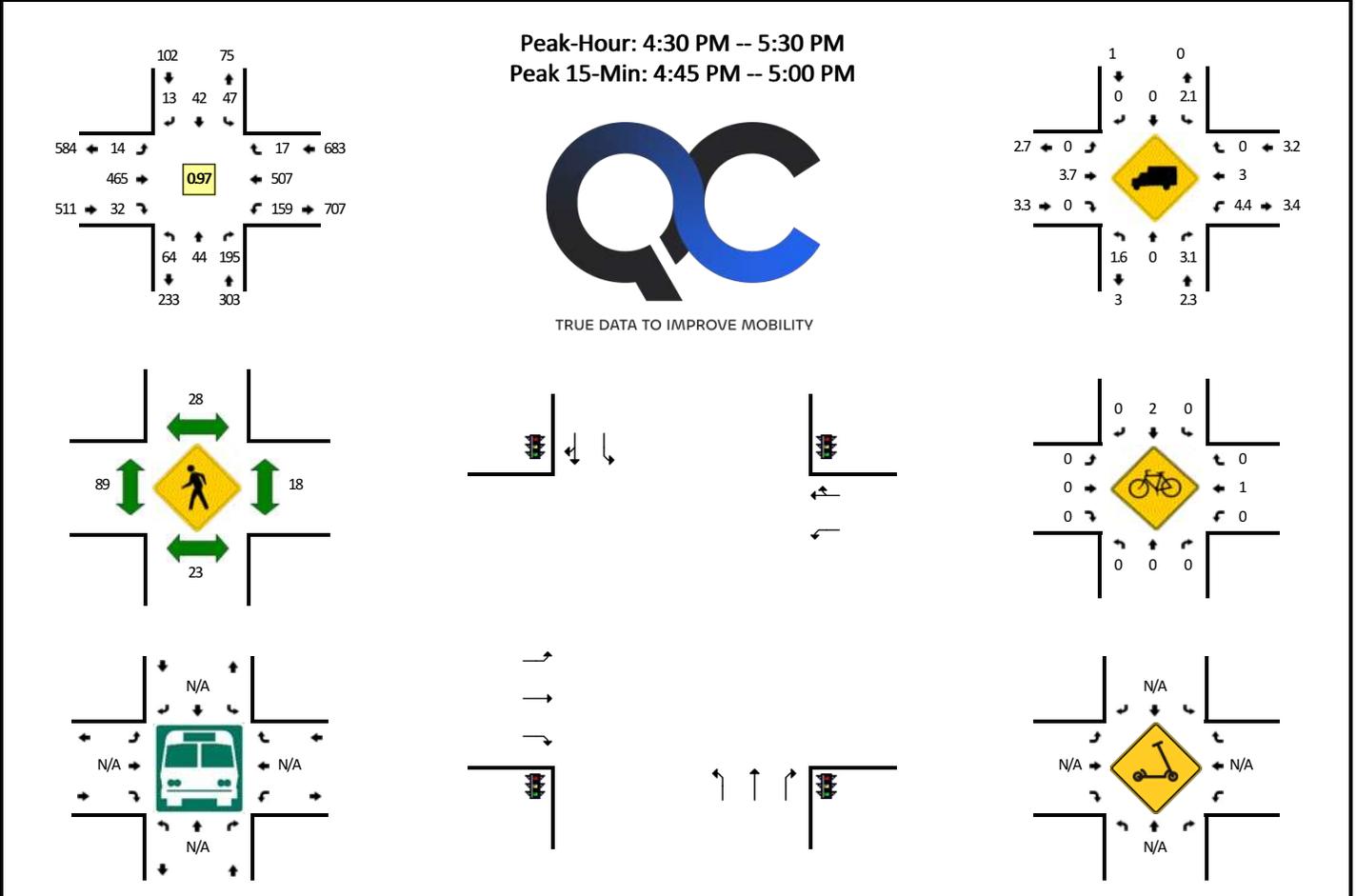
15-Min Count Period Beginning At	Alisal Rd (Northbound)				Alisal Rd (Southbound)				Mission Dr (Eastbound)				Mission Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U														
7:00 AM	4	1	17	0	5	5	5	0	0	98	4	0	18	49	3	0	209	
7:15 AM	5	3	23	0	10	3	6	0	3	126	3	0	10	70	0	0	262	
7:30 AM	6	4	30	0	12	3	5	0	2	125	8	0	19	71	3	0	288	
7:45 AM	8	8	38	0	14	5	3	0	2	129	4	0	25	81	1	0	318	1077
8:00 AM	9	0	32	0	19	12	3	0	1	154	1	0	25	88	4	0	348	1216
8:15 AM	12	5	34	0	11	4	5	0	4	137	9	0	24	92	0	0	337	1291
8:30 AM	7	7	37	0	14	8	0	0	1	131	11	0	15	78	3	0	312	1315
8:45 AM	13	9	52	0	20	7	6	0	5	124	5	0	35	115	7	0	398	1395

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	52	36	208	0	80	28	24	0	20	496	20	0	140	460	28	0	1592
Heavy Trucks	4	0	12		0	0	4		0	40	0		12	40	0		112
Buses																	
Pedestrians		8				20				48				32			108
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Scoters																	0

Comments:

LOCATION: Alisal Rd -- Mission Dr
CITY/STATE: Solvang, CA

QC JOB #: 16654110
DATE: Tue, Jul 16 2024



15-Min Count Period Beginning At	Alisal Rd (Northbound)				Alisal Rd (Southbound)				Mission Dr (Eastbound)				Mission Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U														
4:00 PM	19	8	50	0	10	6	4	0	5	127	7	0	40	117	3	0	396	
4:15 PM	11	4	48	0	21	18	4	0	4	101	12	0	56	99	3	0	381	
4:30 PM	23	17	50	0	16	11	2	0	3	116	7	0	44	106	5	0	400	
4:45 PM	9	12	60	0	7	15	3	0	4	106	9	0	49	136	1	0	411	1588
5:00 PM	20	6	46	0	11	8	4	0	4	111	7	0	35	127	6	0	385	1577
5:15 PM	12	9	39	0	13	8	4	0	3	132	9	0	31	138	5	0	403	1599
5:30 PM	17	3	41	0	14	7	4	0	5	107	9	0	34	104	4	0	349	1548
5:45 PM	9	3	31	0	12	5	3	0	6	110	6	0	32	96	3	0	316	1453

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	36	48	240	0	28	60	12	0	16	424	36	0	196	544	4	0	1644
Heavy Trucks	0	0	8		0	0	0		0	20	0		4	4	0		36
Buses																	
Pedestrians		8				76				40				52			176
Bicycles	0	0	0		0	8	0		0	0	0		0	0	0		8
Scoters																	

Comments:

PROJECT TRIP GENERATION CALCULATIONS

**Associated Transportation Engineers #23080.01
Trip Generation Worksheet**

HOUSING AT ALAMO PINTADO PROJECT

Use	Size	Internal-Trip Factor	ADT		AM PEAK HOUR						PM PEAK HOUR					
			Rate	Trips	Rate	Trips	In %	Trips	Out %	Trips	Rate	Trips	In %	Trips	Out %	Trips
PROPOSED																
Multi-Family Residential (a)	80 DU	1.00	6.74	539	0.40	32	24%	8	76%	24	0.51	41	63%	26	37%	15
Affordable Housing (a)	20 DU	1.00	6.74	135	0.40	8	24%	2	76%	6	0.51	10	63%	6	37%	4
Totals				674		40		10		30		51		32		19

(a) Trip generation based on ITE rates for Multifamily Housing (Low-Rise) (ITE #220).

Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

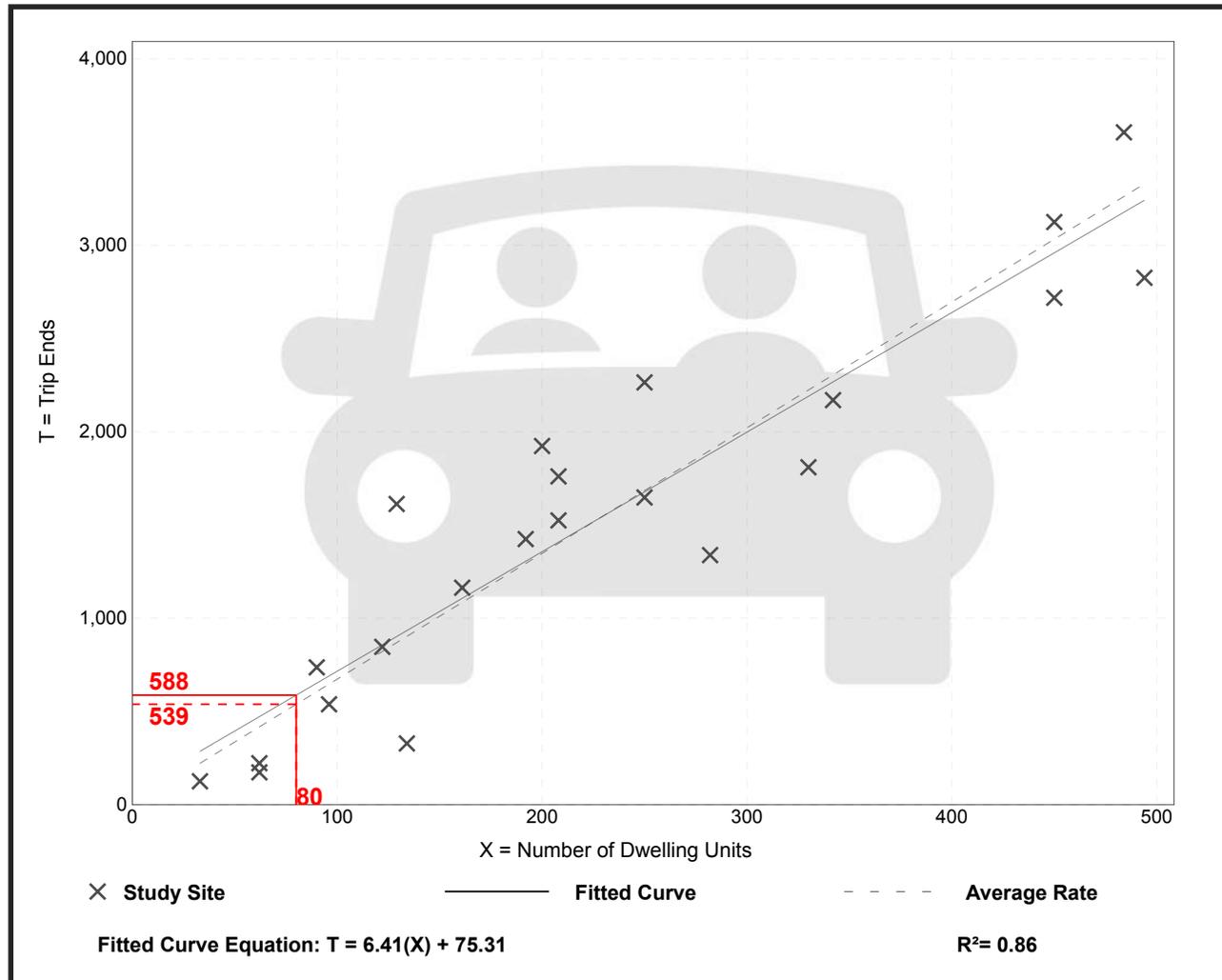
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

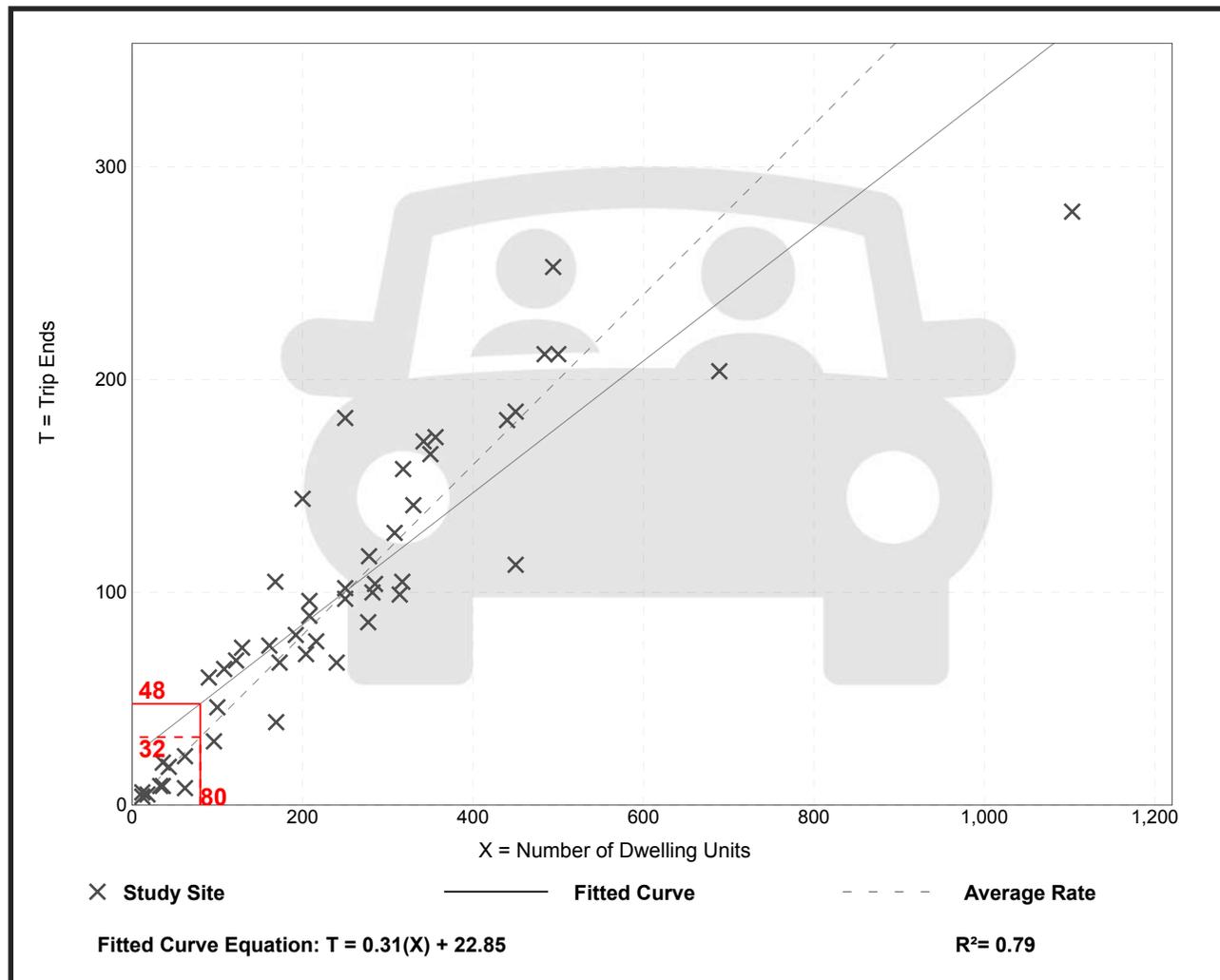
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban
 Number of Studies: 49
 Avg. Num. of Dwelling Units: 249
 Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

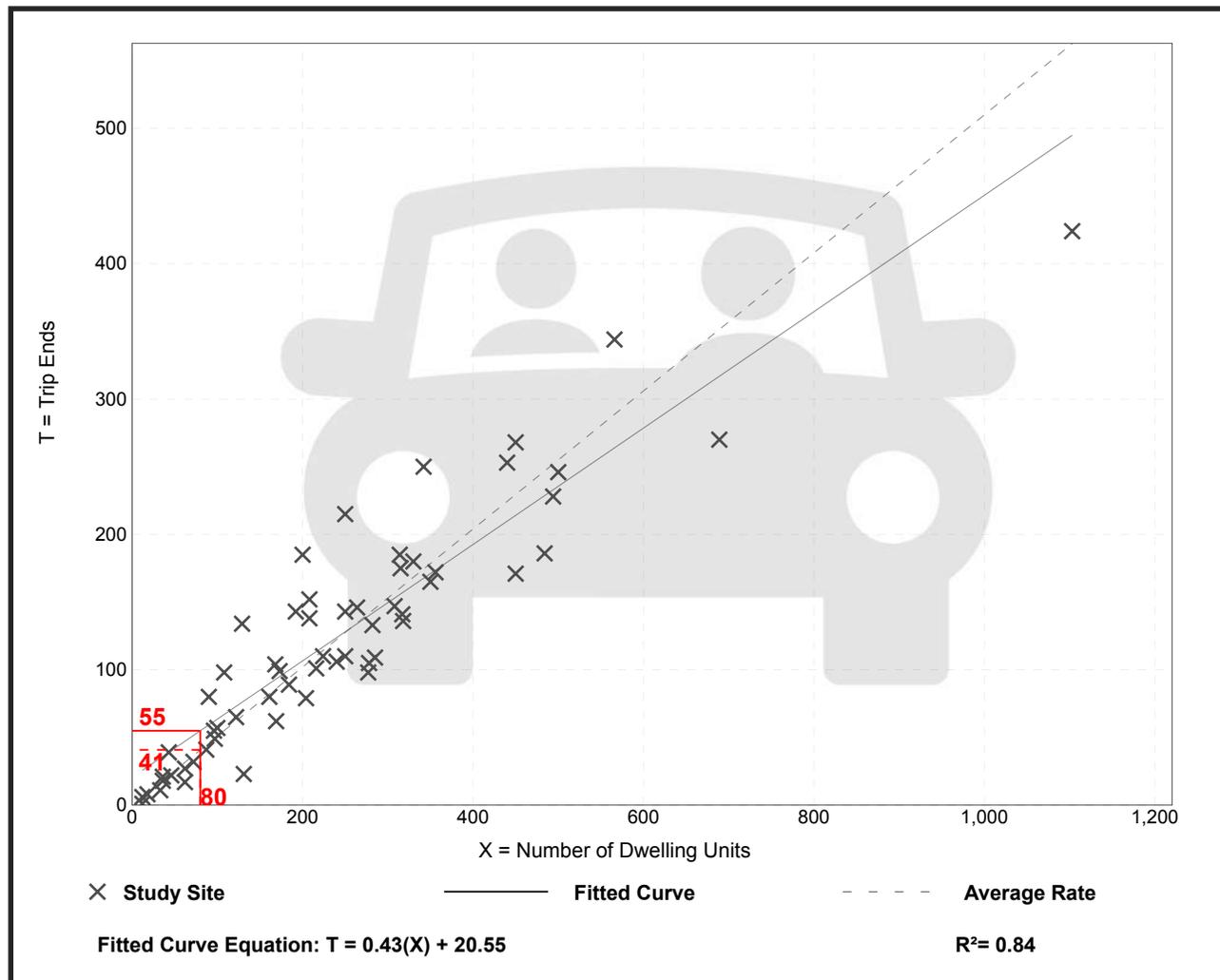
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban
 Number of Studies: 59
 Avg. Num. of Dwelling Units: 241
 Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

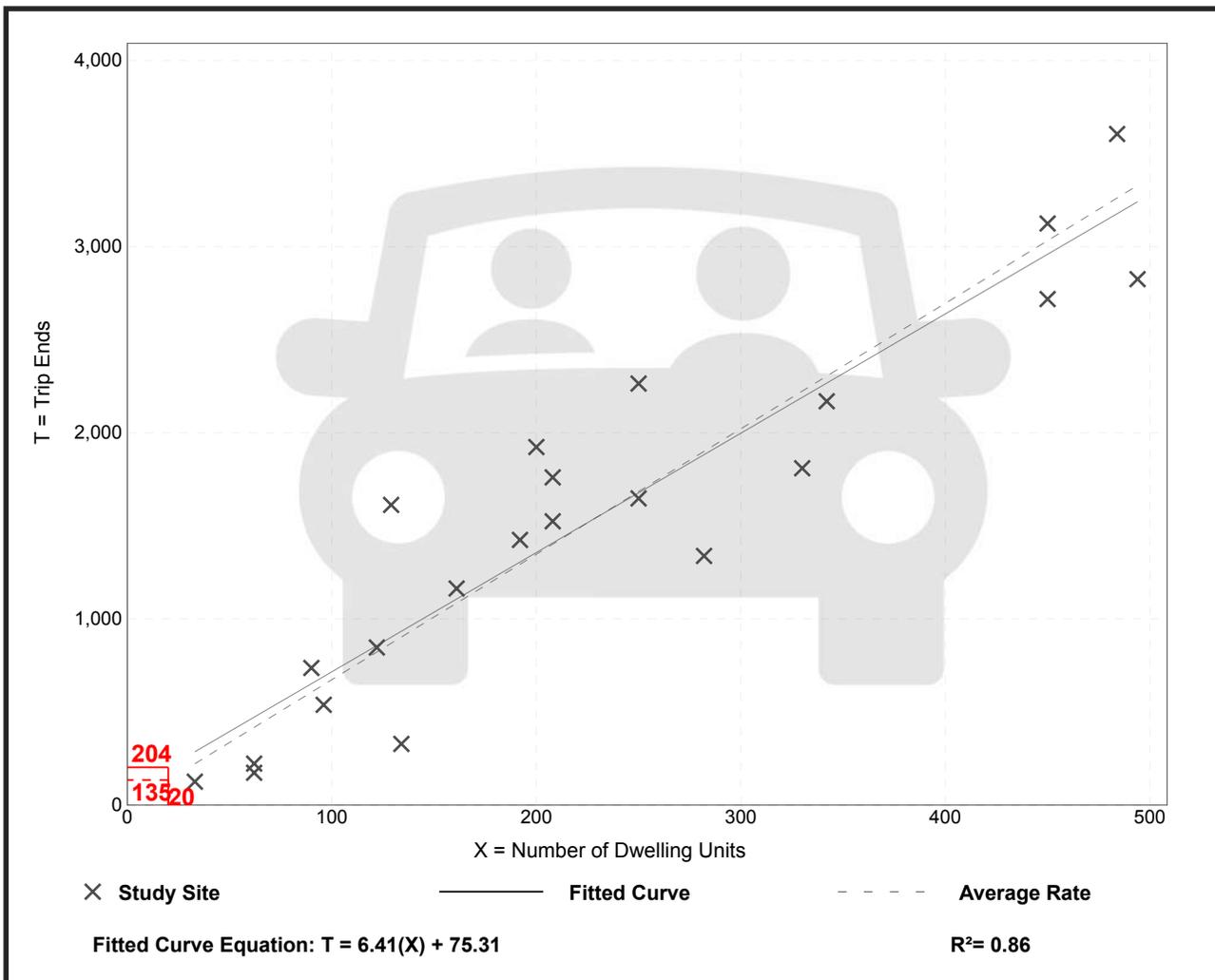
Vehicle Trip Ends vs: Dwelling Units
On a: Weekday

Setting/Location: General Urban/Suburban
Number of Studies: 22
Avg. Num. of Dwelling Units: 229
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
6.74	2.46 - 12.50	1.79

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

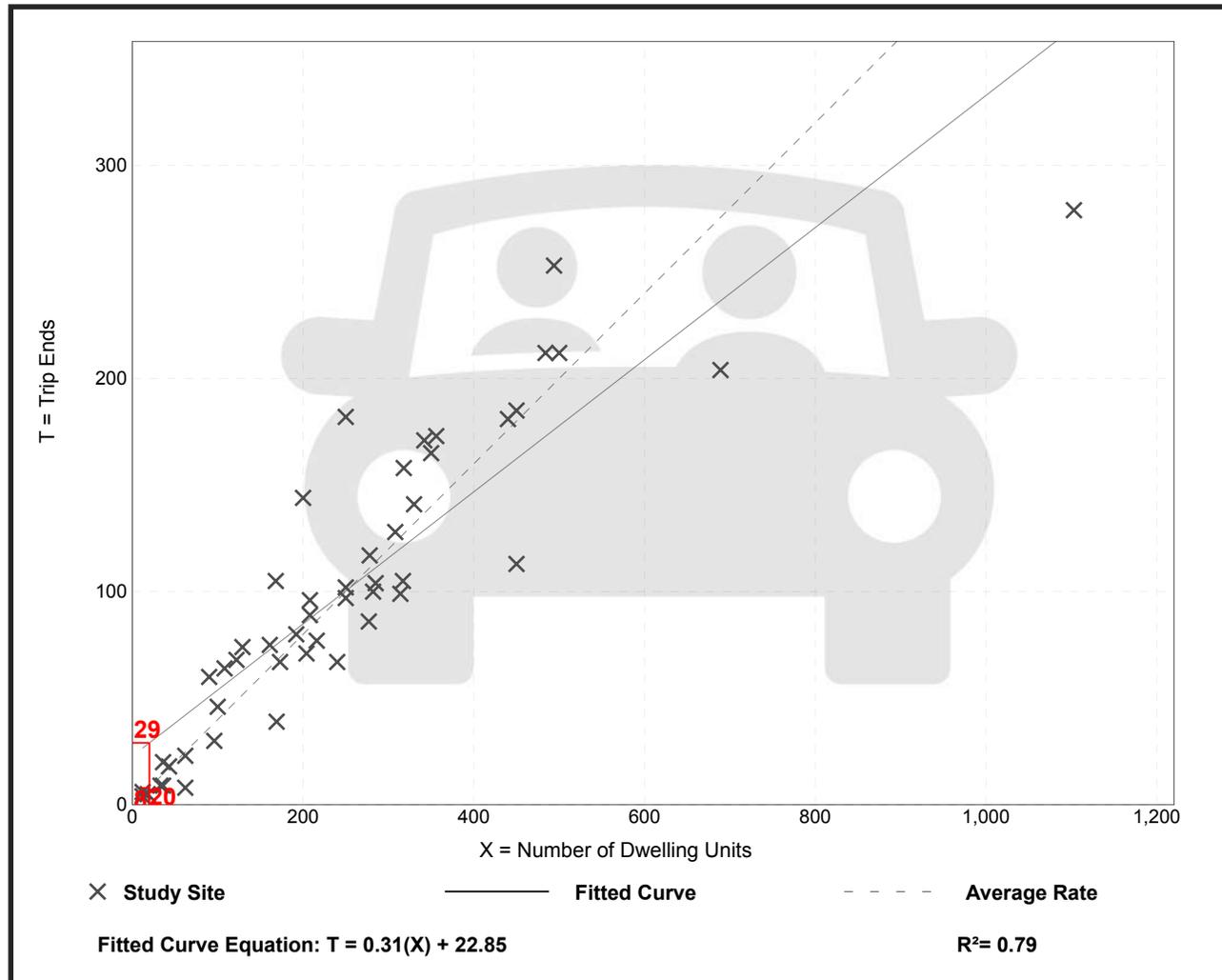
Setting/Location: General Urban/Suburban

Number of Studies: 49
Avg. Num. of Dwelling Units: 249
Directional Distribution: 24% entering, 76% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.40	0.13 - 0.73	0.12

Data Plot and Equation



Multifamily Housing (Low-Rise) Not Close to Rail Transit (220)

Vehicle Trip Ends vs: Dwelling Units
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 59

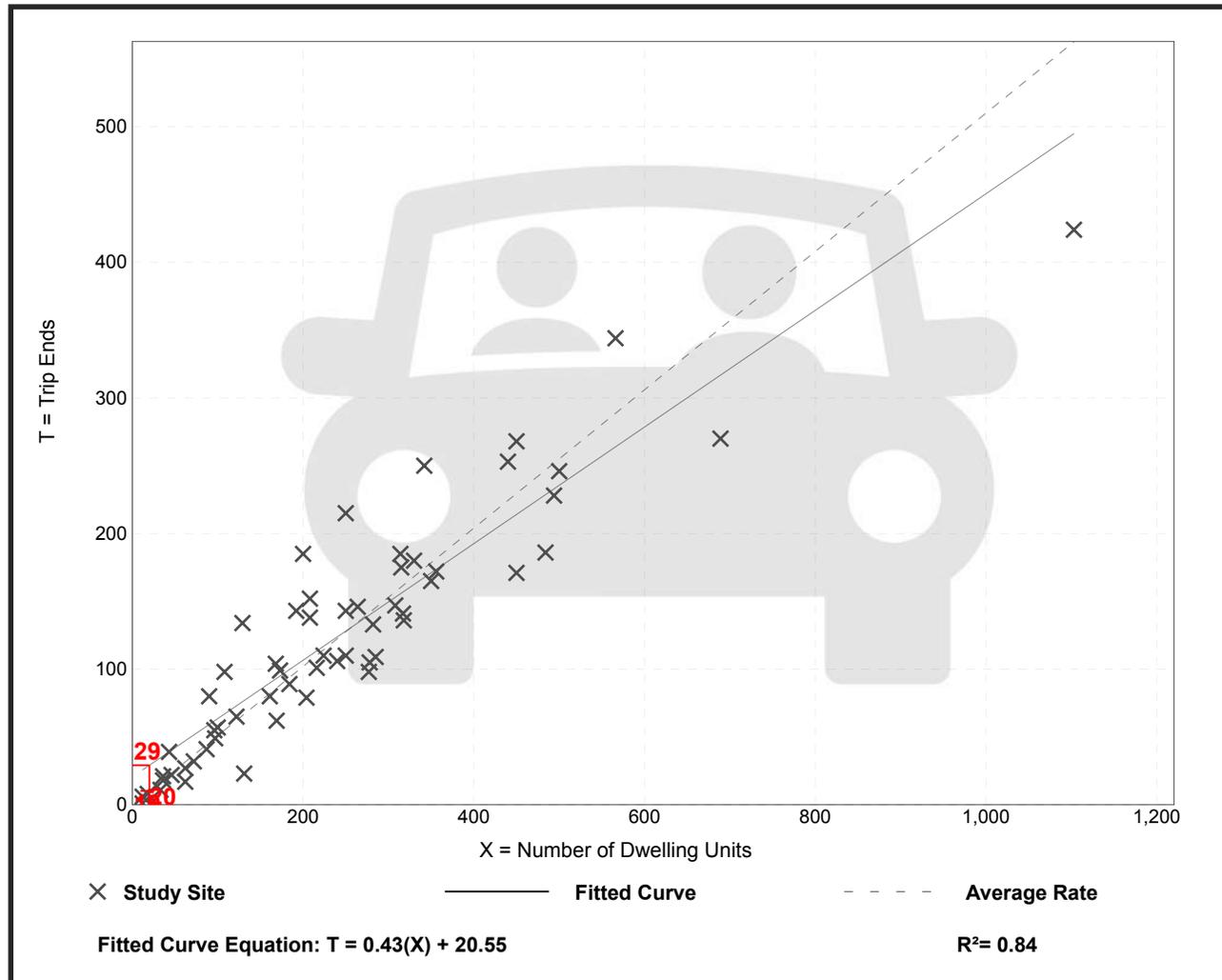
Avg. Num. of Dwelling Units: 241

Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.51	0.08 - 1.04	0.15

Data Plot and Equation



**Associated Transportation Engineers #23080.01
Trip Generation Worksheet**

HOUSING AT ALAMO PINTADO PROJECT - WITH AFFORDABLE HOUSING RATES

Use	Size	Internal-Trip Factor	ADT		AM PEAK HOUR						PM PEAK HOUR					
			Rate	Trips	Rate	Trips	In %	Trips	Out %	Trips	Rate	Trips	In %	Trips	Out %	Trips
PROPOSED																
Multi-Family Residential (a)	80 DU	1.00	6.74	539	0.40	32	24%	8	76%	24	0.51	41	63%	26	37%	15
Affordable Housing (b)	20 DU	1.00	4.81	96	0.50	10	29%	3	71%	7	0.46	9	59%	5	41%	4
Totals				635		42		11		31		50		31		19

(a) Trip generation based on ITE rates for Multifamily Housing (Low-Rise) (ITE #220).

(b) Trip generation based on ITE rates for Affordable Housing (ITE #223).

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:	WILDWOOD	Organization:	ATE
Project Location:	SOLVANG	Performed By:	GOM
Scenario Description:		Date:	16-Aug-24
Analysis Year:		Checked By:	SAS
Analysis Period:	PM Street Peak Hour	Date:	16-Aug-24

Table 1-P: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office				0		
Retail	821	50,000	SF	451	217	234
Restaurant				0		
Cinema/Entertainment				0		
Residential	220	100	DU	51	32	19
Hotel				0		
All Other Land Uses ²				0		
				502	249	253

Table 2-P: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office						
Retail		4%	4%		4%	4%
Restaurant						
Cinema/Entertainment						
Residential		4%	4%		4%	4%
Hotel						
All Other Land Uses ²						

Table 3-P: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail					600	
Restaurant					600	
Cinema/Entertainment						
Residential		600	600			
Hotel						

Table 4-P: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail	0		0	0	15	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	0	7	0	0		0
Hotel	0	0	0	0	0	

Table 5-P: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	502	249	253
Internal Capture Percentage	9%	9%	9%
External Vehicle-Trips ⁵	422	209	213
External Transit-Trips ⁶	18	9	9
External Non-Motorized Trips ⁶	18	9	9

Table 6-P: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	N/A	N/A
Retail	3%	6%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	47%	37%
Hotel	N/A	N/A

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

CUMULATIVE PROJECT INFORMATION

Associated Transportation Engineers #23080.01
City Cumulative Worksheet

WILDWOOD PROJECT - CITY CUMULATIVE PROJECTS

	Project	Size	PassBy & Internal	ADT		AM PEAK HOUR						PM PEAK HOUR					
				Rate	Trips	Rate	Trips	In %	Trips	Out %	Trips	Rate	Trips	In %	Trips	Out %	Trips
1	Alisal Condo (a)	11 DU	1.00	6.74	74	0.40	4	24%	1	76%	3	0.51	6	63%	4	37%	2
2	1546 Copenhagen Drive (b)	3 DU	1.00	9.43	28	0.70	2	25%	1	75%	1	0.94	3	63%	2	37%	1
3	1621, 1623, 1625 Fir Avenue (b)	3 DU	1.00	9.43	28	0.70	2	25%	1	75%	1	0.94	3	63%	2	37%	1
4	1534 Elm Avenue (b)	1 DU	1.00	9.43	9	0.70	1	25%	0	75%	1	0.94	1	63%	1	37%	0
5	420 Fifth Street (a)	6 DU	1.00	6.74	40	0.40	2	24%	1	76%	1	0.51	3	63%	2	37%	1
6	1745 Mission Drive (c)	5,640 SF	1.00	14.39	81	1.67	9	82%	8	18%	1	2.16	12	34%	4	66%	8
7	1875, 1879, and 1883 Laurel Avenue (b)	3 DU	1.00	9.43	28	0.70	2	26%	1	74%	1	0.94	3	63%	2	37%	1
8	670 Alamo Pintado Condos (a)	32 DU	1.00	6.74	216	0.40	13	24%	3	76%	10	0.51	16	63%	10	37%	6
9	516 5th Street (b)	2 DU	1.00	9.43	19	0.70	1	25%	0	75%	1	0.94	2	63%	1	37%	1
10	1704 Mission Drive Lille Sod Hotel (d)	9 Rooms	1.00	7.99	72	0.46	4	56%	2	44%	2	0.59	5	51%	3	49%	2
11	1420 Mission Drive Boutique Hotel (d)	11 DU	1.00	7.99	88	0.46	5	56%	3	44%	2	0.59	6	51%	3	49%	3
12	Sansum Clinic (e)	24,241 SF	1.00	-	709	-	51	-	40	-	11	-	72	-	21	-	51
13	1693/1687 Mission Drive (f)	40 Rooms	1.00	-	-343	-	-41	-	-27	-	-14	-	-45	-	-17	-	-28
14	1714 Mission Drive Strada Grill & Deli (g)	-	1.00	-	958	-	52	-	30	-	22	-	87	-	48	-	39
15	700 Mesa Drive (b)	3 DU	1.00	9.43	28	0.70	2	25%	1	75%	1	0.94	3	63%	2	37%	1

- (a) Trip generation based on ITE rates for Multifamily Housing (ITE #220).
- (b) Trip generation based on ITE rates for Single-Family Detached Housing (ITE #210).
- (c) Trip generation based on ITE rates for Small Office Building (ITE #712).
- (d) Trip generation based on ITE rates for Hotel (ITE #310).
- (e) Traffic and Circulation Study, ATE, April 2022.
- (f) Traffic and Circulation Study, ATE, October 2023.
- (g) Traffic and Circulation Study, ATE, May 2022.



**CITY OF SOLVANG
PLANNING & BUILDING – MAJOR PROJECT LIST
July 2024**

Project #	Applicant	Project Name	Address	APN	Zoning	Project Description	Project Status	Expiration Date
PROJECTS UNDER CONSTRUCTION								
210074	Darkstar Development, LLC	Alisal Condo	539 Alisal Rd	139-143-004	DR 20	11 Unit multi-family condo development	Temporary C of O Issued Map Recordation	9/28/2024
210058	1546 Copenhagen, LLC	3 unit Vacation Rental	1546 Copenhagen	139-174-006	DR 20	3 Unit Vacation Rentals – 1,878 sf total	Building Permit Issued	11/30/2024
22-130, 131,132	1621 Fir Street, LLC	New SFR Fir Street	1621, 1623, 1625 Fir Street	139-141-004	DR-20	3 New detached SFR	Building Permit Issued	12/28/2024
23-165	Jones	ADU w/Attached Garage	1534 Elm Ave	139-132-005	7-R-1	New 790 sf ADU w/ attached garage	Building Permit Issued	9/05/2024
22-195	Jensen Family Trust	New multi-family Development	420 Fifth Street	139-174-045	DR-20	5 Unit multi-family development with 1 ADU	Building Permit Issued	01/30/2025
23-233**	Slipknot LLC	423 2 nd Street	423 2 nd street	139-191-007	TRC	Building re-habilitation and remodel	Building Permit Issued	3/1/2025
23-111	Olsen Fam TR	Solvang Inn and Cottages Remodel	1515 Mission Dr	139-172-010	TRC	Commercial TI to Solvang Inn & Cottages. Convert existing managers unit to common area and lobby. Remodel lobby. Project has been re-scoped to reduce rooms/office.	Building Permit Issued	2/1/2025
24-060	Lonard Custom Works	Gathering Table TI	1557 Mission Drive	139-132-023	TRC	Interior Demo of non-baring walls, interior finishes, etc for new restaurant. Signage and Colors approved by DRC w/ staff review	Building Permit Issued	04/02/2025
PROJECTS UNDER BUILDING PERMIT REVIEW								
**denotes permits not requiring discretionary review per California Government Code and/or Solvang Municipal Code								
22-282	Solvang Senior Center	Solvang Senior Center	1745 Mission Dr	139-150-024	I	Demolish existing structures and replace with a new 2 story, 5,640 sf commercial / office space	Ready to be issued	4/24/2025
210223	Bella Vista SYV, LLC	Bella Vista	1875,1879,1883 Laurel	139-100-049,048,047	8-R-1	3 new SFR from an existing subdivision	Ready to be issued	07/22/2024
210183	Darkstar Development, LLC	670 Alamo Pintado Condos	670 Alamo Pintado	139-530-005	DR-20	32 new Multi-unit condo building permit phase	Awaiting Re-submittal	3/2/2025
23-247**	Vanfossen-Knight	Interior Commercial TI	606 Alamo Pintado	139-540-054	TRC	Interior commercial TI to expand restaurant space	Awaiting Re-submittal	12/5/2024



CITY OF SOLVANG
PLANNING & BUILDING – MAJOR PROJECT LIST
 July 2024

Project #	Applicant	Project Name	Address	APN	Zoning	Project Description	Project Status	Expiration Date
23-254**	City of Solvang	410 2 nd Street	41 2 nd Street	139-192-025	TRC	Interior Remodel for additional offices	Ready to Issue	10/19/2024
23-259**	FPA Old Mill Associates, LP	Interior Commercial TI	486 1 st Street	139-182-030	TRC	New POS service counter, new coffee bar, new lighting, plumbing & electrical.	Awaiting Re-submittal	10/24/2024
23-284**	Gutierrez	New ADU	516 5 th Street	139-132-016	TRC	New 2 bedroom ADU	Awaiting Re-submittal	11/14/2024
24-042	On Design LLC	1704 Mission Drive hotel	1704 Mission Drive	139-240-033	TRC	New 9 Unit hotel cottages and meeting space	Under Review	02/28/2025
24-064*	Archdiocese of Los Angeles	Mission Santa Ines Seismic Retrofit	1706 Mission Drive	139-240-067	AG	Seismic Retrofit of Mission Santa Ines. No exterior work	Awaiting Re-submittal	04/04/2025
APPROVED ENTITLEMENTS								
180114	1420 Mission Drive LLC	New Hotel	1420 Mission Drive	137-590-010	TRC	New 11 Unit Hotel	Approved	11/06/2024
200233	Maz Y.	Water Wheel Building	425 First Street	139-192-024	TRC	Existing commercial building renovation with parking waiver	Approved	3/01/2025
210183	Darkstar Development, LLC	670 Alamo Pintado Condos	670 Alamo Pintado	139-530-005	DR-20	Condo Map 32 Unit Development	Approved	12/04/2025
22-011	Cearnal Collective	Sansum Clinic	1925 Windmill Ln	139-540-013,014	P-O	New 30,000 sf medical/office building	Approved	2/06/2026
22-021	Lonnie Roy	1704 Mission Drive hotel	1704 Mission Drive	139-240-033	TRC	New 9 Unit hotel cottages and meeting space	Approved	12/04/2026
PLANNING APPLICATIONS IN PROCESS								
	City of Solvang	General Plan Update	City Wide			Comprehensive update of the City's General Plan including General Plan EIR	Approved – 30 day CEQA Appeal	N/A
23-047	Lonnie Roy	Denmarket Square	1693/1687 Mission Drive	139-143-025,026	TRC	Development Plan and Lot Merger to demolish an existing commercial structure at 1687 Mission Drive, redevelop and create an addition at 1693 Mission Drive to construct a 40	DRC Meeting 7/18, 7/25	6/8/2025



CITY OF SOLVANG
PLANNING & BUILDING – MAJOR PROJECT LIST
 July 2024

Project #	Applicant	Project Name	Address	APN	Zoning	Project Description	Project Status	Expiration Date
						Room Hotel with four (4) ancillary commercial units		
23-242	Lots on Alamo Pintoado LLC	Wildwood-SB 330 Application	N/A	139-530-001,002	20-R-1	Proposed 100 multi-family units with 20 affordable housing units with proposed State Density Bonus. Utilizing SB 330 application via CGC Section 65941.1	Awaiting Re-submittal	8/01/2024
23-302	Lonnie Roy	LUCCA Market & Deli Amendment	1714 Mission Drive	139-240-034	TRC	Amendment to approved Development Plan (Resolution No 22-07). Proposed amendment includes deli that has drive in coffee operations during the morning hours of 6 AM to 9 AM. Additions are proposed to the existing structure along the existing drive thru for a total proposed building size of 9,456 SF.	Awaiting Re-submittal	12/18/2024
PA 24-003	Valeueven Fam / Power Trust	Valeueven Fam / Power Trust	700 Mesa Dr	137-750-014/137-120-083	3E-1/10-R1	3 Parcel Map subdivision	Awaiting Re-submittal	04/08/2024
PA 24-008	City of Solvang	Zoning Ordinance Amendments	City Wide			Proposed zoning ordinance amendments including consolidation of zones, land use definitions, development standards, and entitlement amendments	DRC Discussion: 7/18 CC Discussion 7/22 PC: 9/3 CC: 9/23	

Associated Transportation Engineers
 Pending and Approved Projects - Trip Generation Worksheet

WILDWOOD PROJECT - CUMULATIVE COUNTY LIST (#23038.01)																		
Land-Use	Size		Pass-By Factor	ADT		AM Peak						PM Peak						
				Rate	Trips	Rate	Trips	In %	Trips	Out %	Trips	Rate	Trips	In %	Trips	Out %	Trips	
1	Skytt Family Lot Split (a)	4	DU	1.00	9.43	38	0.70	3	25%	1	75%	2	0.94	4	63%	3	37%	1
2	Inn at Matei's Tavern (b)	67	Rooms	1.00	-	485	-	31	-	15	-	16	-	33	-	16	-	17
3	Claxton Winery (c)	19,818	SF	1.00	-	80	-	4	-	3	-	1	-	9	-	3	-	6
4	Bridlewood Redevelopment (d)	7,662	SF	1.00	-	6	-	0	-	0	-	0	-	1	-	1	-	0
5	Larner Tier II Winery (e)	4,702	SF	1.00	-	80	-	3	-	2	-	1	-	9	-	4	-	5
6	799 W Hwy 246 Tier II Winery (f)	15,998	SF	1.00	-	80	-	4	-	3	-	1	-	9	-	3	-	6
7	Brave and Maiden Winery Amendment (c)	19,818	SF	1.00	-	80	-	4	-	3	-	1	-	9	-	3	-	6
8	Sagunto Place Supportive Housing (g)	23	DU	1.00	4.31	99	0.24	6	33%	2	67%	4	0.30	7	61%	4	39%	3
9	Harry's House (h)	60	DU	1.00	-	121	-	4	-	1	-	3	-	11	-	7	-	4
10	Ballard Ranch Special Events (c)	10,000	SF	1.00	-	80	-	4	-	3	-	1	-	9	-	3	-	6
11	Novatt Equestrian Facility (i)	84,200	SF	1.00	-	50	-	10	-	6	-	4	-	5	-	2	-	3
12	Kernott Tentative Parcel Map (a)	2	DU	1.00	9.43	19	0.70	1	25%	0	75%	1	0.94	2	63%	1	37%	1
13	Conroy - Tentative Parcel Map (a)	2	DU	1.00	9.43	19	0.70	1	25%	0	75%	1	0.94	2	63%	1	37%	1

- (a) Trip generation based on ITE rates for Single-Family Detached Housing (#210).
- (b) Traffic Assessment, ATE, December 2019.
- (c) Trip generated based on SB County Winery Studies conducted by ATE.
- (d) Traffic and Circulation Study, ATE, May 2018.
- (e) Traffic Study, ATE, August 2016.
- (f) Traffic Study, ATE, March 2024.
- (g) Trip generation based on ITE rates for Senior Adult Housing Single Family (#251).
- (h) Trip Generation Analysis, ATE, October 2020.

Cumulative Projects List For the Entire County

Printed on February 1, 2023 at 10:53 am

Santa Ynez Valley

Not within a Community/Specific Plan Area

Use Type	Case Number/ Assigned Staff	Project Name/ APN(s)	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.	Misc
Wineries	12ZCI-00000-00014 F. Trotter	PARKER WINERY REVISION 89-DP-13 RV01 133-110-044	Built		1,000			
Commercial	15DVP-00000-00012 J. Ritterbeck	NOJOQUI RANCH TIER II WINERY 081-020-024	Under Construction		12,500			
Commercial – Special Events	19CUP-00000-00023 S. Reese	FOXEN CANYON RANCH SPECIAL EVENTS 133-110-036	Built					

Not within a Community/Specific Plan Area Cumulative Status Summaries:	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.
	Proposed				
	In Process				
	Approved				
	Under Construction		12,500		
	Built		1,000		
	Totals		13,500		

Santa Ynez Valley Plan Area

Use Type	Case Number/ Assigned Staff	Project Name/ APN(s)	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.	Misc
Commercial – Special Events	00CUP-00000-06028 J. Zorovich	SHELLY TRAINING STABLES & EQUESTRIAN EVENTS 135-030-056	Built	2	20,866	0	0	0

Note: To appear on this report, a CAP must have a primary parcel designated.

For specific information regarding each of these cases

(e.g. project description, location, etc.), please visit the Citizens Access site at: <https://aca.sbcountyplanning.org/CitizenAccess/>

Cumulative Projects List For the Entire County

Printed on February 1, 2023 at 10:53 am

Santa Ynez Valley

continued ...

Santa Ynez Valley Plan Area

continued ...

Use Type	Case Number/ Assigned Staff	Project Name/ APN(s)	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.	Misc
Mines	03CUP-00001-00024 J. Dargel	GRANITE GARDNER RANCH MINING REVISIONS PROJECT 137-270-015 137-270-032	Built	0	0	0	0	250,000 tons/yr
Commercial – Special Events	04LUP-00000-00929 T. Weber	HONEA VINEYARD WINERY 137-020-022	Built	0				
Wineries	08DVP-00000-00018 D. Eady	DE WERD TIER II WINERY 133-151-050	Built	0	0	0	9,856	0
Parcel Map	08TPM-00000-00004 T. Harris	SKYTT FAMILY LOT SPLIT (TPM 14,745) 099-190-039 099-190-040	Approved	4	0	0	0	0
Commercial	09DVP-00000-00019 J. Zorovich	INN AT MATTEI'S TAVERN 135-064-002 135-064-011 135-064-020 135-064-021 135-073-003 135-073-005	Under Construction	67	74,587	0	0	To allow for the construction of 67-key, cottage-style hotel. In addition to guestroom cottages, the project also includes a small gym, spa, pool, and a meeting/banquet building. Total development is 56,806 net (74,587 gross) square feet.

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Cumulative Projects List For the Entire County

Printed on February 1, 2023 at 10:53 am

Santa Ynez Valley

continued ...

Santa Ynez Valley Plan Area

continued ...

Use Type	Case Number/ Assigned Staff	Project Name/ APN(s)	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.	Misc
Wineries	09DVP-00000-00034 J. Karamitsos	VINCENT VINEYARDS & WINERY TIER III DEV PLAN 135-250-033	Built	0	0	0	5,918	0
Commercial – Special Events	10CUP-00000-00042 T. Weber	HARMON COMMERCIAL SPECIAL EVENTS 143-220-004	Built					
Commercial – Special Events	11CUP-00000-00025 T. Weber	ZACA CREEK RANCH SPECIAL EVENT 135-010-027	Built					
Wineries	11DVP-00000-00001 T. Weber	EL CAMINO REAL WINERY 133-151-077	Built					
Wineries	11DVP-00000-00009 J. Gerber	CLAXTON WINERY 141-460-001 141-460-002	Approved		19,818			
Wineries	11RVP-00000-00014 D. Eady	BRIDLEWOOD DEVELOPMENT PLAN REVISION 135-051-019	In Process		7,662		1,595	
Institutional (schools, churches, etc)	12DVP-00000-00014 D. Eady	THE GOLDEN INN 141-380-014	Approved		36,991	0	0	Assisted Living/Memory Care Facility

Note: To appear on this report, a CAP must have a primary parcel designated.

For specific information regarding each of these cases

(e.g. project description, location, etc.), please visit the Citizens Access site at: <https://aca.sbcountyplanning.org/CitizenAccess/>

Cumulative Projects List For the Entire County

Printed on February 1, 2023 at 10:53 am

Santa Ynez Valley

continued ...

Santa Ynez Valley Plan Area

continued ...

Use Type	Case Number/ Assigned Staff	Project Name/ APN(s)	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.	Misc
Residential	12TRM-00000-00001 S. Rodriguez	ZACA PRESERVE LLC TRACT MAP (TM 14,786) 099-400-017 099-600-041	Approved	7				Subdivision of two existing lots of 2.59 acres into seven lots
Residential	13DVP-00000-00005 D. Eady	THE GOLDEN INN SENIOR LIVING 141-380-014	Built	60				
Residential	13DVP-00000-00006 D. Eady	THE GOLDEN INN EMPLOYEE/FAMILY HOUSING 141-380-014	Built	27				
Wineries	13DVP-00000-00009 A. Orta	LARNER TIER II WINERY 137-100-001	Approved		4,702			
Wineries	14DVP-00000-00003 F. Trotter	799 W HWY. 246 TIER II WINERY 099-251-069	Approved		15,998			
Wineries	16AMD-00000-00006 F. Trotter	BRAVE AND MAIDEN WINERY AMENDMENT 141-460-001 141-460-002	Approved		19,818			
Commercial – Special Events	18CUP-00000-00022 S. Reese	RIVER LILI RANCH WEDDING EVENTS 135-030-052	Built					
Parcel Map	18MPC-00000-00009 T. Harris	SKYTT FAMILY LOT SPLIT (TPM 14,745) MAP CLEARANCE 099-190-039	Approved	4	0	0	0 0	

Note: To appear on this report, a CAP must have a primary parcel designated.

For specific information regarding each of these cases

(e.g. project description, location, etc.), please visit the Citizens Access site at: <https://aca.sbcountyplanning.org/CitizenAccess/>

Cumulative Projects List For the Entire County

Printed on February 1, 2023 at 10:53 am

Santa Ynez Valley

continued ...

Santa Ynez Valley Plan Area

continued ...

Use Type	Case Number/ Assigned Staff	Project Name/ APN(s)	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.	Misc
Commercial – Special Events	19CUP-00000-00038 T. Mitchell	LIEFF SPECIAL EVENTS 135-040-044	Built					
Commercial – Special Events	19CUP-00000-00058 E. Gomez	GLEASON FAMILY VINEYARDS SPECIAL EVENT 141-030-025	Built					
Residential	19DVP-00000-00009 S. Reese	Sagunto Place Residential Studios Development 143-184-002	Proposed					
Residential	20APL-00000-00012 S. Reese	THE ASSELSTINE APPEAL OF SAGUNTO PLACE SUPPORTIVE HOUSING PROJECT 143-184-002	Proposed					
Residential	20APL-00000-00013 S. Reese	GOMBINER APPEAL OF SAGUNTO PLACE SUPPORTIVE HOUSING PROJECT 143-184-002	Proposed					
Residential	20APL-00000-00014 S. Reese	APPLICANT APPEAL OF SAGUNTO PLACE SUPPORTIVE HOUSING PROJECT 143-184-002	Proposed					
Residential	20LUP-00000-00150 S. Reese	SAGUNTO PLACE SUPPORTIVE HOUSING PROJECT 143-184-002	Approved	23				

Note: To appear on this report, a CAP must have a primary parcel designated.

For specific information regarding each of these cases

(e.g. project description, location, etc.), please visit the Citizens Access site at: <https://aca.sbcountyplanning.org/CitizenAccess/>

Cumulative Projects List For the Entire County

Printed on February 1, 2023 at 10:53 am

Santa Ynez Valley

continued ...

Santa Ynez Valley Plan Area

continued ...

Use Type	Case Number/ Assigned Staff	Project Name/ APN(s)	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.	Misc
Residential	20ZCI-00000-00053 S. Reese	SAGUNTO PLACE SUPPORTIVE HOUSING PROJECT 143-184-002	Proposed					
Residential	20ZCI-00000-00167 S. Reese	HARRY'S HOUSE 141-380-045	Approved	60				affordable senior housing units (replaced memory care facility in Golden Inn DVP)
Commercial – Special Events	21CUP-00000-00021 A. Vosburg	BALLARD RANCH SPECIAL EVENTS 137-250-069	In Process		10,000			
Ag Development (excluding wineries)	21CUP-00000-00026 T. Mitchell	Novatt Equestrian Facility 137-250-067	Proposed				84,200	
Commercial – Special Events	21CUP-00000-00031 A. Vosburg	CLANJODA LLC, SPECIAL EVENTS 137-100-065	In Process					
Residential	21TPM-00000-00001 T. Mitchell	KERNOTT TENTATIVE PARCEL MAP (TPM 14,854) 141-111-078	In Process	2				TPM 14,854
Commercial – Special Events	22CUP-00000-00024 S. Kringel	Santa Ynez Outdoor Event Area 143-182-029	Proposed		20,037			Proposed Outdoor Events Area

Note: To appear on this report, a CAP must have a primary parcel designated.

For specific information regarding each of these cases

(e.g. project description, location, etc.), please visit the Citizens Access site at: <https://aca.sbcountyplanning.org/CitizenAccess/>

Cumulative Projects List For the Entire County

Printed on February 1, 2023 at 10:53 am

Santa Ynez Valley

continued ...

Santa Ynez Valley Plan Area

continued ...

Use Type	Case Number/ Assigned Staff	Project Name/ APN(s)	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.	Misc
Commercial – Special Events	22LUP-00000-00362 A. Vosburg	BALLARD RANCH AGRICULTURAL ACCESSORY STRUCTURES 137-250-069	In Process		10,000			
Residential	22MPC-00000-00001 T. Mitchell	ZACA PRESERVE LLC - MAP CLEARANCE - TRACT MAP (TM 14,786) 099-400-017	Approved	7				Subdivision of two existing lots of 2.59 acres into seven lots
Commercial	22NGD-00000-00005 G. Beyeler	BALLARD RANCH SPECIAL EVENTS 137-250-069	In Process		10,000			
Residential	22TPM-00000-00005 A. Vosburg	CONROY - TENTATIVE PARCEL MAP (TPM 14,870) 137-030-004		2				TPM 14,870
Residential	22ZCI-00000-00023 T. Mitchell	BALLARD RANCH LLC AG EMPLOYEE DWELLINGS 137-250-068	In Process	4				Four AEDs
Commercial – Special Events	22ZCI-00000-00224 A. Vosburg	BALLARD RANCH SPECIAL EVENTS 137-250-069	In Process		10,000			

Note: To appear on this report, a CAP must have a primary parcel designated.

For specific information regarding each of these cases

(e.g. project description, location, etc.), please visit the Citizens Access site at: <https://aca.sbcountyplanning.org/CitizenAccess/>

Cumulative Projects List For the Entire County

Printed on February 1, 2023 at 10:53 am

Santa Ynez Valley

continued ...

Santa Ynez Valley Plan Area Cumulative Status Summaries:	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.
	Proposed		20,037		84,200
	In Process	6	47,662		1,595
	Approved	105	97,327	0	0
	Under Construction	67	74,587	0	0
	Built	89	20,866	0	15,774
	Totals	269	260,479	0	101,569

Santa Ynez Valley Cumulative Status Summaries:	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.
	Proposed		20,037		84,200
	In Process	6	47,662		1,595
	Approved	105	97,327	0	0
	Under Construction	67	87,087	0	0
	Built	89	21,866	0	15,774
	Totals	269	273,979	0	101,569

South Coast

Unknown Plan Area

Use Type	Case Number/ Assigned Staff	Project Name/ APN(s)	Status	# Res. Units/Lots	Commr. Sq. Ft.	Industr. Sq. Ft.	Ag Dev. Sq. Ft.	Misc
Commercial	09DVP-00000-00014 A. Tuttle	CALTRANS HIGH OCCUPANCY VEHICLE LANES 111-111-111	Built	0	0	0	0	.45 miles of high occupancy freeway upgrades between the Santa Barbara County/Ventura County lines and the City of Carpinteria

Note: To appear on this report, a CAP must have a primary parcel designated.

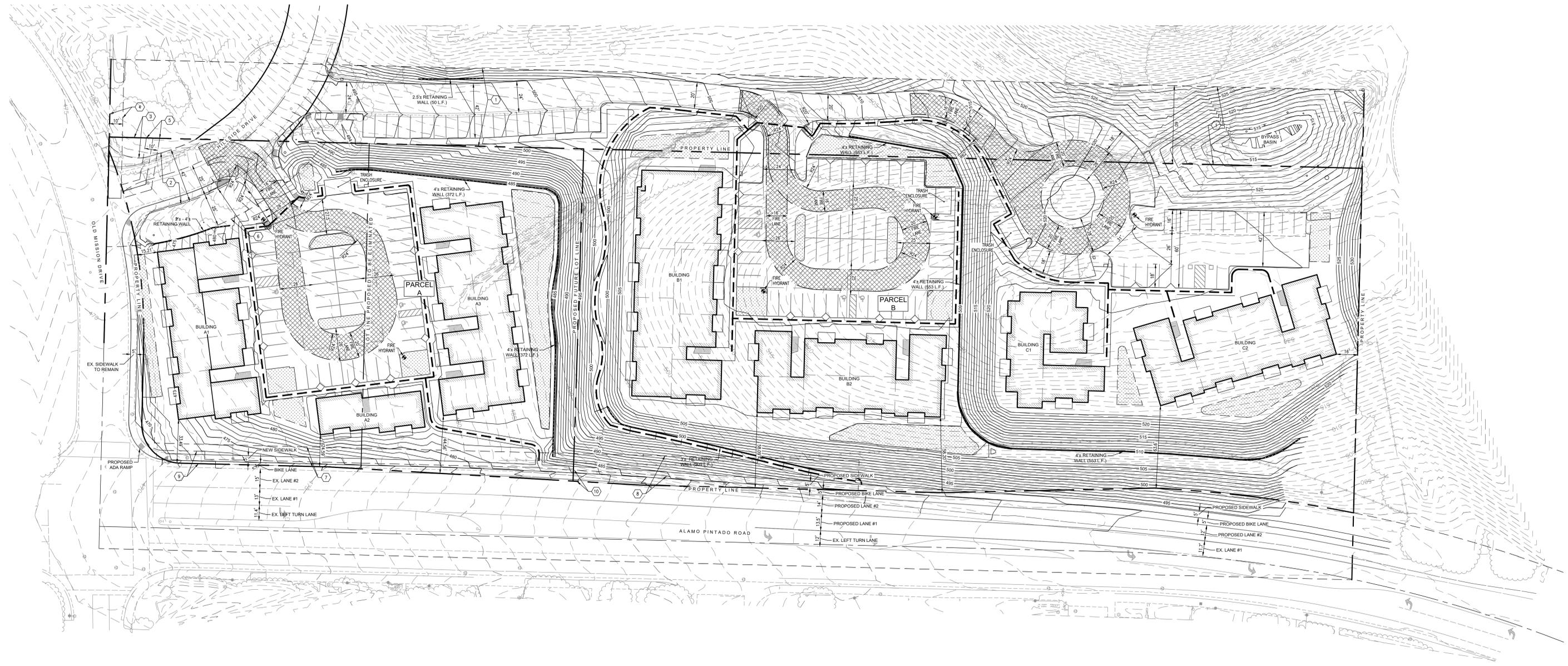
For specific information regarding each of these cases

(e.g. project description, location, etc.), please visit the Citizens Access site at: <https://aca.sbcountyplanning.org/CitizenAccess/>

PROJECT FRONTAGE IMPROVEMENT PLANS

WILDWOOD DEVELOPMENT

PRELIMINARY GRADING PLAN - TITLE SHEET
FOR PARCELS A & B OF PM 11644 (APN'S 139-530-001 & 002)
SHEET 1 OF 5



LEGEND

PROJECT BOUNDARY	---
EXISTING PROPERTY LINE	---
CENTERLINE	---
LOT LINE	---
CURB LINE	---
EXISTING EDGE OF PAVEMENT	---
EASEMENT LINE	---
STORM DRAIN (PUBLIC)	---
EXIST STORM DRAIN (PUBLIC)	---
SEWER MAIN (PUBLIC)	---
EXIST SEWER MAIN (PUBLIC)	---
WATER MAIN (PUBLIC)	---
EXIST. WATER MAIN (PUBLIC)	---
EXIST. CONTOURS	--- 200 ---
PROPOSED CONTOURS	--- 200 ---
AG BUFFER	---
MASONRY WALL	---
ADA PATH OF TRAVEL	---
SAN. SEWER MANHOLE	⊙
EXIST. SEWER MANHOLE	⊙
STORM DRAIN MANHOLE	⊙
STREET LIGHT	⊙
FIRE HYDRANT	⊙
LID BASIN	⊙

- EXISTING EASEMENTS**
- APPURTENANT EASEMENT FOR PUBLIC UTILITIES, INGRESS & EGRESS, PARKING, LANDSCAPING, DRAINAGE, RETAINING WALLS OVER 60" STRIP PER BOOK 127, PAGES 88 TO 89, INCLUSIVE
 - ROADWAY & PUBLIC UTILITY EASEMENT TO OAK VIEW PARTNERSHIP (PARCEL 1) PER DOC. #89-003407
 - PUBLIC UTILITY EASEMENT TO OAK VIEW PARTNERSHIP (PARCEL 2) PER DOC. #89-003407
 - 10' WATERLINE EASEMENT TO SOLVING MUN. IMP. DIST. PER 1959 OR 565
 - 10' SEWERLINE EASEMENT TO OAK VIEW PARTNERSHIP PER DOC. #89-003408
 - LANDSCAPE EASEMENT TO OAK VIEW PARTNERSHIP (PARCEL 3) PER DOC. #89-003407
 - SLOPE EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50930
 - SLOPE EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50389
 - RIGHT-OF-WAY EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50929
 - RIGHT-OF-WAY EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50389

BASIS OF BEARINGS

THE HORIZONTAL DATUM FOR THIS SURVEY IS THE NORTH AMERICAN DATUM OF 1983, CORRS 1996 ADJUSTMENT [NAD83(2011)], EPOCH DATE OF 2010.0000.

THE PROJECTION USED IS THE CALIFORNIA COORDINATE SYSTEM OF 1983 (CCSR3), ZONE 5 PROJECTION.

WALLACE GROUP CONTROL POINT #4 11061, 11046, AND 11048 WERE USED AS CONTROL FOR SUPPLEMENTAL TOPOGRAPHIC MAPPING.

ALL MEASUREMENTS LISTED, SHOWN AND REPRESENTED HEREON ARE BASED ON GRID DISTANCES OF THE CALIFORNIA COORDINATE SYSTEM OF 1983 ZONE 5 PROJECTION. THE COMBINED SCALE FACTOR FOR THE PROJECT IS 0.999992314. THIS SCALE FACTOR WAS CALCULATED USING AN ELEVATION OF 459.73 FEET FOR PT. NO. 3. DIVIDE THE DISTANCES HEREON BY THE COMBINED SCALE FACTOR TO OBTAIN GROUND DISTANCES. ALL DISTANCES SHOWN ARE U.S. SURVEY FEET.

THE CONVERGENCE ANGLE IS -17'47.5" AT PT. NO. 3

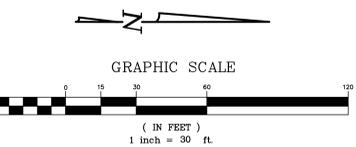
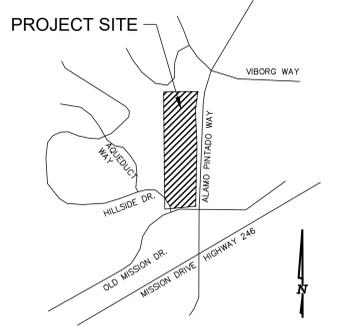
BENCHMARK

THE ORTHOMETRIC HEIGHTS (ELEVATIONS) ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) PER THE CITY OF SOLVING BENCHMARK INDEX. THIS SURVEY TIED TO THE POINT DESIGNATED AS PT. NO. 91-35 OF SAID INDEX BEING A 2" BRASS CAP INSCRIBED SOLVING 91-35 AND HAVING A PUBLISHED ELEVATION OF 470.40' DATUM: NAVD88

EARTHWORK QUANTITIES

RAW CUT	36,442 C.Y. OUT
RAW FILL	19,667 C.Y. FILL
	16,775 C.Y. NET CUT

*VALUES ARE RAW AND DO NOT LOSSES DUE TO COMPACTION



INDEX

SHEET NO.	DESCRIPTION
C-1	TITLE SHEET
C-2	GRADING PLAN
C-3	GRADING PLAN
C-4	SECTIONS
C-5	COMPOSITE UTILITY PLAN

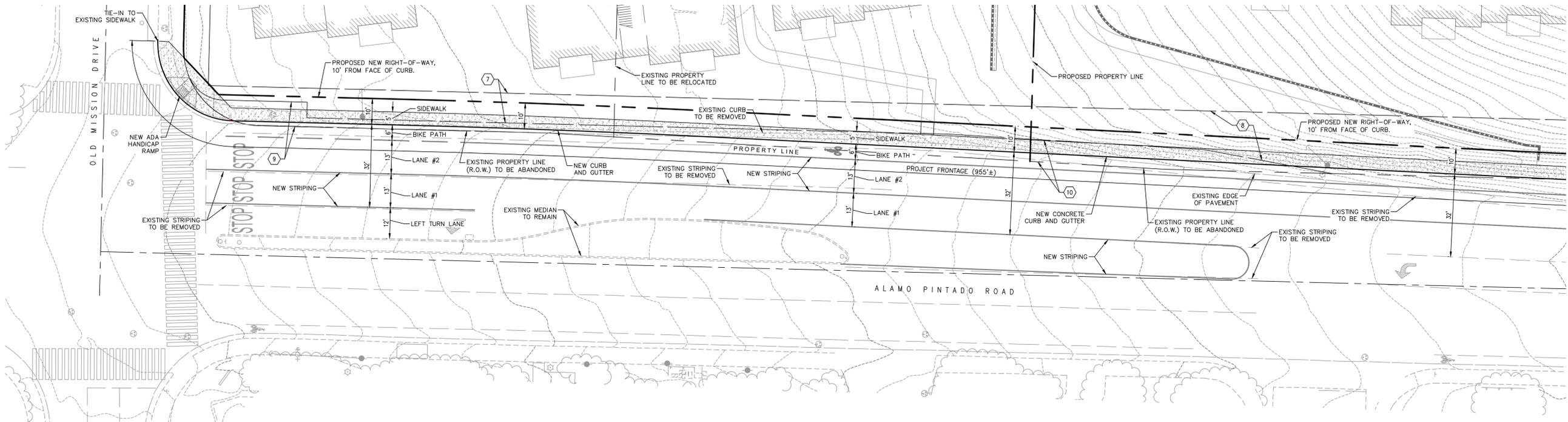
VICINITY MAP
N.T.S.

SHEET: C-1
DATE: 07/31/2024

BETHEL engineering

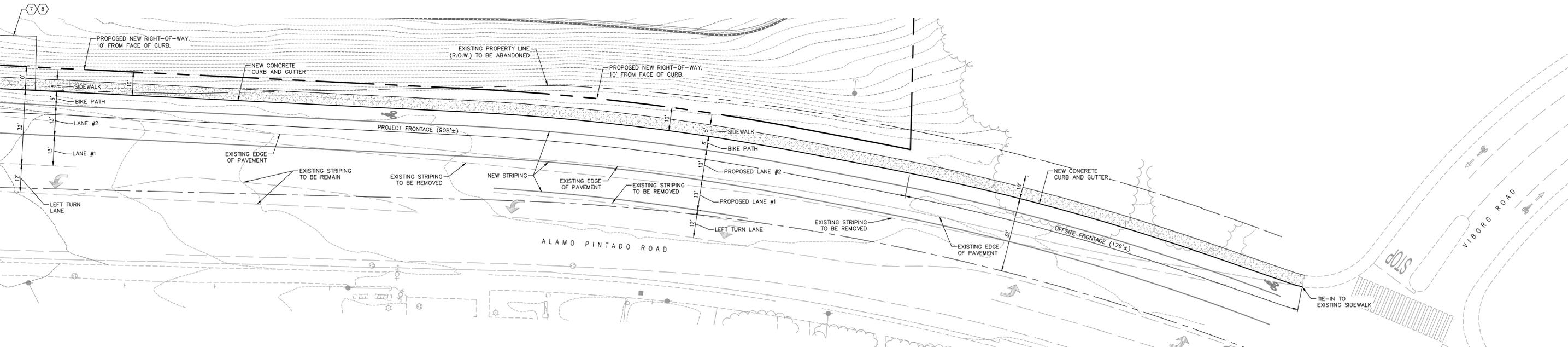
2624 Airport Drive
Santa Maria, California 93455
(805) 934-5767

RUSSELL J. GARRISON, P.E. LIC. NO. 59987



MATCHLINE STA: SEE BELOW FOR CONTINUATION

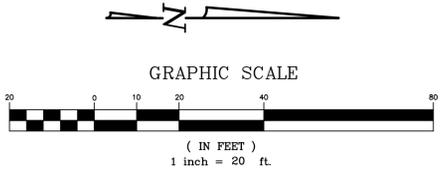
MATCHLINE STA: SEE ABOVE FOR CONTINUATION



LEGEND

	EXISTING STRIPING
	EXISTING EDGE OF PAVEMENT
	EXISTING CONCRETE (CURBS/SIDEWALK)
	EXISTING CONTOURS
	ROAD CENTERLINE
	EASEMENTS
	PROPERTY LINE
	PROPOSED STRIPING
	PROPOSED CURB FACE
	PROPOSED CONCRETE FLATWORK
	CONCRETE
	LANDSCAPE

- EXISTING EASEMENTS**
- ⑦ SLOPE EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50930 (TO BE ABANDONED)
 - ⑧ SLOPE EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50388 (TO BE ABANDONED)
 - ⑨ RIGHT-OF-WAY EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50929 (TO BE ABANDONED)
 - ⑩ RIGHT-OF-WAY EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50389 (TO BE ABANDONED)



PUBLIC ROADWAY IMPROVEMENTS

SIDEWALK AND STREET IMPROVEMENTS FOR WILDWOOD DEVELOPMENT

SHEET: 1 OF 2
DATE: 11/04/2024

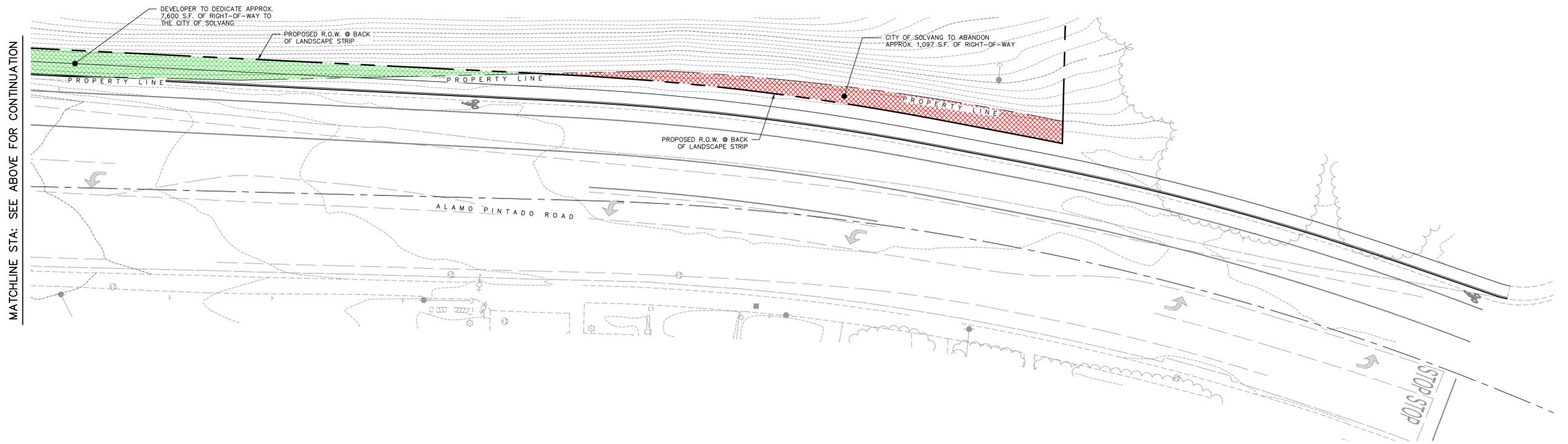
bethel
engineering

2624 Airpark Drive
Santa Maria, California 93455
(805) 934-5767

RUSSELL J. GARRISON, P.E. LIC. NO. 59987



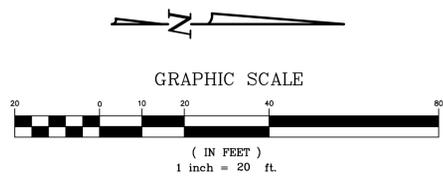
MATCHLINE STA: SEE BELOW FOR CONTINUATION



MATCHLINE STA: SEE ABOVE FOR CONTINUATION

SUMMARY OF R.O.W. ADJUSTMENTS

DEVELOPER R.O.W. DEDICATION:	7,600 S.F.
CITY R.O.W. ABANDONMENT:	1,097 S.F.



PUBLIC ROADWAY IMPROVEMENTS

SIDEWALK AND STREET IMPROVEMENTS FOR WILDWOOD DEVELOPMENT

SHEET: 2 OF 2
DATE: 11/01/2024

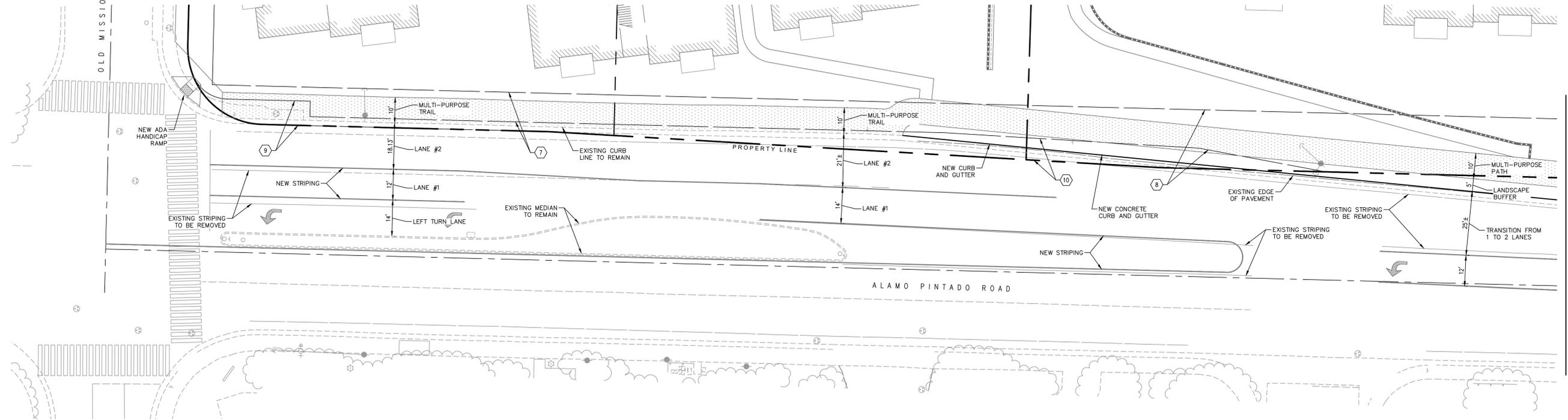
bethel engineering

2624 Airpark Drive
Santa Maria, California 93455
(805) 934-5767

RUSSELL J. GARRISON, P.E. LIC. NO. 59987

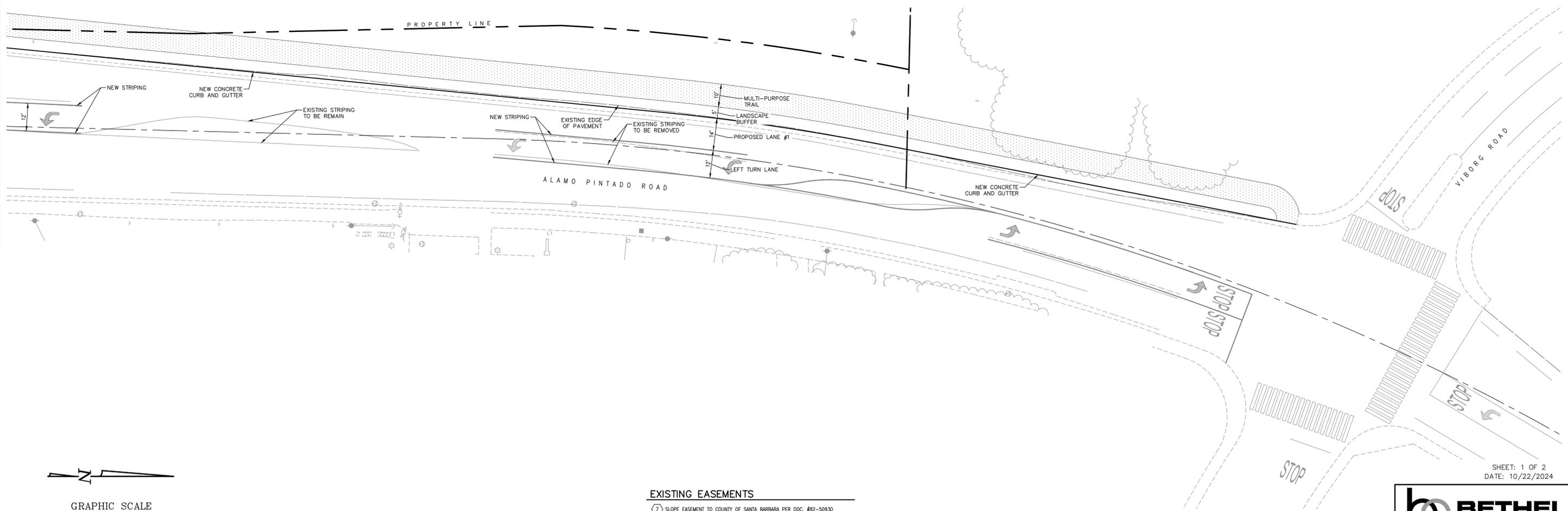
ALAMO PINTADO ROAD

PUBLIC ROADWAY IMPROVEMENTS ON ALAMO PINTADO ROAD FOR WILDWOOD DEVELOPMENT



MATCHLINE STA: SEE BELOW FOR CONTINUATION

MATCHLINE STA: SEE ABOVE FOR CONTINUATION



GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

EXISTING EASEMENTS

- (7) SLOPE EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50930
- (8) SLOPE EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50388
- (9) RIGHT-OF-WAY EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50929
- (10) RIGHT-OF-WAY EASEMENT TO COUNTY OF SANTA BARBARA PER DOC. #82-50389

SHEET: 1 OF 2
DATE: 10/22/2024

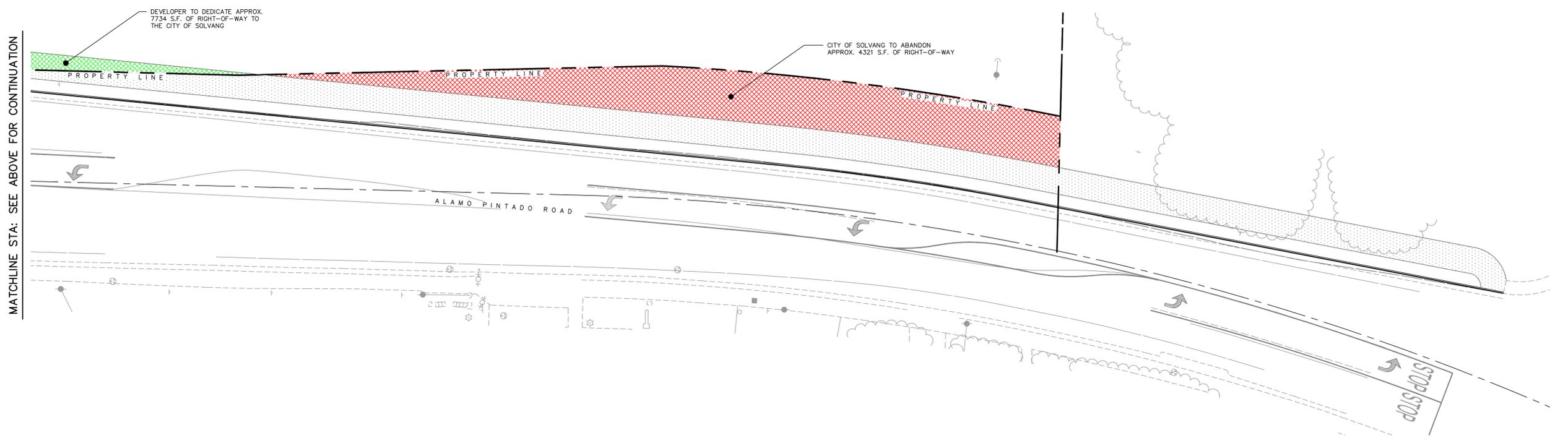
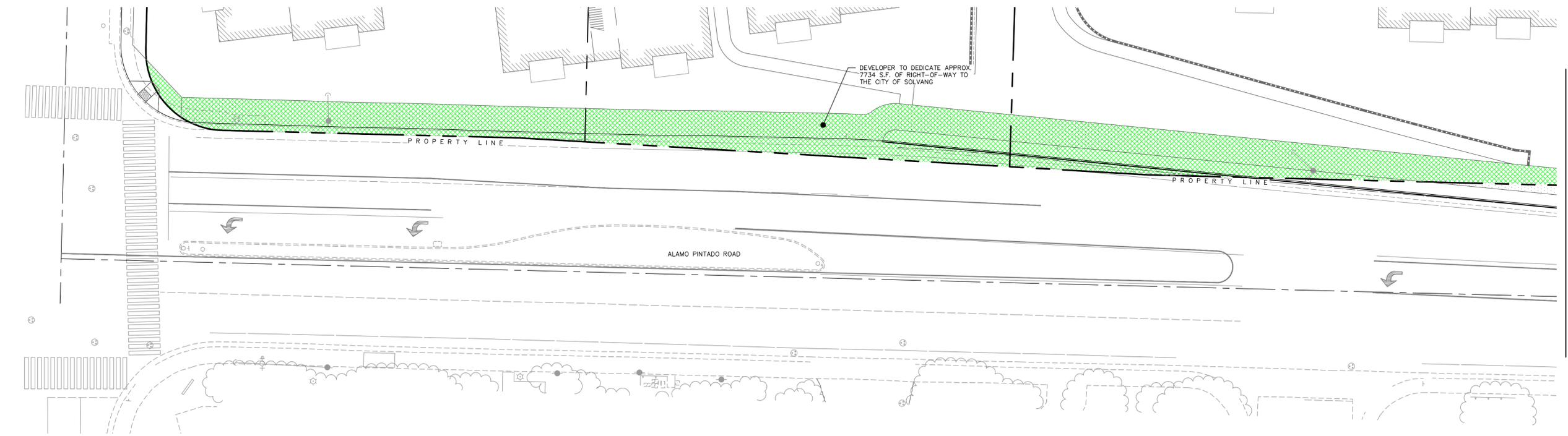


2624 Airpark Drive
Santa Maria, California 93455
(805) 934-5767

RUSSELL J. GARRISON, P.E. LIC. NO. 59987

ALAMO PINTADO ROAD

PUBLIC ROADWAY IMPROVEMENTS ON ALAMO PINTADO ROAD FOR WILDWOOD DEVELOPMENT



GRAPHIC SCALE



(IN FEET)
1 inch = 20 ft.

SHEET: 2 OF 2
DATE: 10/22/2024



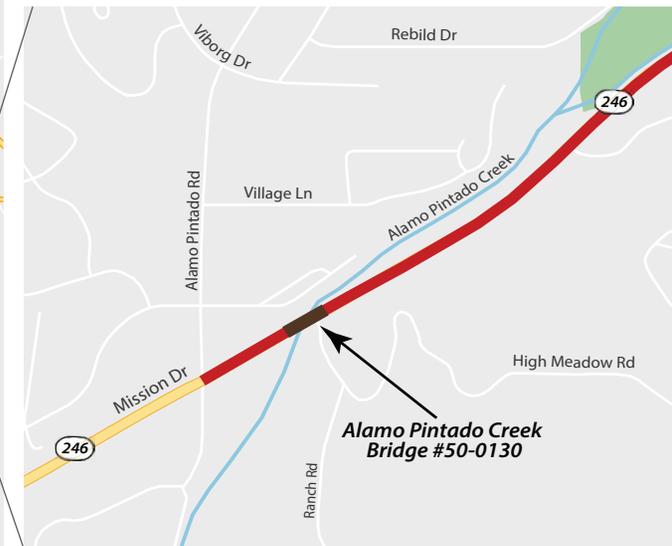
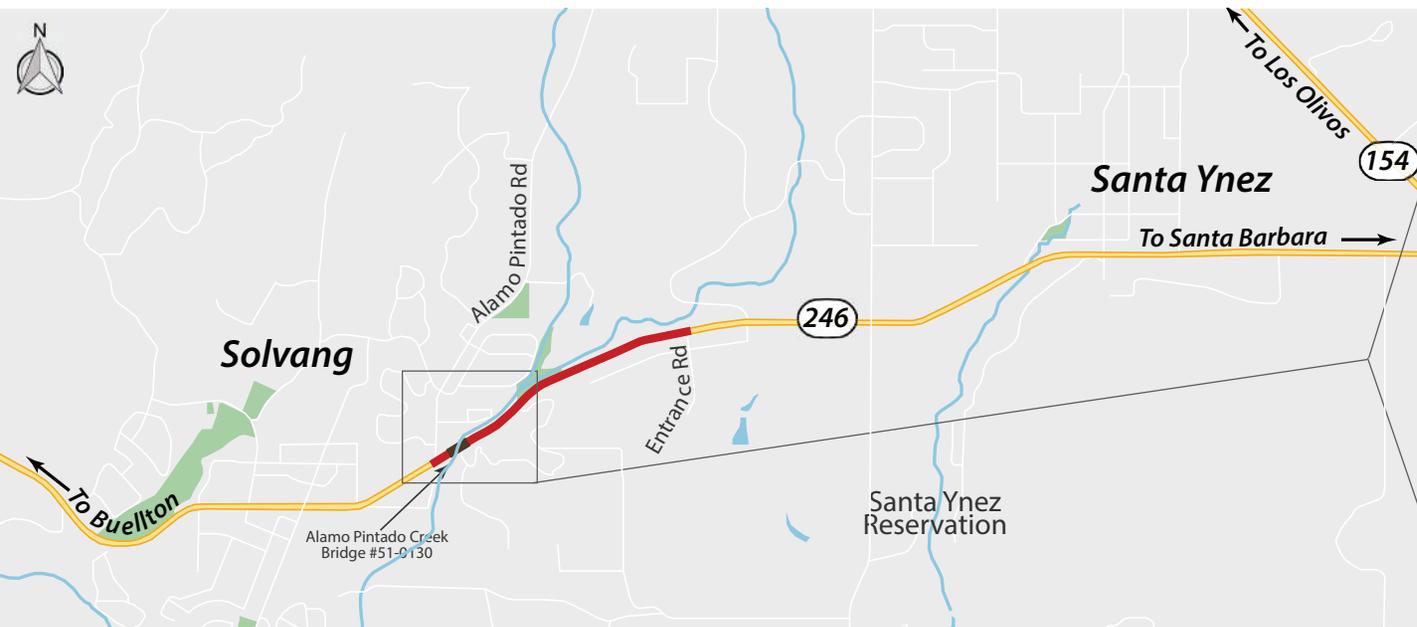
2624 Airpark Drive
Santa Maria, California 93455
(805) 934-5767

RUSSELL J. GARRISON, P.E. LIC. NO. 59987

ALAMO PINTADO CREEK BRIDGE REPLACEMENT PLANS

Alamo Pintado Creek Bridge Replacement

Santa Barbara County - Highway 246 - Post Mile 30.3/31.4



Description

The Alamo Pintado Bridge Replacement is located on Highway 246 in the City of Solvang between the Alamo Pintado Rd Intersection and Entrance Rd. The project proposes to replace the Alamo Pintado Creek Bridge and upgrade the existing curb ramps at the Alamo Pintado Rd intersection. In coordination with local partners, the project will also incorporate complete streets features by constructing a Class I bikeway on the bridge. The bikeway will be extended to the Alamo Pintado Rd intersection on the north side of Highway 246 and east along Highway 246 to where the bike path begins.

Purpose & Need

The scope of this project is to maintain traffic along the corridor by addressing deficiencies in the existing Alamo Pintado Creek Bridge, primarily due to stability concerns. The existing bridge exhibits critical scouring and the bridge deck exhibits cracking, which could lead to bridge pier and deck failure. Additionally, it does not have sufficient flow capacity during a 100-year event requiring the bridge to be closed during large storm events. The project will also upgrade existing pedestrian facilities within the project limits that do not meet current ADA standards.

Current Schedule

Approve Proj Initiation Doc.	Complete
Approve Proj. Report & Environ. Doc.	Summer 2025
100% Design Completion	Summer 2028
Begin Construction	Early 2029
End Construction	Summer 2030

Funding Source

Fund Source SHOPP
 Construction Capital Estimate \$18,462,000
 Right of Way Capital Estimate \$2,675,000

Contact

Project Manager
 David Emerson
 david.emerson@dot.ca.gov
 (805) 748-1315



ACCIDENT RATE WORKSHEETS



ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

Project: Wildwood Project **File Name:** Accident Rate Worksheet 7 Years
Project #: 23080.01
Analyst: GOM
Date: 9/12/2024

N/S Street: Alamo Pintado Road
E/W Street: Old Mission Drive

Weekday:
PM Peak Hour Entering Volume: 1076
Peak Hour Factor: 10.58
-----OR-----
Total Approach ADT: N/A

Weekend:
PM Peak Hour Entering Volume OR ADT: 75% (as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)

Period Analyzed (years): 7

Number of Accidents: 4

Million Entering Vehicle Miles: 27.01 million entering vehicle miles (mevm)

Accident Rate: .15 accidents per million entering vehicle miles (mevm)

Intersection Rate Group: 108

California State Average Collision Rate: 0.39



ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805) 687-4418 • (805) 682-8509-F

ACCIDENT RATE CALCULATION SHEET - FOR INTERSECTIONS

Project:	Wildwood Project	File Name:	Accident Rate Worksheet 7 Years
Project #:	23080.01		
Analyst:	GOM		
Date:	9/12/2024		
N/S Street:	Alamo Pintado Road		
E/W Street:	Mission Drive		
Weekday:			
PM Peak Hour Entering Volume:	1849		
Peak Hour Factor:	10.58		
-----OR-----			
Total Approach ADT:	N/A		
Weekend:			
PM Peak Hour Entering Volume OR ADT:	75%	(as a percentage of Weekday PM Peak Hour Entering Volume OR ADT)	
Period Analyzed (years):	7		
Number of Accidents:	15		
Million Entering Vehicle Miles:	46.42 million entering vehicle miles (mevm)		
Accident Rate:	.32 accidents per million entering vehicle miles (mevm)		
Intersection Rate Group:	<u>109</u>		
California State Average Collision Rate:	0.55		

INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

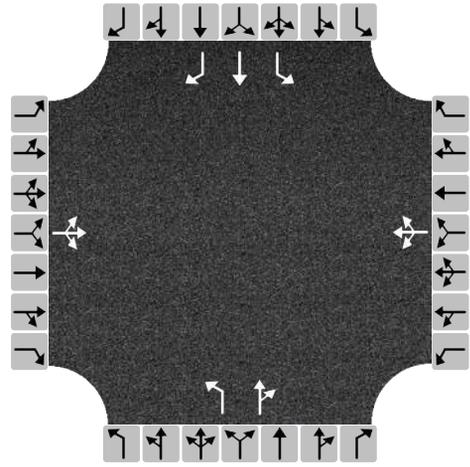
- Reference 1 - Viborg Road/Alamo Pintado Road**
- Reference 2 - Old Mission Drive/Hillside Drive**
- Reference 3 - Old Mission Drive/Alamo Pintado Road**
- Reference 4 - Mission Drive/Alamo Pintado Road**
- Reference 5 - Mission Drive/Alisal Road**

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM PEAK HOUR
Project Description	EXISTING CONDITIONS
Intersection	ALAMO PINTADO ROAD/VIBORG RO...
Jurisdiction	SOLVANG
East/West Street	VIBORG ROAD
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.86

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	59	19	62	32	14	4	33	111	68	9	127	33
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	163			58			38	208		10	148	38
Percent Heavy Vehicles	2			2			2	2		2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20			3.20	3.20		3.20	3.20	3.20
Initial Degree of Utilization, x	0.145			0.052			0.034	0.185		0.009	0.131	0.034
Final Departure Headway, h _d (s)	5.68			6.20			6.24	5.46		6.02	5.51	4.81
Final Degree of Utilization, x	0.257			0.100			0.066	0.316		0.017	0.226	0.051
Move-Up Time, m (s)	2.3			2.3			2.3	2.3		2.3	2.3	2.3
Service Time, t _s (s)	3.38			3.90			3.94	3.16		3.72	3.21	2.51

Capacity, Delay and Level of Service

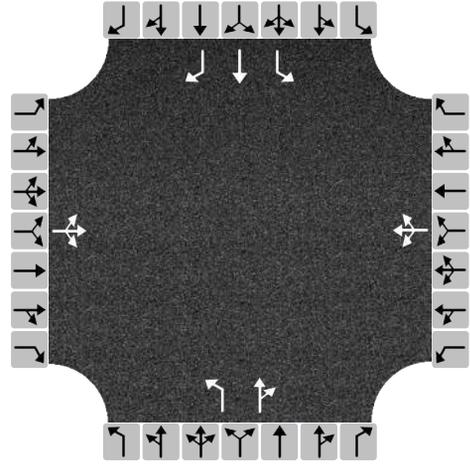
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	163			58			38	208		10	148	38
Capacity (veh/h)	634			580			577	659		598	653	749
95% Queue Length, Q ₉₅ (veh)	1.0			0.3			0.2	1.4		0.1	0.9	0.2
Control Delay (s/veh)	10.3			9.6			9.4	10.7		8.8	9.8	7.8
Level of Service, LOS	B			A			A	B		A	A	A
Approach Delay (s/veh) LOS	10.3		B	9.6		A	10.5		B	9.4		A
Intersection Delay (s/veh) LOS	10.0						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM PEAK HOUR
Project Description	EXISTING + PROJECT
Intersection	ALAMO PINTADO ROAD/VIBORG RO...
Jurisdiction	SOLVANG
East/West Street	VIBORG ROAD
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.86

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	59	19	63	32	14	4	36	114	68	9	128	33
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	164			58			42	212		10	149	38
Percent Heavy Vehicles	2			2			2	2		2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20			3.20	3.20		3.20	3.20	3.20
Initial Degree of Utilization, x	0.146			0.052			0.037	0.188		0.009	0.132	0.034
Final Departure Headway, h _d (s)	5.70			6.23			6.25	5.48		6.04	5.53	4.82
Final Degree of Utilization, x	0.259			0.101			0.073	0.322		0.018	0.229	0.051
Move-Up Time, m (s)	2.3			2.3			2.3	2.3		2.3	2.3	2.3
Service Time, t _s (s)	3.40			3.93			3.95	3.18		3.74	3.23	2.52

Capacity, Delay and Level of Service

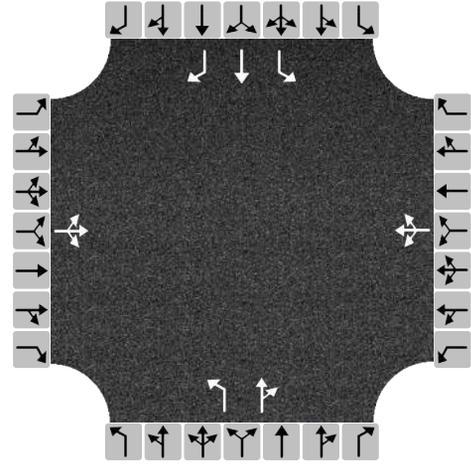
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	164			58			42	212		10	149	38
Capacity (veh/h)	632			578			576	657		596	651	746
95% Queue Length, Q ₉₅ (veh)	1.0			0.3			0.2	1.4		0.1	0.9	0.2
Control Delay (s/veh)	10.4			9.6			9.4	10.8		8.8	9.9	7.8
Level of Service, LOS	B			A			A	B		A	A	A
Approach Delay (s/veh) LOS	10.4		B	9.6		A	10.5		B	9.4		A
Intersection Delay (s/veh) LOS	10.1						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM PEAK HOUR
Project Description	CUMULATIVE CONDITIONS
Intersection	ALAMO PINTADO ROAD/VIBORG RO...
Jurisdiction	SOLVANG
East/West Street	VIBORG ROAD
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.86

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	59	19	66	32	14	4	35	116	68	9	142	33
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	167			58			41	214		10	165	38
Percent Heavy Vehicles	2			2			2	2		2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20			3.20	3.20		3.20	3.20	3.20
Initial Degree of Utilization, x	0.149			0.052			0.036	0.190		0.009	0.147	0.034
Final Departure Headway, h _d (s)	5.74			6.29			6.31	5.54		6.06	5.56	4.85
Final Degree of Utilization, x	0.267			0.102			0.071	0.329		0.018	0.255	0.052
Move-Up Time, m (s)	2.3			2.3			2.3	2.3		2.3	2.3	2.3
Service Time, t _s (s)	3.44			3.99			4.01	3.24		3.76	3.26	2.55

Capacity, Delay and Level of Service

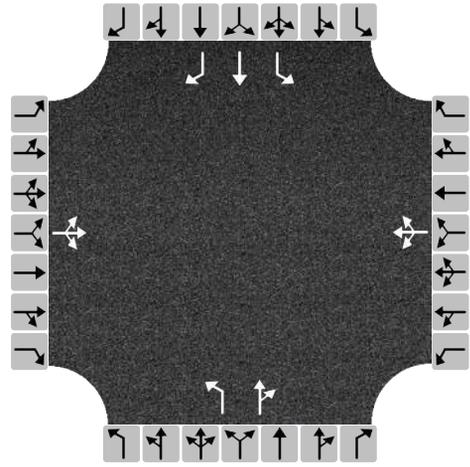
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	167			58			41	214		10	165	38
Capacity (veh/h)	627			572			571	650		594	648	743
95% Queue Length, Q ₉₅ (veh)	1.1			0.3			0.2	1.4		0.1	1.0	0.2
Control Delay (s/veh)	10.5			9.7			9.5	10.9		8.9	10.1	7.8
Level of Service, LOS	B			A			A	B		A	B	A
Approach Delay (s/veh) LOS	10.5		B	9.7		A	10.7		B	9.7		A
Intersection Delay (s/veh) LOS	10.3						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM PEAK HOUR
Project Description	CUMULATIVE + PROJECT
Intersection	ALAMO PINTADO ROAD/VIBORG RO...
Jurisdiction	SOLVANG
East/West Street	VIBORG ROAD
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.86

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	59	19	67	32	14	4	38	119	68	9	143	33
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	169			58			44	217		10	166	38
Percent Heavy Vehicles	2			2			2	2		2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20			3.20	3.20		3.20	3.20	3.20
Initial Degree of Utilization, x	0.150			0.052			0.039	0.193		0.009	0.148	0.034
Final Departure Headway, h _d (s)	5.76			6.32			6.32	5.56		6.08	5.57	4.86
Final Degree of Utilization, x	0.270			0.102			0.078	0.336		0.018	0.257	0.052
Move-Up Time, m (s)	2.3			2.3			2.3	2.3		2.3	2.3	2.3
Service Time, t _s (s)	3.46			4.02			4.02	3.26		3.78	3.27	2.56

Capacity, Delay and Level of Service

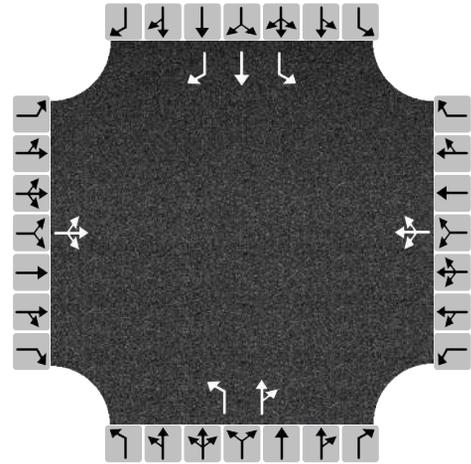
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	169			58			44	217		10	166	38
Capacity (veh/h)	625			570			570	648		592	646	740
95% Queue Length, Q ₉₅ (veh)	1.1			0.3			0.3	1.5		0.1	1.0	0.2
Control Delay (s/veh)	10.6			9.7			9.5	11.0		8.9	10.2	7.8
Level of Service, LOS	B			A			A	B		A	B	A
Approach Delay (s/veh) LOS	10.6		B	9.7		A	10.8		B	9.7		A
Intersection Delay (s/veh) LOS	10.3						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	EXISTING CONDITIONS
Intersection	ALAMO PINTADO ROAD/VIBORG RO...
Jurisdiction	SOLVANG
East/West Street	VIBORG ROAD
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.91

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	52	11	62	67	51	14	102	189	35	0	167	87
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	137			145			112	246		0	184	96
Percent Heavy Vehicles	2			2			2	2		2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20			3.20	3.20		3.20	3.20	3.20
Initial Degree of Utilization, x	0.122			0.129			0.100	0.219		0.000	0.163	0.085
Final Departure Headway, h _d (s)	6.48			6.77			6.80	6.18		6.59	6.08	5.37
Final Degree of Utilization, x	0.247			0.273			0.212	0.423		0.000	0.310	0.143
Move-Up Time, m (s)	2.3			2.3			2.3	2.3		2.3	2.3	2.3
Service Time, t _s (s)	4.18			4.47			4.50	3.88		4.29	3.78	3.07

Capacity, Delay and Level of Service

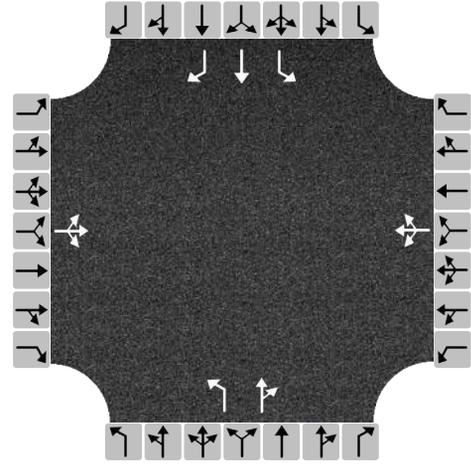
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	137			145			112	246		0	184	96
Capacity (veh/h)	555			531			529	582		0	592	671
95% Queue Length, Q ₉₅ (veh)	1.0			1.1			0.8	2.1		0.0	1.3	0.5
Control Delay (s/veh)	11.3			12.0			11.3	13.3		9.3	11.5	9.0
Level of Service, LOS	B			B			B	B			B	A
Approach Delay (s/veh) LOS	11.3		B	12.0		B	12.7		B	10.6		B
Intersection Delay (s/veh) LOS	11.8						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	EXISTING + PROJECT
Intersection	ALAMO PINTADO ROAD/VIBORG RO...
Jurisdiction	SOLVANG
East/West Street	VIBORG ROAD
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.91

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	59	11	65	67	51	14	104	191	35	0	170	87
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	148			145			114	248		0	187	96
Percent Heavy Vehicles	2			2			2	2		2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20			3.20	3.20		3.20	3.20	3.20
Initial Degree of Utilization, x	0.132			0.129			0.102	0.221		0.000	0.166	0.085
Final Departure Headway, h _d (s)	6.54			6.84			6.87	6.25		6.65	6.14	5.43
Final Degree of Utilization, x	0.270			0.276			0.218	0.431		0.000	0.319	0.144
Move-Up Time, m (s)	2.3			2.3			2.3	2.3		2.3	2.3	2.3
Service Time, t _s (s)	4.24			4.54			4.57	3.95		4.35	3.84	3.13

Capacity, Delay and Level of Service

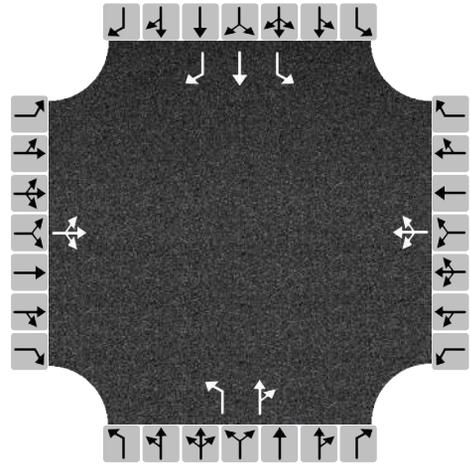
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	148			145			114	248		0	187	96
Capacity (veh/h)	550			526			524	576		0	586	663
95% Queue Length, Q ₉₅ (veh)	1.1			1.1			0.8	2.2		0.0	1.4	0.5
Control Delay (s/veh)	11.6			12.1			11.5	13.6		9.4	11.7	9.0
Level of Service, LOS	B			B			B	B			B	A
Approach Delay (s/veh) LOS	11.6		B	12.1		B	12.9		B	10.8		B
Intersection Delay (s/veh) LOS	12.0						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	CUMULATIVE CONDITIONS
Intersection	ALAMO PINTADO ROAD/VIBORG RO...
Jurisdiction	SOLVANG
East/West Street	VIBORG ROAD
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.91

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	59	11	65	67	51	14	107	208	35	0	177	87
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	148			145			118	267		0	195	96
Percent Heavy Vehicles	2			2			2	2		2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20			3.20	3.20		3.20	3.20	3.20
Initial Degree of Utilization, x	0.132			0.129			0.105	0.237		0.000	0.173	0.085
Final Departure Headway, h _d (s)	6.64			6.93			6.91	6.30		6.70	6.20	5.48
Final Degree of Utilization, x	0.274			0.279			0.226	0.467		0.000	0.335	0.146
Move-Up Time, m (s)	2.3			2.3			2.3	2.3		2.3	2.3	2.3
Service Time, t _s (s)	4.34			4.63			4.61	4.00		4.40	3.90	3.18

Capacity, Delay and Level of Service

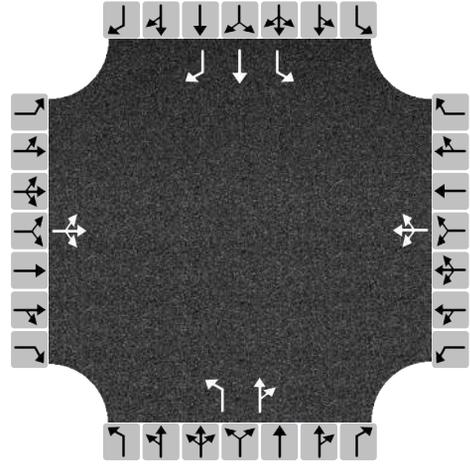
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	148			145			118	267		0	195	96
Capacity (veh/h)	542			519			521	572		0	581	656
95% Queue Length, Q ₉₅ (veh)	1.1			1.1			0.9	2.5		0.0	1.5	0.5
Control Delay (s/veh)	11.8			12.3			11.6	14.4		9.4	12.0	9.1
Level of Service, LOS	B			B			B	B			B	A
Approach Delay (s/veh) LOS	11.8		B	12.3		B	13.5		B	11.0		B
Intersection Delay (s/veh) LOS	12.3						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	CUMULATIVE + PROJECT
Intersection	ALAMO PINTADO ROAD/VIBORG RO...
Jurisdiction	SOLVANG
East/West Street	VIBORG ROAD
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.91

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	52	11	68	67	51	14	109	210	35	0	180	87
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	144			145			120	269		0	198	96
Percent Heavy Vehicles	2			2			2	2		2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20			3.20	3.20		3.20	3.20	3.20
Initial Degree of Utilization, x	0.128			0.129			0.106	0.239		0.000	0.176	0.085
Final Departure Headway, h _d (s)	6.61			6.94			6.90	6.29		6.69	6.18	5.47
Final Degree of Utilization, x	0.264			0.280			0.229	0.470		0.000	0.340	0.145
Move-Up Time, m (s)	2.3			2.3			2.3	2.3		2.3	2.3	2.3
Service Time, t _s (s)	4.31			4.64			4.60	3.99		4.39	3.88	3.17

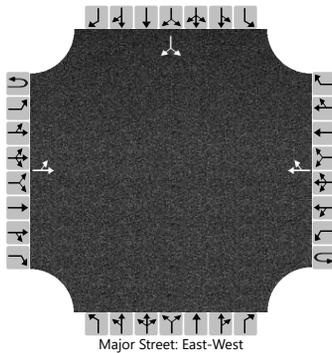
Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LTR			L	TR		L	T	R
Flow Rate, v (veh/h)	144			145			120	269		0	198	96
Capacity (veh/h)	545			519			522	573		0	582	658
95% Queue Length, Q ₉₅ (veh)	1.1			1.1			0.9	2.5		0.0	1.5	0.5
Control Delay (s/veh)	11.7			12.3			11.6	14.4		9.4	12.0	9.1
Level of Service, LOS	B			B			B	B			B	A
Approach Delay (s/veh) LOS	11.7		B	12.3		B	13.6		B	11.1		B
Intersection Delay (s/veh) LOS	12.3						B					

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB			Intersection	HILLSIDE DRIVE/OLD MISSION DRIVE		
Agency/Co.	ATE			Jurisdiction	SOLVANG		
Date Performed	7/29/2024			East/West Street	OLD MISSION DRIVE		
Analysis Year	2024			North/South Street	HILLSIDE DRIVE		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.82		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	EXISTING CONDITIONS						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6	7	8	9		10	11	12	
Priority																
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0		0	1	0	
Configuration		LT						TR							LR	
Volume (veh/h)		0	24				46	4					4		1	
Percent Heavy Vehicles (%)		3											3		3	
Proportion Time Blocked																
Percent Grade (%)													0			
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0													6	
Capacity, c (veh/h)		1536													928	
v/c Ratio		0.00													0.01	
95% Queue Length, Q ₉₅ (veh)		0.0													0.0	
Control Delay (s/veh)		7.3	0.0												8.9	
Level of Service (LOS)		A	A												A	
Approach Delay (s/veh)		0.0													8.9	
Approach LOS		A													A	

HCS Two-Way Stop-Control Report

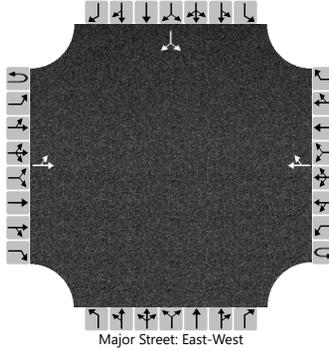
General Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Time Analyzed	AM PEAK HOUR
Intersection Orientation	East-West
Project Description	EXISTING + PROJECT

Site Information

Intersection	HILLSIDE DRIVE/OLD MISSION DRIVE
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	HILLSIDE DRIVE
Peak Hour Factor	0.82
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		0	24				46	14						33		2
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type Storage					Undivided											

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

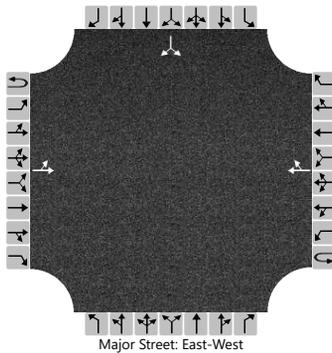
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0														43	
Capacity, c (veh/h)		1520														908	
v/c Ratio		0.00														0.05	
95% Queue Length, Q ₉₅ (veh)		0.0														0.1	
Control Delay (s/veh)		7.4	0.0													9.2	
Level of Service (LOS)		A	A													A	
Approach Delay (s/veh)		0.0												9.2			
Approach LOS		A												A			

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB			Intersection	HILLSIDE DRIVE/OLD MISSION DRIVE		
Agency/Co.	ATE			Jurisdiction	SOLVANG		
Date Performed	7/29/2024			East/West Street	OLD MISSION DRIVE		
Analysis Year	2024			North/South Street	HILLSIDE DRIVE		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.82		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	CUMULATIVE CONDITIONS						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	
Configuration		LT						TR							LR	
Volume (veh/h)		0	25				47	4						4		1
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

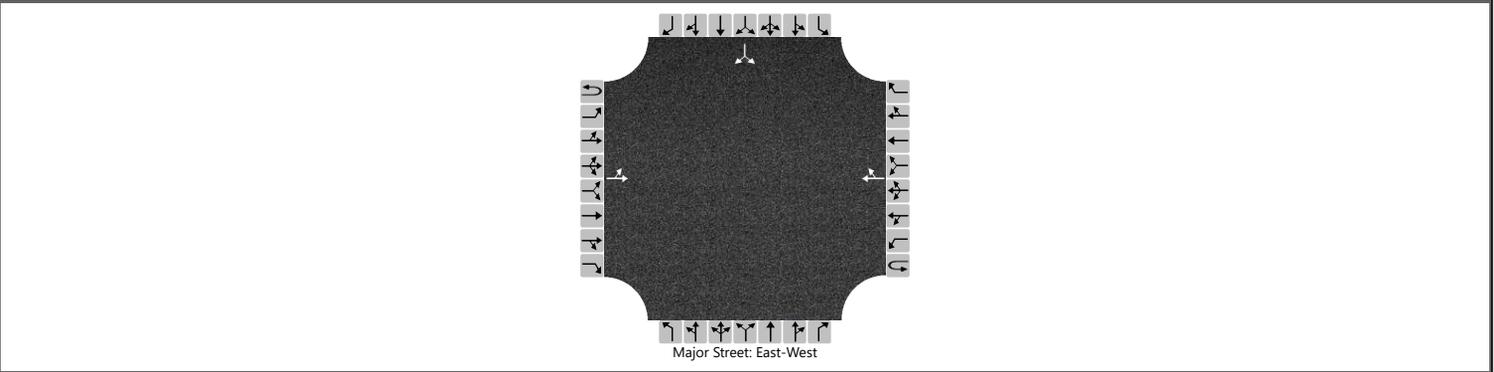
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0													6		
Capacity, c (veh/h)		1534													925		
v/c Ratio		0.00													0.01		
95% Queue Length, Q ₉₅ (veh)		0.0													0.0		
Control Delay (s/veh)		7.3	0.0												8.9		
Level of Service (LOS)		A	A												A		
Approach Delay (s/veh)		0.0												8.9			
Approach LOS		A												A			

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB			Intersection	HILLSIDE DRIVE/OLD MISSION DRIVE		
Agency/Co.	ATE			Jurisdiction	SOLVANG		
Date Performed	7/29/2024			East/West Street	OLD MISSION DRIVE		
Analysis Year	2024			North/South Street	HILLSIDE DRIVE		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.82		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	CUMULATIVE + PROJECT						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		0	25				47	14						33		2
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

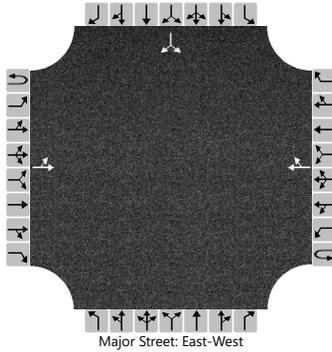
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		0														43	
Capacity, c (veh/h)		1519														905	
v/c Ratio		0.00														0.05	
95% Queue Length, Q ₉₅ (veh)		0.0														0.1	
Control Delay (s/veh)		7.4	0.0													9.2	
Level of Service (LOS)		A	A													A	
Approach Delay (s/veh)		0.0												9.2			
Approach LOS		A												A			

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB			Intersection	HILLSIDE DRIVE/OLD MISSION DRIVE		
Agency/Co.	ATE			Jurisdiction	SOLVANG		
Date Performed	7/29/2024			East/West Street	OLD MISSION DRIVE		
Analysis Year	2024			North/South Street	HILLSIDE DRIVE		
Time Analyzed	PM PEAK HOUR			Peak Hour Factor	0.85		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	EXISTING CONDITIONS						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0	0	0	0	0	0	1	0	
Configuration		LT						TR							LR	
Volume (veh/h)		2	93				101	5						9		1
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

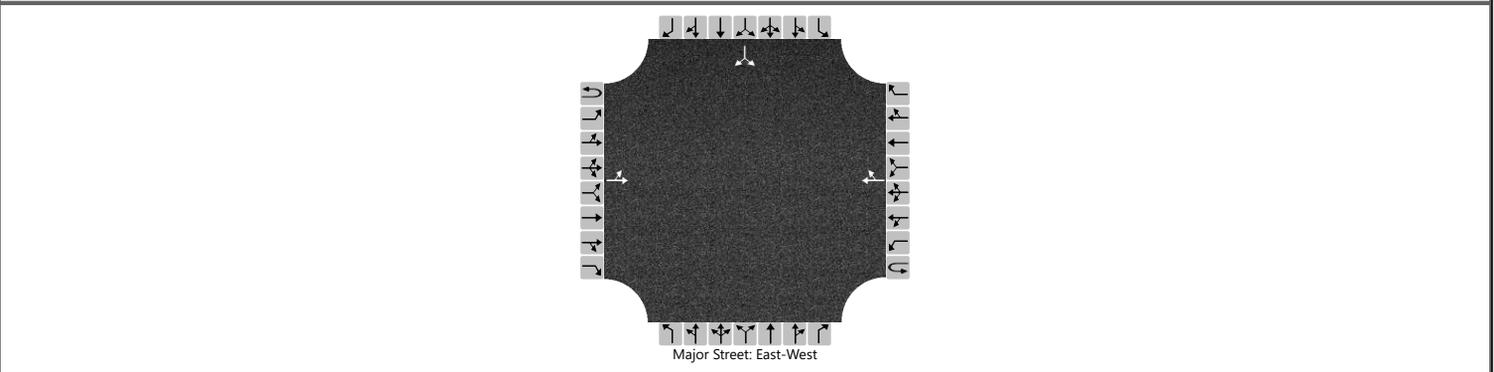
Flow Rate, v (veh/h)		2													12		
Capacity, c (veh/h)		1456													763		
v/c Ratio		0.00													0.02		
95% Queue Length, Q ₉₅ (veh)		0.0													0.0		
Control Delay (s/veh)		7.5	0.0												9.8		
Level of Service (LOS)		A	A												A		
Approach Delay (s/veh)		0.2												9.8			
Approach LOS		A												A			

AWD = 9.5 sec. (LOS A)

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB			Intersection	HILLSIDE DRIVE/OLD MISSION DRIVE		
Agency/Co.	ATE			Jurisdiction	SOLVANG		
Date Performed	7/29/2024			East/West Street	OLD MISSION DRIVE		
Analysis Year	2024			North/South Street	HILLSIDE DRIVE		
Time Analyzed	PM PEAK HOUR			Peak Hour Factor	0.85		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	EXISTING + PROJECT						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		3	93				101	36						27		2
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

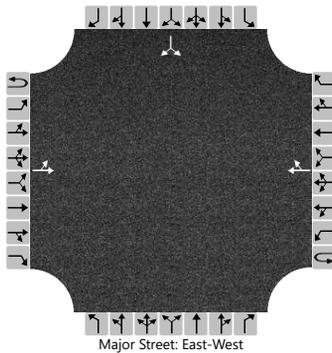
Flow Rate, v (veh/h)		4														34	
Capacity, c (veh/h)		1412														738	
v/c Ratio		0.00														0.05	
95% Queue Length, Q ₉₅ (veh)		0.0														0.1	
Control Delay (s/veh)		7.6	0.0													10.1	
Level of Service (LOS)		A	A													B	
Approach Delay (s/veh)		0.3												10.1			
Approach LOS		A												B			

AWD = 9.8 sec. (LOS A)

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB			Intersection	HILLSIDE DRIVE/OLD MISSION DRIVE		
Agency/Co.	ATE			Jurisdiction	SOLVANG		
Date Performed	7/29/2024			East/West Street	OLD MISSION DRIVE		
Analysis Year	2024			North/South Street	HILLSIDE DRIVE		
Time Analyzed	PM PEAK HOUR			Peak Hour Factor	0.85		
Intersection Orientation	East-West			Analysis Time Period (hrs)	0.25		
Project Description	CUMULATIVE CONDITIONS						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT						TR							LR	
Volume (veh/h)		2	94				103	5						9		1
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		2														12	
Capacity, c (veh/h)		1453														760	
v/c Ratio		0.00														0.02	
95% Queue Length, Q ₉₅ (veh)		0.0														0.0	
Control Delay (s/veh)		7.5	0.0													9.8	
Level of Service (LOS)		A	A													A	
Approach Delay (s/veh)		0.2												9.8			
Approach LOS		A												A			

AWD = 9.5 sec. (LOS A)

HCS Two-Way Stop-Control Report

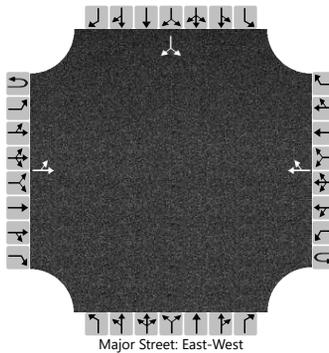
General Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Time Analyzed	PM PEAK HOUR
Intersection Orientation	East-West
Project Description	CUMULATIVE + PROJECT

Site Information

Intersection	HILLSIDE DRIVE/OLD MISSION DRIVE
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	HILLSIDE DRIVE
Peak Hour Factor	0.85
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Priority																
Number of Lanes	0	0	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		LT					TR								LR	
Volume (veh/h)		3	94				103	36						27		2
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized																
Median Type Storage							Undivided									

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4														34	
Capacity, c (veh/h)		1409														735	
v/c Ratio		0.00														0.05	
95% Queue Length, Q ₉₅ (veh)		0.0														0.1	
Control Delay (s/veh)		7.6	0.0													10.1	
Level of Service (LOS)		A	A													B	
Approach Delay (s/veh)		0.3												10.1			
Approach LOS		A												B			

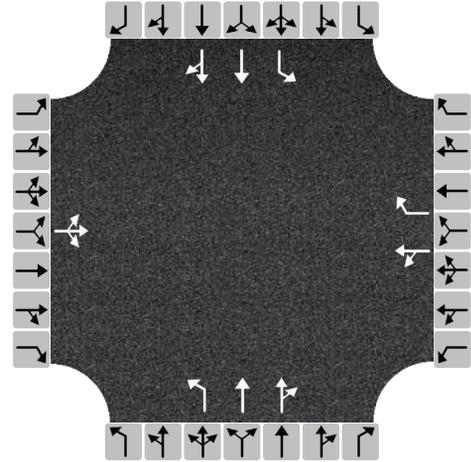
AWD = 9.8 sec. (LOS A)

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM PEAK HOUR
Project Description	EXISTING CONDITIONS
Intersection	ALAMO PINTADO ROAD/OLD MISSIO...
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.83

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	14	3	13	43	4	28	65	255	63	45	170	9
% Thrus in Shared Lane									50			50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	36			57	34		78	154	230	54	102	113
Percent Heavy Vehicles	2			2	2		2	2	2	2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.032			0.050	0.030		0.070	0.137	0.204	0.048	0.091	0.101
Final Departure Headway, h _d (s)	6.69			7.08	5.92		6.17	5.66	5.43	6.51	6.00	5.94
Final Degree of Utilization, x	0.067			0.111	0.055		0.134	0.242	0.346	0.098	0.171	0.187
Move-Up Time, m (s)	2.3			2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t _s (s)	4.39			4.78	3.62		3.87	3.36	3.13	4.21	3.70	3.64

Capacity, Delay and Level of Service

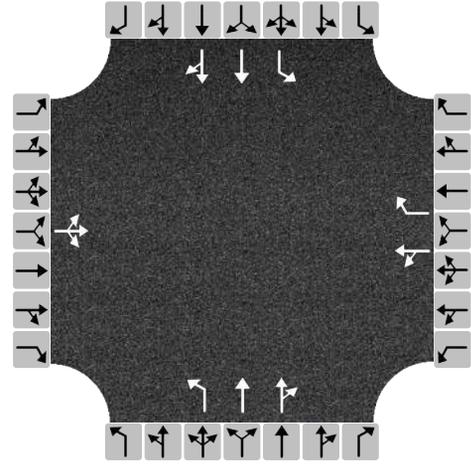
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	36			57	34		78	154	230	54	102	113
Capacity (veh/h)	538			509	608		584	636	663	553	600	606
95% Queue Length, Q ₉₅ (veh)	0.2			0.4	0.2		0.5	0.9	1.5	0.3	0.6	0.7
Control Delay (s/veh)	9.9			10.7	9.0		9.8	10.2	11.0	9.9	9.9	10.0
Level of Service, LOS	A			B	A		A	B	B	A	A	A
Approach Delay (s/veh) LOS	9.9		A	10.0		B	10.5		B	10.0		A
Intersection Delay (s/veh) LOS	10.3						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM PEAK HOUR
Project Description	EXISTING + PROJECT
Intersection	ALAMO PINTADO ROAD/OLD MISSIO...
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.83

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	20	12	36	43	13	28	73	255	63	45	170	11
% Thrus in Shared Lane									50			50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	82			67	34		88	154	230	54	102	116
Percent Heavy Vehicles	2			2	2		2	2	2	2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.073			0.060	0.030		0.078	0.137	0.204	0.048	0.091	0.103
Final Departure Headway, h _d (s)	6.68			7.25	6.16		6.44	5.93	5.70	6.80	6.30	6.22
Final Degree of Utilization, x	0.152			0.136	0.058		0.157	0.253	0.363	0.102	0.179	0.200
Move-Up Time, m (s)	2.3			2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t _s (s)	4.38			4.95	3.86		4.14	3.63	3.40	4.50	4.00	3.92

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	82			67	34		88	154	230	54	102	116
Capacity (veh/h)	539			497	584		559	607	632	529	572	579
95% Queue Length, Q ₉₅ (veh)	0.5			0.5	0.2		0.6	1.0	1.7	0.3	0.6	0.7
Control Delay (s/veh)	10.6			11.1	9.2		10.3	10.6	11.6	10.3	10.4	10.5
Level of Service, LOS	B			B	A		B	B	B	B	B	B
Approach Delay (s/veh) LOS	10.6		B	10.5		B	11.1		B	10.4		B
Intersection Delay (s/veh) LOS	10.8						B					

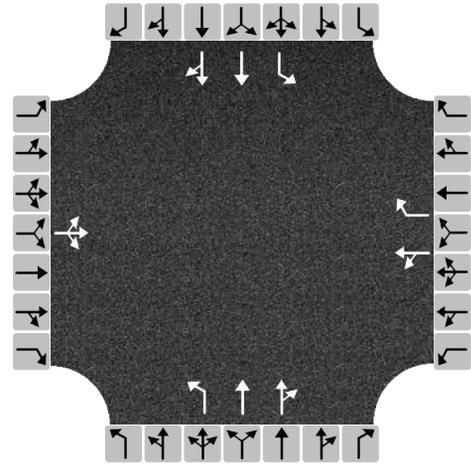
*Traffic volumes account for 18 pedestrian trips crossing Alamo Pintado Road

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM PEAK HOUR
Project Description	CUMULATIVE CONDITIONS
Intersection	ALAMO PINTADO ROAD/OLD MISSIO...
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.83

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	14	3	14	43	4	28	66	263	63	45	197	9
% Thrus in Shared Lane									50			50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	37			57	34		80	158	234	54	119	130
Percent Heavy Vehicles	2			2	2		2	2	2	2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.033			0.050	0.030		0.071	0.141	0.208	0.048	0.105	0.115
Final Departure Headway, h _d (s)	6.80			7.20	6.04		6.26	5.75	5.53	6.55	6.05	5.99
Final Degree of Utilization, x	0.071			0.113	0.057		0.138	0.253	0.360	0.099	0.199	0.215
Move-Up Time, m (s)	2.3			2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t _s (s)	4.50			4.90	3.74		3.96	3.45	3.23	4.25	3.75	3.69

Capacity, Delay and Level of Service

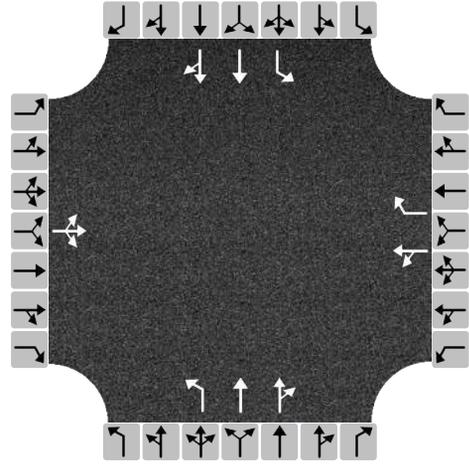
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	37			57	34		80	158	234	54	119	130
Capacity (veh/h)	530			500	596		575	626	652	549	595	601
95% Queue Length, Q ₉₅ (veh)	0.2			0.4	0.2		0.5	1.0	1.6	0.3	0.7	0.8
Control Delay (s/veh)	10.0			10.8	9.1		10.0	10.4	11.3	10.0	10.2	10.3
Level of Service, LOS	B			B	A		A	B	B	A	B	B
Approach Delay (s/veh) LOS	10.0		B	10.2		B	10.8		B	10.2		B
Intersection Delay (s/veh) LOS	10.5						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	AM PEAK HOUR
Project Description	CUMULATIVE + PROJECT
Intersection	ALAMO PINTADO ROAD/OLD MISSIO...
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.83

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	20	12	37	43	13	28	74	263	63	45	197	11
% Thrus in Shared Lane									50			50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	83			67	34		89	158	234	54	119	132
Percent Heavy Vehicles	2			2	2		2	2	2	2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.074			0.060	0.030		0.079	0.141	0.208	0.048	0.105	0.117
Final Departure Headway, h _d (s)	6.81			7.39	6.30		6.54	6.03	5.80	6.86	6.35	6.28
Final Degree of Utilization, x	0.157			0.138	0.059		0.162	0.265	0.378	0.103	0.209	0.230
Move-Up Time, m (s)	2.3			2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t _s (s)	4.51			5.09	4.00		4.24	3.73	3.50	4.56	4.05	3.98

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	83			67	34		89	158	234	54	119	132
Capacity (veh/h)	529			487	571		551	597	621	525	567	573
95% Queue Length, Q ₉₅ (veh)	0.6			0.5	0.2		0.6	1.1	1.8	0.3	0.8	0.9
Control Delay (s/veh)	10.8			11.3	9.4		10.5	10.9	12.0	10.3	10.7	10.8
Level of Service, LOS	B			B	A		B	B	B	B	B	B
Approach Delay (s/veh) LOS	10.8		B	10.6		B	11.3		B	10.7		B
Intersection Delay (s/veh) LOS	11.0						B					

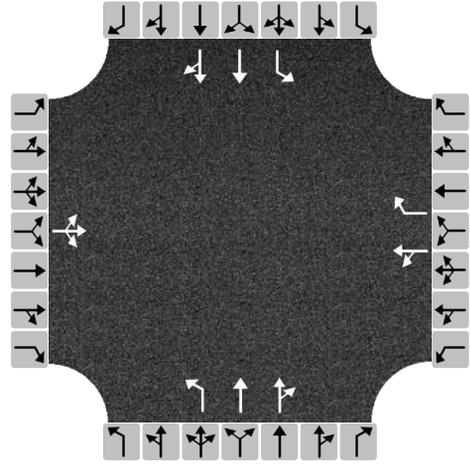
*Traffic volumes account for 18 pedestrian trips crossing Alamo Pintado Road

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	EXISTING CONDITIONS
Intersection	ALAMO PINTADO ROAD/OLD MISSIO...
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	46	15	44	116	12	79	106	182	134	72	243	27
% Thrus in Shared Lane									50			50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	111			135	83		112	96	237	76	128	156
Percent Heavy Vehicles	2			2	2		2	2	2	2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.098			0.120	0.074		0.099	0.085	0.211	0.067	0.114	0.139
Final Departure Headway, h _d (s)	7.65			7.90	6.74		7.41	6.90	6.48	7.57	7.06	6.93
Final Degree of Utilization, x	0.235			0.296	0.156		0.230	0.184	0.426	0.159	0.251	0.301
Move-Up Time, m (s)	2.3			2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t _s (s)	5.35			5.60	4.44		5.11	4.60	4.18	5.27	4.76	4.63

Capacity, Delay and Level of Service

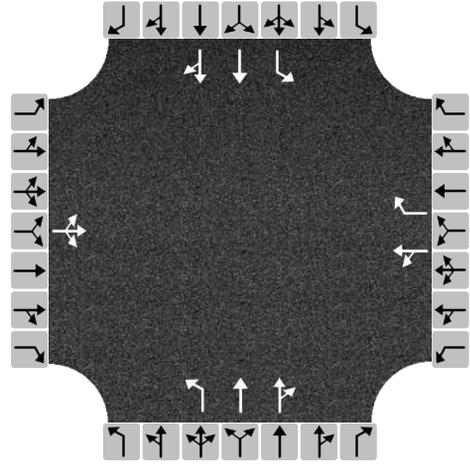
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	111			135	83		112	96	237	76	128	156
Capacity (veh/h)	470			456	534		486	522	556	475	510	519
95% Queue Length, Q ₉₅ (veh)	0.9			1.2	0.5		0.9	0.7	2.1	0.6	1.0	1.3
Control Delay (s/veh)	12.7			13.9	10.7		12.3	11.1	13.9	11.7	12.1	12.6
Level of Service, LOS	B			B	B		B	B	B	B	B	B
Approach Delay (s/veh) LOS	12.7		B	12.7		B	12.9		B	12.2		B
Intersection Delay (s/veh) LOS	12.6						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	EXISTING + PROJECT
Intersection	ALAMO PINTADO ROAD/OLD MISSIO...
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	50	24	58	116	22	79	130	182	134	72	243	33
% Thrus in Shared Lane									50			50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	139			145	83		137	96	237	76	128	163
Percent Heavy Vehicles	2			2	2		2	2	2	2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.124			0.129	0.074		0.122	0.085	0.211	0.067	0.114	0.145
Final Departure Headway, h _d (s)	7.86			8.18	7.04		7.69	7.18	6.76	7.90	7.39	7.24
Final Degree of Utilization, x	0.303			0.330	0.163		0.292	0.191	0.444	0.166	0.263	0.327
Move-Up Time, m (s)	2.3			2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t _s (s)	5.56			5.88	4.74		5.39	4.88	4.46	5.60	5.09	4.94

Capacity, Delay and Level of Service

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	139			145	83		137	96	237	76	128	163
Capacity (veh/h)	458			440	511		468	501	533	455	487	497
95% Queue Length, Q ₉₅ (veh)	1.3			1.4	0.6		1.2	0.7	2.3	0.6	1.0	1.4
Control Delay (s/veh)	13.9			14.8	11.1		13.5	11.6	14.7	12.2	12.7	13.4
Level of Service, LOS	B			B	B		B	B	B	B	B	B
Approach Delay (s/veh) LOS	13.9		B	13.5		B	13.7		B	12.9		B
Intersection Delay (s/veh) LOS	13.5						B					

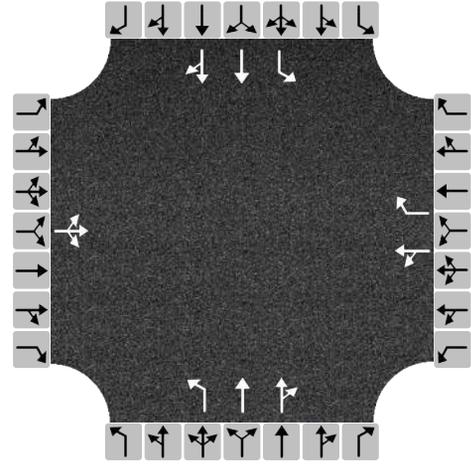
*Traffic volumes account for 18 pedestrian trips crossing Alamo Pintado Road

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	CUMULATIVE CONDITIONS
Intersection	ALAMO PINTADO ROAD/OLD MISSIO...
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	46	15	45	116	12	79	108	213	134	72	259	27
% Thrus in Shared Lane									50			50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	112			135	83		114	112	253	76	136	165
Percent Heavy Vehicles	2			2	2		2	2	2	2	2	2
Initial Departure Headway, h _d (s)	3.20			3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.099			0.120	0.074		0.101	0.100	0.225	0.067	0.121	0.146
Final Departure Headway, h _d (s)	7.83			8.08	6.91		7.50	6.99	6.60	7.70	7.19	7.07
Final Degree of Utilization, x	0.243			0.302	0.160		0.237	0.218	0.464	0.162	0.272	0.323
Move-Up Time, m (s)	2.3			2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t _s (s)	5.53			5.78	4.61		5.20	4.69	4.30	5.40	4.89	4.77

Capacity, Delay and Level of Service

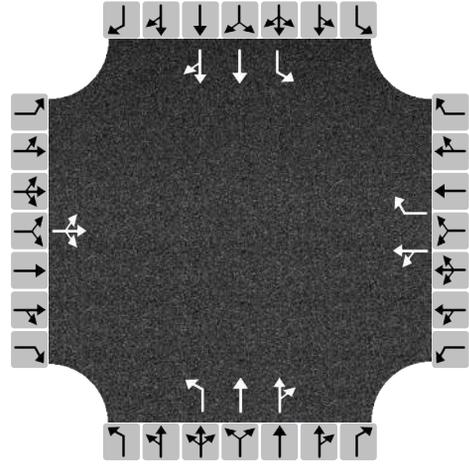
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	112			135	83		114	112	253	76	136	165
Capacity (veh/h)	460			446	521		480	515	546	467	501	509
95% Queue Length, Q ₉₅ (veh)	0.9			1.3	0.6		0.9	0.8	2.4	0.6	1.1	1.4
Control Delay (s/veh)	13.0			14.2	10.9		12.5	11.6	14.9	11.9	12.6	13.1
Level of Service, LOS	B			B	B		B	B	B	B	B	B
Approach Delay (s/veh) LOS	13.0		B	13.0		B	13.6		B	12.7		B
Intersection Delay (s/veh) LOS	13.1						B					

HCS All-Way Stop Control Report

General and Site Information

Analyst	AGB
Agency/Co.	ATE
Date Performed	7/29/2024
Analysis Year	2024
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	CUMULATIVE + PROJECT
Intersection	ALAMO PINTADO ROAD/OLD MISSIO...
Jurisdiction	SOLVANG
East/West Street	OLD MISSION DRIVE
North/South Street	ALAMO PINTADO ROAD
Peak Hour Factor	0.95

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	50	24	59	116	22	79	132	213	134	72	259	33
% Thrus in Shared Lane									50			50

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	140			145	83		139	112	253	76	136	171
Percent Heavy Vehicles	2			2	2		2	2	2	2	2	2
Initial Departure Headway, h_d (s)	3.20			3.20	3.20		3.20	3.20	3.20	3.20	3.20	3.20
Initial Degree of Utilization, x	0.124			0.129	0.074		0.124	0.100	0.225	0.067	0.121	0.152
Final Departure Headway, h_d (s)	8.02			8.35	7.21		7.78	7.27	6.87	8.03	7.51	7.37
Final Degree of Utilization, x	0.312			0.337	0.167		0.300	0.226	0.483	0.169	0.285	0.350
Move-Up Time, m (s)	2.3			2.3	2.3		2.3	2.3	2.3	2.3	2.3	2.3
Service Time, t_s (s)	5.72			6.05	4.91		5.48	4.97	4.57	5.73	5.21	5.07

Capacity, Delay and Level of Service

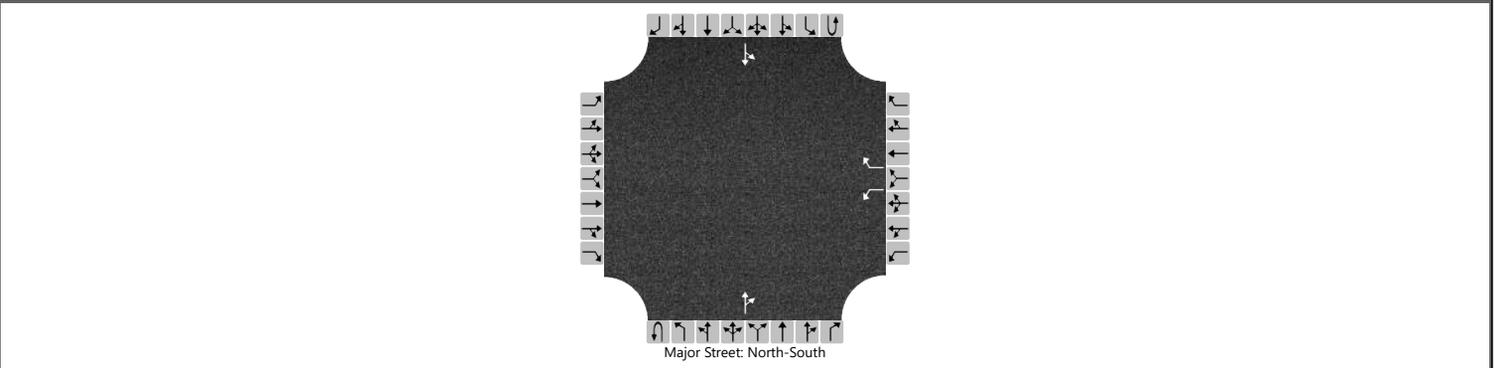
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LTR			LT	R		L	T	TR	L	T	TR
Flow Rate, v (veh/h)	140			145	83		139	112	253	76	136	171
Capacity (veh/h)	449			431	499		463	495	524	448	479	489
95% Queue Length, Q_{95} (veh)	1.3			1.5	0.6		1.2	0.9	2.6	0.6	1.2	1.6
Control Delay (s/veh)	14.3			15.2	11.3		13.8	12.1	15.8	12.4	13.2	14.0
Level of Service, LOS	B			C	B		B	B	C	B	B	B
Approach Delay (s/veh) LOS	14.3		B	13.8		B	14.4		B	13.4		B
Intersection Delay (s/veh) LOS	14.0						B					

PROJECT DRIVEWAYS – LEVEL OF SERVICE CALCULATION WORKSHEETS

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB			Intersection	HILLSIDE DRIVE/NORTHERLY DRIVEWAY		
Agency/Co.	ATE			Jurisdiction	SOLVANG		
Date Performed	7/29/2024			East/West Street	NORTHERLY DRIVEWAY		
Analysis Year	2024			North/South Street	HILLSIDE DRIVE		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	NORTHERLY DRIVEWAY CUMULATIVE + PROJECT						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						17		0			4	6		0	5	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)						0										
Right Turn Channelized						No										
Median Type Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

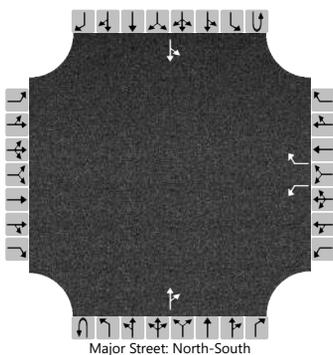
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						18		0						0			
Capacity, c (veh/h)						1004		1072						1602			
v/c Ratio						0.02		0.00						0.00			
95% Queue Length, Q ₉₅ (veh)						0.1		0.0						0.0			
Control Delay (s/veh)						8.7		8.4						7.2	0.0		
Level of Service (LOS)						A		A						A	A		
Approach Delay (s/veh)		8.7												0.0			
Approach LOS		A												A			

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB			Intersection	HILLSIDE DRIVE/NORTHERLY DRIVEWAY		
Agency/Co.	ATE			Jurisdiction	SOLVANG		
Date Performed	7/29/2024			East/West Street	NORTHERLY DRIVEWAY		
Analysis Year	2024			North/South Street	HILLSIDE DRIVE		
Time Analyzed	PM PEAK HOUR			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	NORTHERLY DRIVEWAY CUMULATIVE + PROJECT						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						10		0			7	18		0	10	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

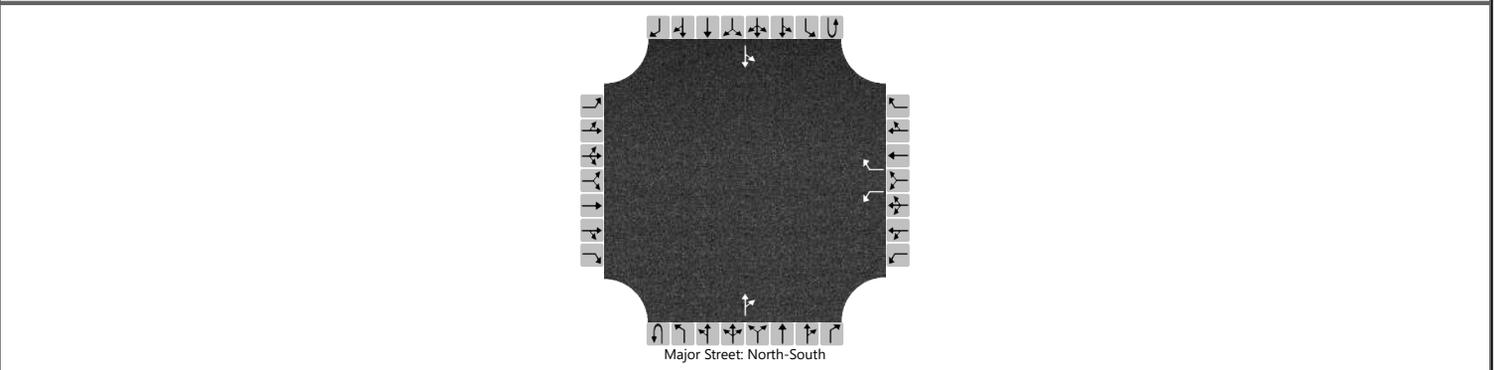
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						11		0						0		
Capacity, c (veh/h)						984		1058						1580		
v/c Ratio						0.01		0.00						0.00		
95% Queue Length, Q ₉₅ (veh)						0.0		0.0						0.0		
Control Delay (s/veh)						8.7		8.4						7.3	0.0	
Level of Service (LOS)						A		A						A	A	
Approach Delay (s/veh)					8.7								0.0			
Approach LOS					A								A			

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB			Intersection	HILLSIDE DRIVE/SOUTHERLY DRIVEWAY		
Agency/Co.	ATE			Jurisdiction	SOLVANG		
Date Performed	7/29/2024			East/West Street	SOUTHERLY DRIVEWAY		
Analysis Year	2024			North/South Street	HILLSIDE DRIVE		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.92		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	SOUTHERLY DRIVEWAY CUMULATIVE + PROJECT						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1	0	0	1	0	0	0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						13		0			10	4		0	22	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

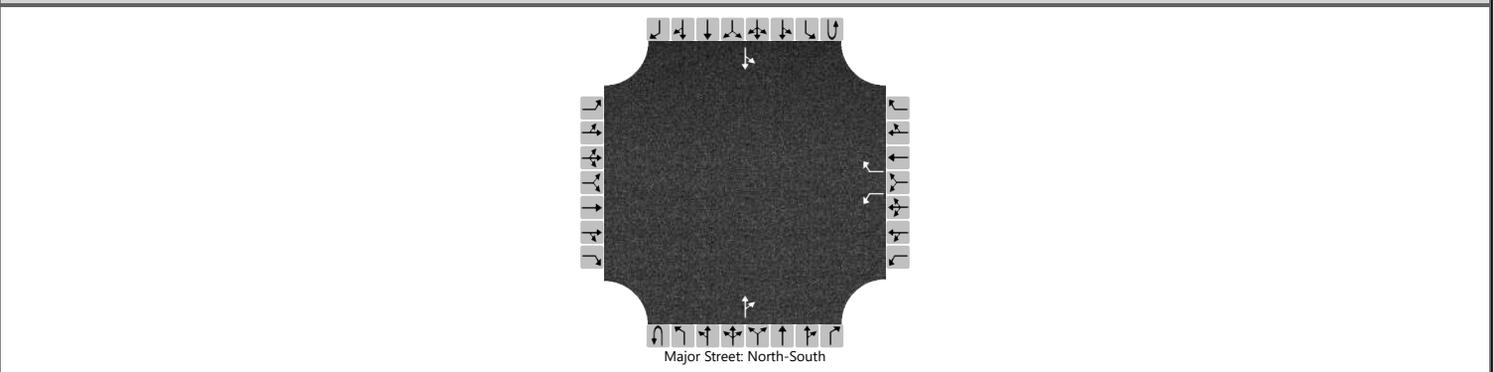
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						14		0						0		
Capacity, c (veh/h)						973		1064						1596		
v/c Ratio						0.01		0.00						0.00		
95% Queue Length, Q ₉₅ (veh)						0.0		0.0						0.0		
Control Delay (s/veh)						8.8		8.4						7.3	0.0	
Level of Service (LOS)						A		A						A	A	
Approach Delay (s/veh)					8.8								0.0			
Approach LOS					A								A			

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	AGB	Intersection	HILLSIDE DRIVE/SOUTHERLY DRIVEWAY				
Agency/Co.	ATE	Jurisdiction	SOLVANG				
Date Performed	7/29/2024	East/West Street	SOUTHERLY DRIVEWAY				
Analysis Year	2024	North/South Street	HILLSIDE DRIVE				
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.92				
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25				
Project Description	SOUTHERLY DRIVEWAY CUMULATIVE + PROJECT						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		0	0	0		1	0	1		0	1	0		0	1	0
Configuration						L		R				TR		LT		
Volume (veh/h)						9		0			25	14		0	20	
Percent Heavy Vehicles (%)						3		3						3		
Proportion Time Blocked																
Percent Grade (%)					0											
Right Turn Channelized					No											
Median Type Storage	Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)						7.1		6.2						4.1		
Critical Headway (sec)						6.43		6.23						4.13		
Base Follow-Up Headway (sec)						3.5		3.3						2.2		
Follow-Up Headway (sec)						3.53		3.33						2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)						10		0						0		
Capacity, c (veh/h)						948		1035						1560		
v/c Ratio						0.01		0.00						0.00		
95% Queue Length, Q ₉₅ (veh)						0.0		0.0						0.0		
Control Delay (s/veh)						8.8		8.5						7.3	0.0	
Level of Service (LOS)						A		A						A	A	
Approach Delay (s/veh)					8.8								0.0			
Approach LOS					A								A			