

TRAFFIC STUDY

For

***Sundale Subdivision
(TM 5466, ER 05-14-043)***

in the County of San Diego

Submitted To:

Randall McManus

Submitted By:

Darnell & Associates, Inc.

Revised: January 16, 2007

Original: August 31, 2006

Darnell & ASSOCIATES, INC.

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

January 16, 2007

Mr. Randall McManus
Law Office of Randall McManus
2295 Needham Road #49
El Cajon, CA 92020

D&A Ref. No.: 060712

Subject: Traffic Study for the Proposed Sundale Subdivision (TM 5466, ER 05-14-043) Located Between Sundale Road and Hillsdale Road East of Jamacha Road (State Route 54) in the Valle de Oro Community of the County of San Diego.

Dear Mr. McManus:

In response to the County of San Diego's December 8, 2006 comments, Darnell & Associates, Inc. (D&A) has revised our August 31, 2006 traffic impact study for the proposed Sundale Subdivision located between Sundale Road and Hillsdale Road east of Jamacha Road (State Route 54) in the Valle de Oro community of the County of San Diego. (A copy of our written responses to each of the County's comments is provided directly behind this letter and in Appendix E of the report.) This report analyzes the traffic impacts associated with the proposed project on local roadways and intersections under existing and existing plus project conditions.

As a part of your submittals, you will need to include a letter agreeing to pay the County's Transportation Impact Fee (TIF) to mitigate your cumulative impact.

If you have any questions, please feel free to contact the office.

Sincerely,

DARNELL & ASSOCIATES, INC.



Candice M. Tritt
Assistant Transportation Planner



Vicki S Haskell, P.E.
Senior Transportation Engineer
RCE 63754



Date Signed: 1-16-07

vsh/cmt
060712-sundale-rpt2 (Jan 07)-SU/01-07

Darnell & ASSOCIATES, INC.

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

MEMORANDUM

DATE: January 16, 2007

TO: Randall McManus, Law Office of Randall McManus

FROM: Vicki S. Haskell, P.E. 

D&A Ref. No: 060712

RE: Sundale (TM 5466, ER 05-14-043) Traffic Study – Responses to County of San Diego's December 8, 2006 Comments

Darnell & Associates, Inc. (D&A) has reviewed the County of San Diego's December 8, 2006 comments on our August 31, 2006 traffic study for the Sundale Subdivision (TM 5466). The following summarizes our response to each of the County's comments. These responses have been incorporated into our January 2007 iteration of our traffic study.

- Comment 1:** Due to the existing and projected LOS deficiencies, the TS should assess the project's potential direct and cumulative impacts to Jamacha Road/SR-54, south of Hillsdale Road.
- Response 1:** Our December 8, 2006 traffic study evaluated the project's potential direct impacts to Jamacha Road (SR-54) south of Hillsdale Road and found that the proposed project will only assign 68 daily trips to this segment of Jamacha Road (SR-54) and would thus not have a significant direct impact. The traffic study has been expanded to discuss the potential cumulative impacts to Jamacha Road/SR-54 south of Hillsdale Road.
- Comment 2:** Jamacha Road/SR-54 is a Caltrans maintained facility. The Countywide TIF document does not identify Jamacha Road/SR-54 as a TIF roadway facility for the Valle De Oro area. If significant traffic impacts are identified, the TS must recommend non-TIF mitigation measures.
- Response 2:** The traffic study has been revised to include a discussion on the potential cumulative impacts to Jamacha Road/SR-54 south of Hillsdale Road. As discussed in the revised report, Jamacha Road/SR-54 in the vicinity of the project is expected to operate at an acceptable LOS D under 2010 conditions, thus there will not be a cumulative impact to the segment of Jamacha Road/SR-54. The traffic study has also been expanded to identify that the project will make a fair-share contribution towards the County's CIP project for the Jamacha Road (SR-54)/Campo Road (SR-94) intersection to mitigate its potential cumulative impacts to the intersection.
- Comment 3:** The TS notes (Pg. 7) that the (current) County circulation element calls for SR-54 to be constructed as a separate expressway west of the current Jamacha Road alignment. The TS should add that on August 2, 2006 the Board of Supervisors endorsed the GP 2020 road network recommendations, which included the deletion of the separate SR-54 Expressway.

Response 3: The traffic study has been revised accordingly.

Comment 4: The TS should reference (Pg. 15) of the County's updated/adopted Significance Criteria/Traffic Impact Guidelines dated September 26, 2006, which discusses PFE policies and average driver perception.

Response 4: The traffic study has been revised accordingly.

Comment 5: DPW is considering the possibility of a fair-share contribution towards the SR-54 (Jamacha Road)/SR-94 (Campo Road) Capital Improvement Program (CIP) improvement project as a mitigation measure for the project's potential cumulative impacts.

Response 5: The traffic study has been revised to include a discussion on the CIP projects in the vicinity of the proposed project.

TRAFFIC STUDY
FOR
SUNDALE SUBDIVISION
(TM 5466, ER 05-14-043)
in the County of San Diego

Submitted To:

*Randall McManus
2295 Needham Road #49
El Cajon, CA 92020*

Submitted By:

*Darnell & Associates, Inc.
1446 Front Street, Third Floor
San Diego, CA 92101-3425
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January 16, 2007

~~August 31, 2006~~

060712-sundale-rpt2 (Jan 07)-SU/01-07

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- 24-Hour Segment Counts
- AM/PM Peak Hour Turn Counts
- Excerpts from the County's -Public Road Standards
- County's Proposed GP2020 Circulation Element Road Standards
- Excerpts from the *Public Facilities Element*
- Excerpts from the County's *Draft-Guidelines for Determining Significance*
- Excerpts from Ordinance No. 9712 (N.S.), Title 7, Division 7 (new), Transportation Impact Fee
- County of San Diego TIF Valle de Oro Fee Schedule

APPENDIX B

- (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, SANDAG
- SANDAG 2010 Select Zone Forecast for TAZ 3121
- SANDAG 2010 Forecast
- County GP2020 Roadway Network & Roadway ADT
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APPENDIX C

- Existing Conditions Analysis Synchro Worksheets

APPENDIX D

- Existing + Project Conditions Analysis Synchro Worksheets

APPENDIX E

- Responses to County Comments

EXECUTIVE SUMMARY

The proposed Sundale subdivision consists of 15 estate residential dwelling units and is located in the community of Valle de Oro in the County of San Diego. The project site is located on 8.38 acres between Hillsdale Road and Sundale Road, just east of Jamacha Road (State Route 54).

The project is estimated to generate 180 daily trips. Of those, 14 trips will occur during the morning peak hour, and 18 trips will occur in the evening peak hour.

Existing Plus Project analysis demonstrates that the proposed project does not have direct impacts to roadway segments or intersections in the project vicinity.

See Section VI for a discussion on how the ~~The project will fully mitigate its potential cumulative impacts by paying the County's Transportation Impact Fee (TIF).~~

SECTION I – INTRODUCTION

PROJECT DESCRIPTION

The proposed Sundale subdivision consists of 15 estate residential dwelling units and is located in the community of Valle de Oro in the County of San Diego. The project site is located on 8.38 acres between Hillsdale Road and Sundale Road, just east of Jamacha Road (State Route 54). Currently, the site is occupied by one existing single family house and remnant structures associated with a past nursery. The house and remnant structures are proposed to be removed when the project is developed. Figure 1 shows the project's vicinity and Figure 2 shows the development site plan.

CONGESTION MANAGEMENT PROGRAM

Based on the approval of Proposition 111 in 1990, regulations require the preparation, implementation, and annual updating of a Congestion Management Program (CMP) in each of California's urbanized counties. The original CMP for the San Diego region was adopted in 1991 and has been updated periodically as an element of the Regional Transportation Plan (RTP). One required element of the CMP is a process to evaluate the transportation and traffic impacts of large projects on the regional transportation system. That process is undertaken by local agencies, project applicants, and traffic consultants through a transportation impact report usually conducted as part of the CEQA project review process. Authority for local land use decisions including project approvals and any required mitigation remains the responsibility of local jurisdictions.

The criteria for which a project is subject to the regulations as set forth in the CMP are determined by the trip generation potential for the project. Currently, the threshold is 2,400 average daily trips (ADT) or 200 peak hour trips. The proposed project will generate 180 average daily trips, 14 AM peak hour trips, and 18 PM peak hour trips (see Section III), and is therefore, not subject to CMP guidelines for traffic impact studies.

SCENARIOS STUDIED

The traffic scenarios analyzed in this report are identified as follows:

Existing Conditions refers to that condition which exists on the ground today (2006), including existing traffic and existing lane configurations at intersections and roadway segments.

Existing Plus Project Conditions refers to that condition which includes the project traffic added onto existing volumes.

LEVEL OF SERVICE

Level of Service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. Level of Service is defined on a scale of A to F; where LOS A represents the best operating conditions and LOS F represents the worst operating conditions. LOS A facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS F facilities are characterized as having forced flow with many stoppages and low operating speeds.

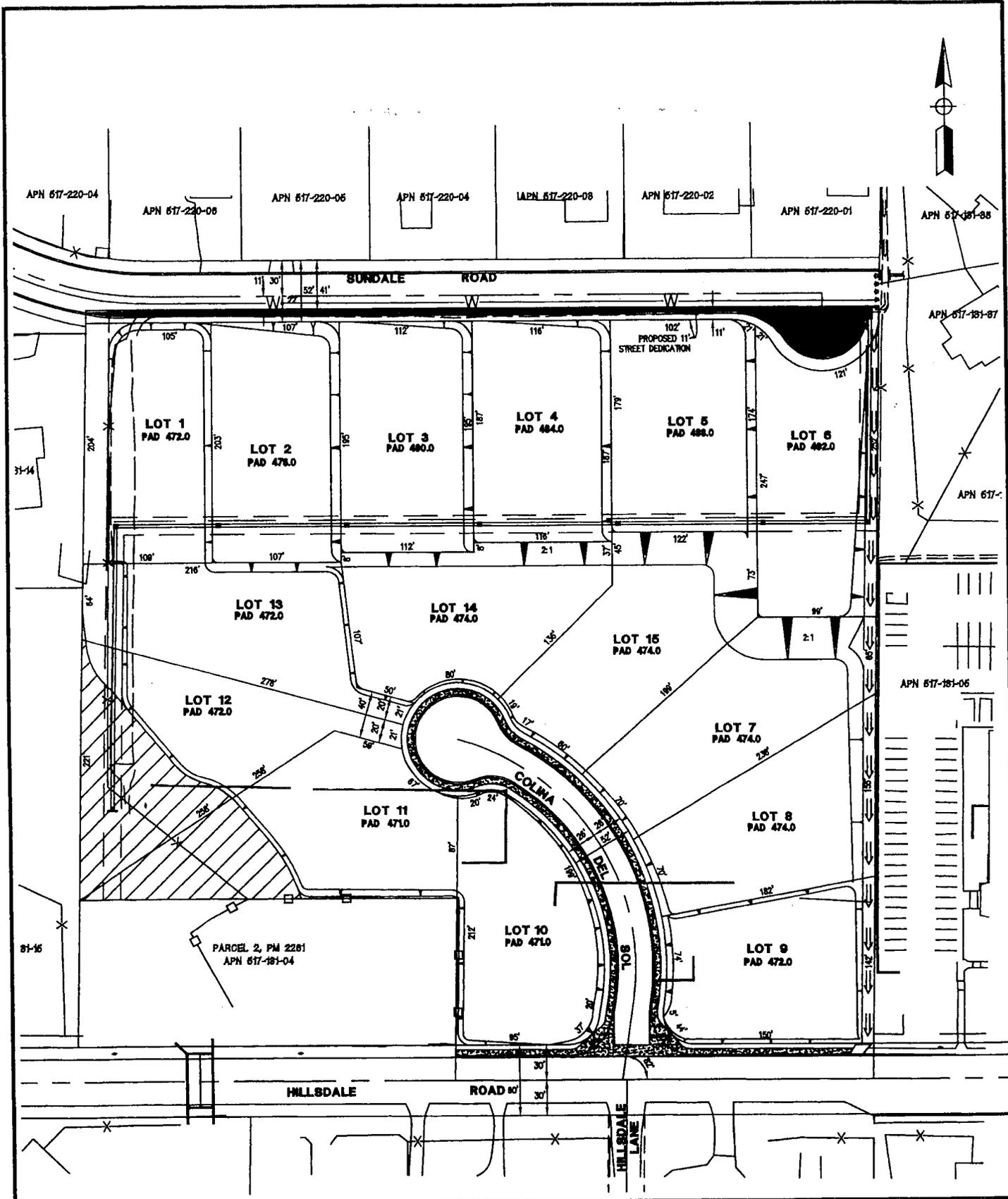
Table 1 shows the average daily traffic volumes (ADT) and delay ranges that are equivalent to each level of service.



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FIGURE 1
VICINITY MAP



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FIGURE 2
 SITE PLAN

Table 1 - Level of Service Ranges			
Level of Service	Intersections		Roadway Segments
	Unsignalized Delay (Seconds/Vehicle) ¹	Signalized Delay (Seconds/Vehicle) ¹	Average Daily Traffic (ADT) ²
A	Less than or equal to 10.0	Less than or equal to 10.0	Less than 1,900
B	10.1 to 15.0	10.1 to 20.0	1,900 to 4,100
C	15.1 to 25.0	20.1 to 35.0	4,100 to 7,100
D	25.1 to 35.0	35.1 to 55.0	7,100 to 10,900
E	35.1 to 50.0	55.1 to 80.0	10,900 to 16,200
F	Greater than 50.1	Greater than 80.1	Greater than 16,200

¹ The delay ranges shown are based on the 2000 Highway Capacity Manual (HCM)
² The volume ranges are based on the County of San Diego Circulation Element of a Light Collector, the average daily volume ranges for the other roadway classifications has been provided in Appendix A.

According to page XII-4-15 of the San Diego County General Plan *Public Facility Element* “A LOS ‘C’, which allows for stable traffic flow with room to maneuver, is a generally accepted level to strive for in new development. ...However, there are some cases where development cannot achieve a LOS “C” on off-site roadways. For instance, there are areas where the existing development pattern precludes the addition of lanes or other mitigation or when the community is opposed to certain improvements to maintain a LOS ‘C’. ...In these cases a Level of Service ‘D’ is acceptable on off-site roadways.” A copy of excerpts from the County’s *Public Facility Element* is provided in Appendix A.

ANALYSIS METHODOLOGY

The roadway segment daily LOS was determined by comparing the traffic volumes under each traffic scenario to the capacity of the roadway according to its roadway cross-section and classification. For the purpose of this report, the daily traffic volumes of the roadway segments in the vicinity of the project were compared to the County of San Diego Level of Service classification thresholds. The daily (24 hour) traffic count sheets and a copy of the “Summary of County of San Diego Public Road Standards” are included in Appendix A.

The Synchro Software, version 6.0, was utilized to analyze the morning and afternoon peak hour conditions of the intersections in the project vicinity. It should be noted that Synchro, version 6.0, is based on the methodologies outlined in the 2000 Highway Capacity Manual (HCM). The unsignalized intersection methodology defines LOS based on the longest delay experienced by any single movement. The signalized methodology defines LOS based on delay using variables such as lane configuration, traffic volumes, and signal timings.

REPORT ORGANIZATION

Following this section, Section II of this report documents the existing roadway characteristics and traffic conditions on road segments and intersections surrounding the project area. Section III examines the project’s trip generation and trip distribution assumptions. Section IV analyzes the study area traffic under the existing plus project condition and discusses the project’s potential impacts. Section V evaluates project access and onsite circulation. Section VI recommends mitigation measures, and Section VII summarizes the report’s findings.

SECTION II – EXISTING CONDITIONS

This section of the traffic study is intended to assess the existing conditions of the roadways and intersections within the vicinity of the project to determine travel flow and/or delay difficulties, if any, that exist prior to adding the traffic generated by the proposed project. The existing conditions analysis establishes a base condition, which is used to assess the other scenarios discussed in this report. Darnell & Associates, Inc. conducted a field review of the area surrounding the project in August 2006. The existing roadway geometrics are illustrated in Figure 3.

KEY ROADWAY SEGMENTS

The key segments analyzed in the study area are identified below:

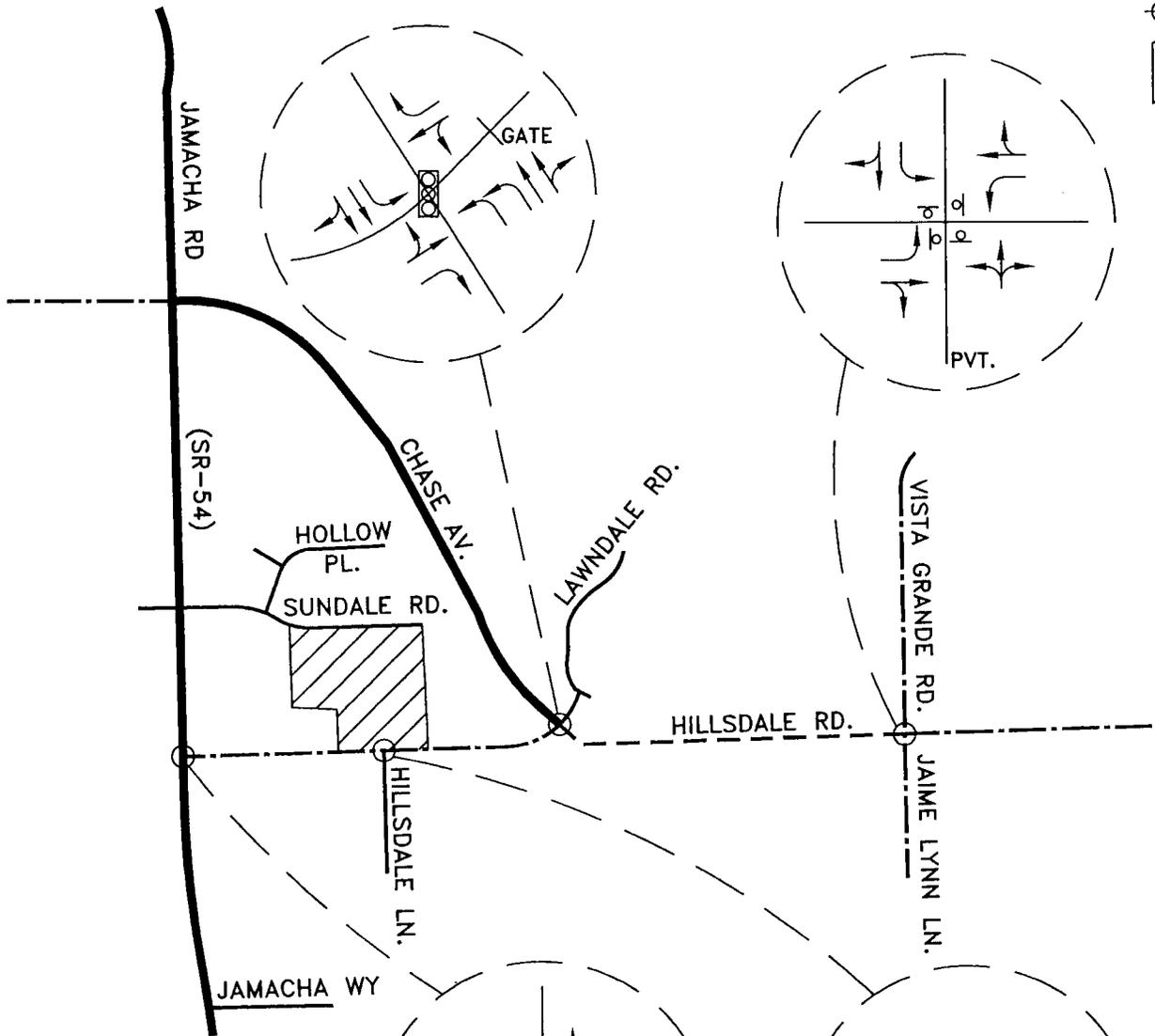
Jamacha Road (SR-54) (SF 1399): Jamacha Road (State Route 54) is a State Highway that is constructed as a four-lane divided roadway with bike lanes and a posted speed limit of 45 miles per hour. Left turn lanes are provided at the intersections. Shoulder width is limited. In the vicinity of the project, Jamacha Road (SR-54) follows a north-south alignment and serves as a connection to roads serving residential neighborhoods, also passing commercial areas. The existing cross-section of Jamacha Road is equivalent to that of a Major Road with a capacity of 33,400 ADT at LOS D.

In the County of San Diego circulation element, Jamacha Road, south of Chase Avenue has an ultimate classification of a 6-lane Prime Arterial with bike lanes, with a capacity of 50,000 average daily traffic (ADT) at LOS D. The current County circulation element calls for SR 54 to be constructed as a separate expressway west of the current Jamacha Road alignment; however, on August 2, 2006 the County Board of Supervisors endorsed the GP2020 road network recommendations to delete the separate SR-54 expressway from the circulation element, with a capacity of 86,000 ADT at LOS D.

Hillsdale Road (SC 2030): Hillsdale Road is an east-west undivided circulation element roadway with a posted speed limit of 40 miles per hour. In the project vicinity, Hillsdale Road mainly carries traffic to residential roads and the Valhalla High School, which is located at the Hillsdale Road/Chase Avenue intersection. The roadway includes a paved shoulder. Currently, Hillsdale Road is constructed from Jamacha Road to Chase Avenue to provide two traffic lanes. The existing cross-section of Hillsdale Road from Jamacha Road to Chase Avenue is equivalent to that of a Light Collector, with a capacity of 10,900 ADT at LOS D. East of Chase Avenue, Hillsdale Road is constructed to provide two lanes and a center two-way left turn lane are provided on a pavement width of 75 feet. The existing cross-section of Hillsdale Road from Chase Avenue to Vista Grande Road is equivalent to that of a Town Collector with bike lanes, with a capacity of 13,500 ADT at LOS D. The County of San Diego's 2006/07-2010/11 Capital Improvement Plan (CIP) includes a project to widen the segment of Hillsdale Road between Chase Avenue and Vista Grande Road. The CIP project is estimated to be completed by the winter of 2009 or 2010.

In the County of San Diego circulation element, Hillsdale Road from Jamacha Road to Chase Avenue has an ultimate classification of Light Collector, with a capacity of 10,900 ADT at LOS D. From Chase Avenue to Vista Grande Road Hillsdale Road's classification will be that of a Major Road with bike lanes, with a capacity of 33,400 ADT at LOS D. East of Vista Grande Road, Hillsdale Road's ultimate classification will be that of a Collector with bike lanes, with a capacity of 30,800 ADT at LOS D.

The GP 2020 proposed roadway network classifies the segment of Hillsdale Road between Jamacha Road and Chase Avenue as a 2.1E-Community Collector and classifies the segment of Hillsdale Road between Chase Avenue and Willow Glen Drive as a 4.1 B-Major Road with Intermittent Turn Lanes. A 2.1E-Community Collector is a two-lane undivided roadway with a right-of-way of 60 feet, and a capacity of 10,900 ADT at LOS D. A 4.1 B-Major Road with Intermittent Turn Lanes is a four-lane undivided roadway with intermittent turn lanes, a right-of-way of 84 feet to 98 feet, and a capacity of 30,800 ADT at LOS D.



LEGEND

-  - TRAVEL LANE
-  - TRAFFIC SIGNAL
-  - STOP SIGN
-  - PROJECT SITE
-  - 4-LANE MAJOR ROAD
-  - TOWN COLLECTOR
-  - LIGHT COLLECTOR

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FIGURE 3
EXISTING CONDITIONS

Chase Avenue (SA 910.1): Chase Avenue is a circulation element roadway that is constructed as a four-lane divided roadway with bike lanes and has a posted speed limit of 45 miles per hour in the project vicinity. Between Jamacha Road and Hillsdale Road, Chase Avenue's paved width is 82 feet. The existing cross section of Chase Avenue from Jamacha Road to Hillsdale Road is equivalent to that of a Major Road, with a capacity of 33,400 ADT at LOS D. In the County of San Diego Circulation Element circulation element, Chase Avenue from Jamacha Road to Hillsdale Road has an ultimate classification of Major Road with bike lanes, with a capacity of 33,400 ADT at LOS D.

The GP 2020 proposed roadway network classifies Chase Avenue as a 4.1A Major Road with raised medians (a four-lane divided roadway with a raised median, 98 feet of ROW, and a capacity of 33,400 ADT at LOS D).

Vista Grande Road (SC 2030): Vista Grande Road is circulation element roadway that is constructed as a two-lane undivided roadway with bike lanes and has a posted speed limit of 40 miles per hour. The existing cross-section of Vista Grande Road is equivalent to that of a Light Collector, with a capacity of 10,900 ADT at LOS D.

In the County of San Diego circulation element, Vista Grande Road has an ultimate classification of Light Collector with bike lanes, with a capacity of 10,900 ADT at LOS D. The GP 2020 proposed roadway network classifies Vista Grande Road as a 2.1E-Community Collector, a two-lane undivided roadway with a right-of-way of 60 feet, and a capacity of 10,900 ADT at LOS D.

Sundale Road: Sundale Road is a non-circulation element roadway that is constructed as a two-lane roadway. The existing cross-section of Sundale Road is equivalent to that of a Residential Collector, with a capacity of 4,500 ADT.

Hillsdale Lane: Hillsdale Lane is a non-circulation element roadway that is constructed as a private two-lane roadway. The lanes are not marked and no shoulder is available. The existing paved width of Hillsdale Lane is 21 feet.

ROADWAY SEGMENT DAILY TRAFFIC

Twenty-four (24) hour traffic counts for roadway segments were collected on typical weekdays in July 2006. Figure 4 illustrates existing traffic volumes. A copy of the traffic count sheets are provided in Appendix A. The key segments in the analysis include:

Jamacha Road (SR 54)

- Chase Avenue to Hillsdale Road; and
- Hillsdale Road to Jamacha Way.

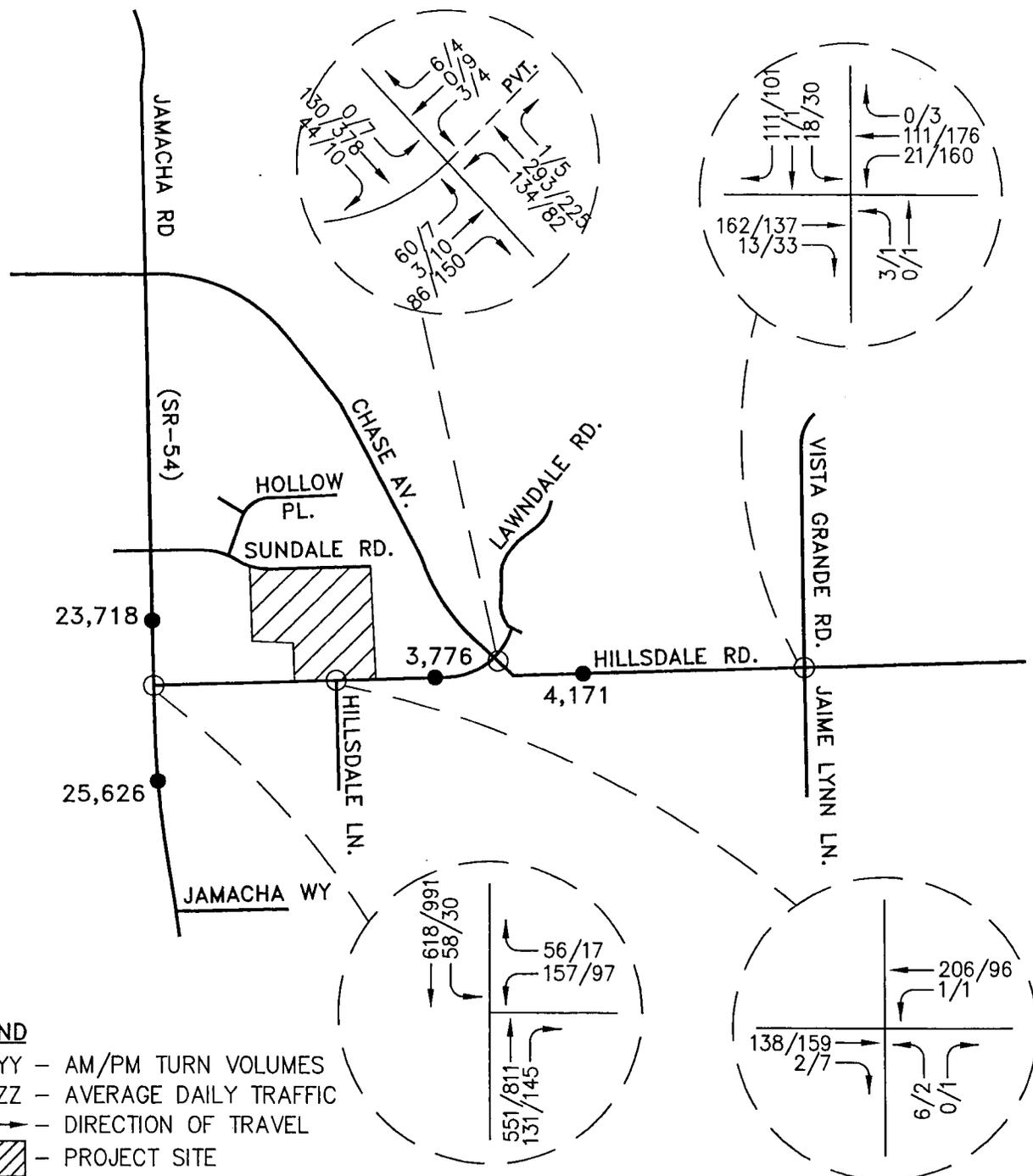
Hillsdale Road

- Jamacha Road to Chase Avenue; and
- Chase Avenue to Vista Grande Road.

KEY INTERSECTIONS

Figure 3 provides intersection configurations and traffic control for the key intersections. The key intersections analyzed include:

- Hillsdale Road/Jamacha Road (SR 54) (signalized);
- Hillsdale Road/Hillsdale Lane (one-way stop controlled);
- Hillsdale Road/Chase Avenue (signalized); and
- Hillsdale Road/Vista Grande Road (all-way stop controlled).



LEGEND
 XX/YY - AM/PM TURN VOLUMES
 ● Z,ZZZ - AVERAGE DAILY TRAFFIC
 → - DIRECTION OF TRAVEL
 ▨ - PROJECT SITE

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FIGURE 4
EXISTING TRAFFIC VOLUMES

INTERSECTION TRAFFIC COUNTS

AM and PM peak hour traffic counts for the key intersections were collected on typical weekdays in July 2006. Figure 4 presents the existing conditions traffic volumes used in this analysis. Copies of the traffic count sheets are provided in Appendix A.

EXISTING LEVEL OF SERVICE CONDITIONS

Roadway Segments

The existing daily roadway segment levels of service are summarized in Table 2. As shown in Table 2, all roadway segments on Jamacha Road and Hillsdale Road currently operate at an acceptable LOS C or better.

Roadway Segment	Class	Capacity ^(a)	ADT	LOS
Jamacha Road (SR 54)				
- Chase Avenue to Hillsdale Road	MR	33,400	25,626 23,718	C B
- Hillsdale Road to Jamacha Way	MR	33,400	23,718 25,626	B C
Hillsdale Road				
- Jamacha Road to Chase Avenue	LC	10,900	3,776	B
- Chase Avenue to Vista Grande Way	TC	13,500	4,171	B
(a) Capacity is based on the upper limit of LOS D per the County of San Diego Level of Service Thresholds. ADT = Average Daily Traffic; LOS = Level of Service; LC = Light Collector; MR = Major Road; TC = Town Collector				

Intersections

The existing levels of service for the intersections were calculated utilizing the lane configuration shown in Figure 3. The results of the Synchro analysis are summarized in Table 3. A copy of the Synchro worksheets can be found in Appendix C.

As shown in Table 3, all intersections analyzed currently operate at an acceptable LOS B or better during the AM and PM peak hours.

Intersection	Critical Movement	AM Peak		PM Peak	
		Delay	LOS	Delay	LOS
Hillsdale Road @ Jamacha Road (sig)	Intersection	9.7	A	7.0	A
Hillsdale Road @ Hillsdale Lane (OWSC)	NB Approach	11.9	B	9.9	A
Hillsdale Road @ Chase Avenue (sig)	Intersection	9.9	A	10.4	B
Hillsdale Road @ Vista Grande Road (AWSC)	EB Approach	8.4	A	9.0	A
	WB Approach	7.8	A	9.7	A
	NB Approach	8.7	A	9.3	A
	SB Approach	7.8	A	8.7	A
	Intersection	7.9	A	9.0	A
OWSC = one-way stop controlled; sig = signalized; AWSC = all-way stop controlled; Delay = seconds of delay per vehicle; LOS = Level of Service; NB = northbound; SB = southbound; EB = westbound; WB = westbound					

SECTION III – PROJECT RELATED CONDITIONS

TRIP GENERATION

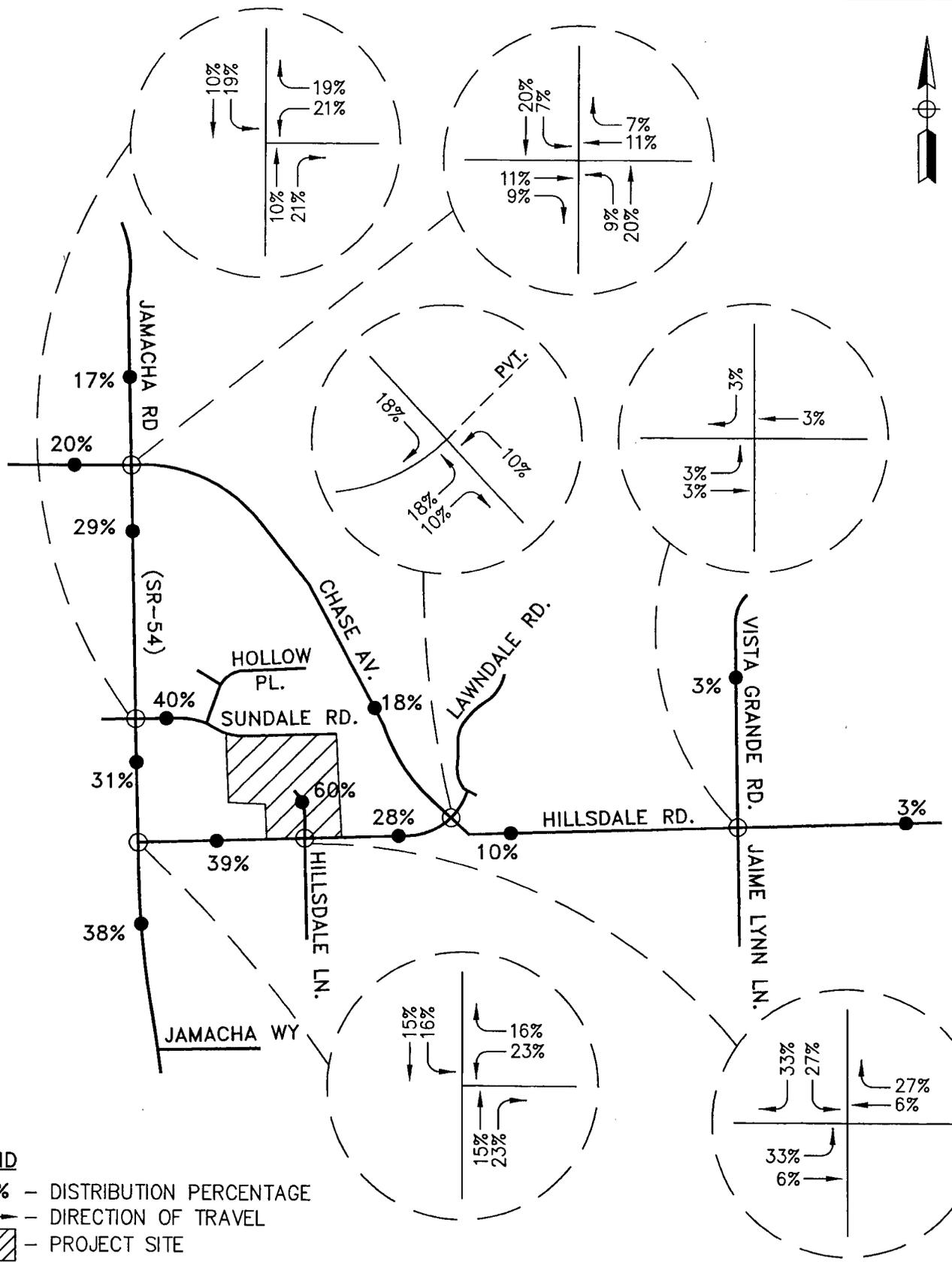
Trip generation to and from the proposed development was calculated based on the trip generation rates published by the San Diego Association of Governments' (SANDAG) *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, April 2002. Table 4 summarizes the trip generation rates and calculations. As shown in Table 4, the proposed project is estimated to generate 180 average daily trips (ADT), 14 AM peak hour trips, and 18 PM peak hour trips.

Table 4 - Trip Generation Rates and Calculations Summary								
Trip Generation Rates								
Land Use	Daily	AM Peak Hour			PM Peak Hour			
		Total - % of Daily	% In	% Out	Total - % of Daily	% In	% Out	
Estate residential	12 Trips/DU	8%	30%	70%	10%	70%	30%	
Trip Generation								
Land Use	Total No. of Units	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Estate residential	15 DUs	180	14	4	10	18	13	5
Trip Generation Rates are based on SANDAG's <i>(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region</i> , April 2002								

TRIP DISTRIBUTION

Trip distribution for the proposed development was calculated using the SANDAG Select Zone Assignment. The select zone was run for the year 2010 condition. A copy of the 2010 Select Zone Forecast is provided in Appendix B. Figure 5 shows the estimated trip distribution percentages for roadway segments and intersections in the vicinity of the project.

Project traffic was assigned to the roadway network using the distribution percentages shown in Figure 5. The project related traffic volumes are illustrated in Figure 6.



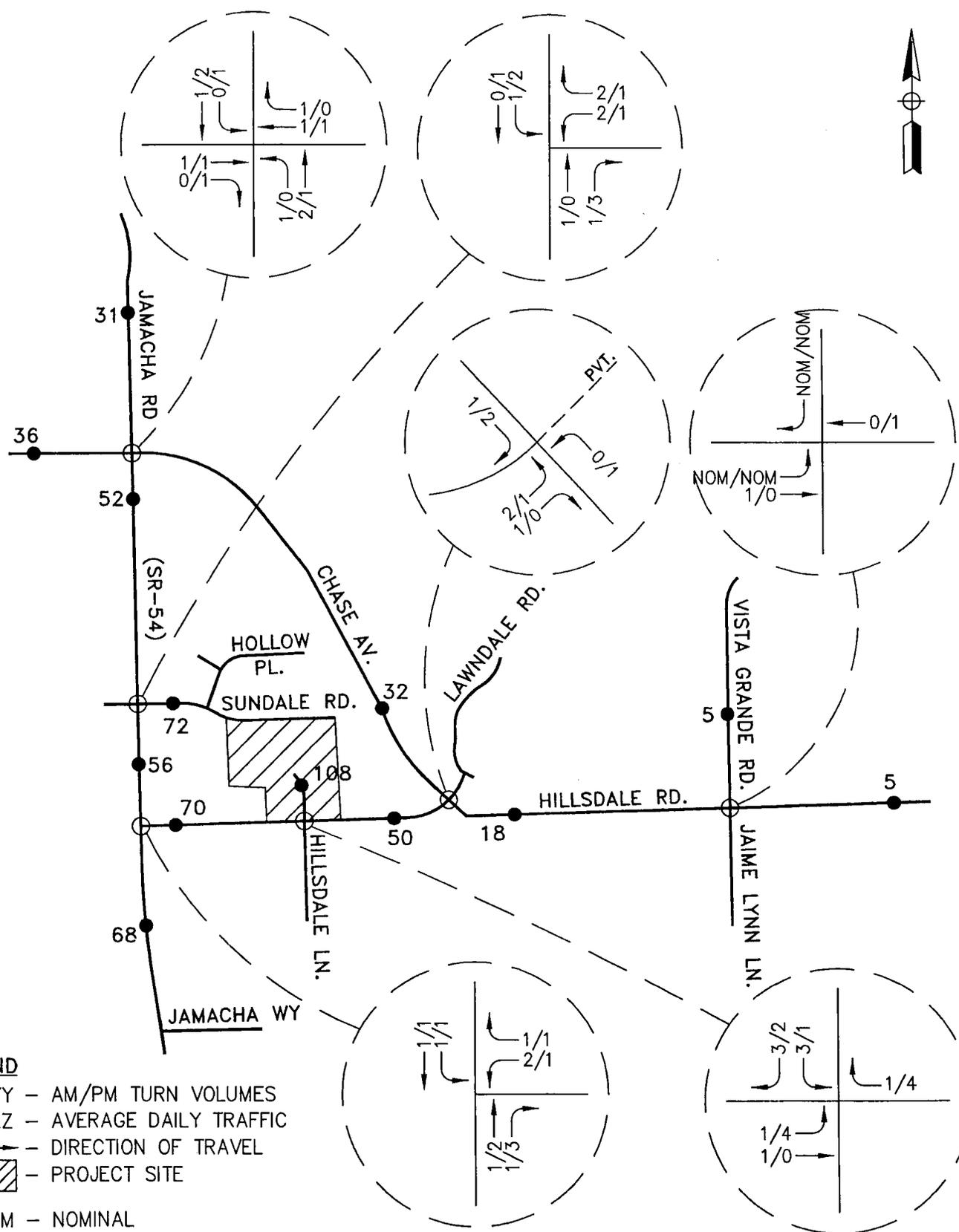
LEGEND

- XX% - DISTRIBUTION PERCENTAGE
- - DIRECTION OF TRAVEL
- ▨ - PROJECT SITE

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FIGURE 5
PROJECT TRIP DISTRIBUTION



LEGEND

- XX/YY - AM/PM TURN VOLUMES
- ZZZ - AVERAGE DAILY TRAFFIC
- - DIRECTION OF TRAVEL
- ▨ - PROJECT SITE
- NOM - NOMINAL

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FIGURE 6
PROJECT TRAFFIC VOLUMES

SECTION IV – IMPACTS

PUBLIC FACILITIES ELEMENT IN COUNTY

According to page XII-4-18 of the *Public Facilities Element* (PFE) for San Diego County, a discretionary project which has a significant impact on roadways will be required, as a condition of approval, to make “improvements or other measures necessary to mitigate traffic impacts to avoid reduction in the existing Level of Service below ‘D’ on off-site and on-site abutting Circulation Element roads. New development that would significantly impact congestion on roads at LOS ‘E’ or ‘F’, either currently or as a result of the project, will be denied unless improvements are scheduled to increase the LOS to ‘D’ or better or appropriate mitigation is provided. Appropriate mitigation would include a fair share contribution in the form of road improvements or a fair share contribution to an established program or project. If impacts cannot be mitigated, the project will be denied unless a specific statement of overriding findings is made pursuant to Section 15091(b) and 15093 of the State CEQA Guidelines.”

The *Public Facilities Element* for the County of San Diego also requires that all on-site Circulation Element roads operate at Level of Service C or better. If the Level of Service at an on-site Circulation Element road is reduced below LOS C, the proposed project must provide appropriate mitigation measures. A copy of excerpts from the County’s *Public Facilities Element* can be found in Appendix A.

LEVELS OF SIGNIFICANCE STANDARDS

Although the *Public Facility Element* (PFE) sets standards as to which level of service roadways and intersections must operate within the County (i.e. requires operation of LOS D or better), it does not establish a threshold to evaluate whether a project is significant if it adds traffic to a roadway facility that is currently operating at an unacceptable LOS E or F. Thus, the County’s *Draft Guidelines for Determining Significance* (adopted September 26, 2006) were developed to evaluate the significance of traffic impacts on roadways and intersections which are currently operating at LOS E or F. A summary of the County’s *Draft Guidelines* is provided in Table 5. Excerpts from the County’s *Draft Guidelines* are provided in Appendix A.

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

Notes:
 – A critical movement is one that is experiencing excessive queues.
 – By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
 – The County may also determine impacts have occurred on roads even when a project’s traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

ADT = Average Daily Traffic; LOS = Level of Service

It should be noted that the significance thresholds summarized in Table 5 is currently only utilized by the County of San Diego to determine if a project has a significant direct and/or future impact. A project is considered to have a significant cumulative impact if it adds any traffic to a roadway segment and/or intersection that operates at LOS E or F under cumulative conditions.

Consistent with the *Public Facility Element* the criteria described below were only applied to segments and intersections that operate at LOS E or LOS F. The guidelines for the roadway segments, signalized

intersections, and stop-controlled intersections discussed below were used to determine the project's direct (project only) impacts.

Roadway Segments

As shown in Table 5, per the County's ~~Draft~~ Guidelines, a project would be considered to have a significant direct traffic volume and/or level of service traffic impact on a road segment if:

- “The additional or redistributed ADT generated by the proposed project will cause an adjacent or nearby County Circulation Element Road to operate below LOS D and will significantly increase congestion as identified in Table [5], and/or
- The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity, and/or
- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road, State Highway, or intersection currently operating at LOS E or LOS F as identified in Table [5].”

As discussed on pages 12 and 13 of the County's *Guidelines for Determining Significance*, an increase of the daily thresholds established for roadway segments operating at LOS E would result in only one additional car every 2.4 minutes per lane while the thresholds established for roadway segments operating at LOS F would result in only one additional car every 4.8 minutes. Therefore, the thresholds identified in Table 5, in most cases, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact on the roadway.

The County guidelines also states that “For large projects, controversial projects and/or projects which are preparing Environmental Impact Reports, more detailed evaluations to verify the applicability of the significance thresholds for the individual project conditions may be necessary. Additional evaluations may include analysis of vehicle headways, speeds, average gaps, queues, delay, and/or other factors.”

Signalized Intersections

At signalized intersections, the project would be considered to have a significant direct volume and/or level of service traffic impact if:

- “The additional or redistributed ADT generated by the proposed project will cause a signalized intersection to operate below LOS D and will significantly increase congestion as identified in Table [5], and/or
- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F as identified in Table [5].”

As discussed on page 15 of the County's *Guidelines for Determining Significance*, an increase in delay of two seconds, the threshold established for signalized intersections operating at LOS E, “...is a small fraction of the typical cycle length for a signalized intersection that ranges between 60 and 120 seconds. The likelihood of increased queues forming due to the additional two seconds of delay is low.” Thus, the increase in delay of two (2) seconds, on average, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact. Since small changes and disruptions to the traffic flow at a signalized intersection can have a greater effect on the overall intersection operation when the intersection is operating at LOS F, versus LOS E, a more stringent guideline of one (1) second of delay was established for intersections operating at LOS F.

The five (5) peak hour trip threshold, established for the critical movement of a signalized intersection operating at LOS F, when spread out throughout the peak hour, results in an increase of one vehicle every 12 minutes or 720 seconds. This increase would not be noticeable to the average driver because one additional vehicle during a 12 minute interval on average would clear the traffic signal cycles well within the 12 minute period. Further, even if all five (5) additional peak hour vehicles arrived at the same time, these trips would also, on average, clear the traffic cycle and the existing queue lengths would be re-established. Thus, the increase of five (5) peak hour trips to a critical movement at a signalized intersection, on average, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact. (See page 15 of the County's *Guidelines for Determining Significance* provided in Appendix A.)

Unsignalized Intersections

At unsignalized intersections, the project would be considered to have a significant direct volume and/or level of service traffic impact if:

- “The proposed project will generate 20 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate below LOS D, or
- The proposed project will generate 20 or more peak hour trips to a critical movement of an unsignalized intersection and the unsignalized intersection currently operates at LOS E, or
- The proposed project will generate 5 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate below LOS E, or
- The proposed project will generate 5 or more peak hour trips to a critical movement of an unsignalized intersection and the unsignalized intersection currently operates at LOS F, or
- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance and/or other factors, it is found that the generation rate less than those specified above would significantly impact the operations of the intersection.”

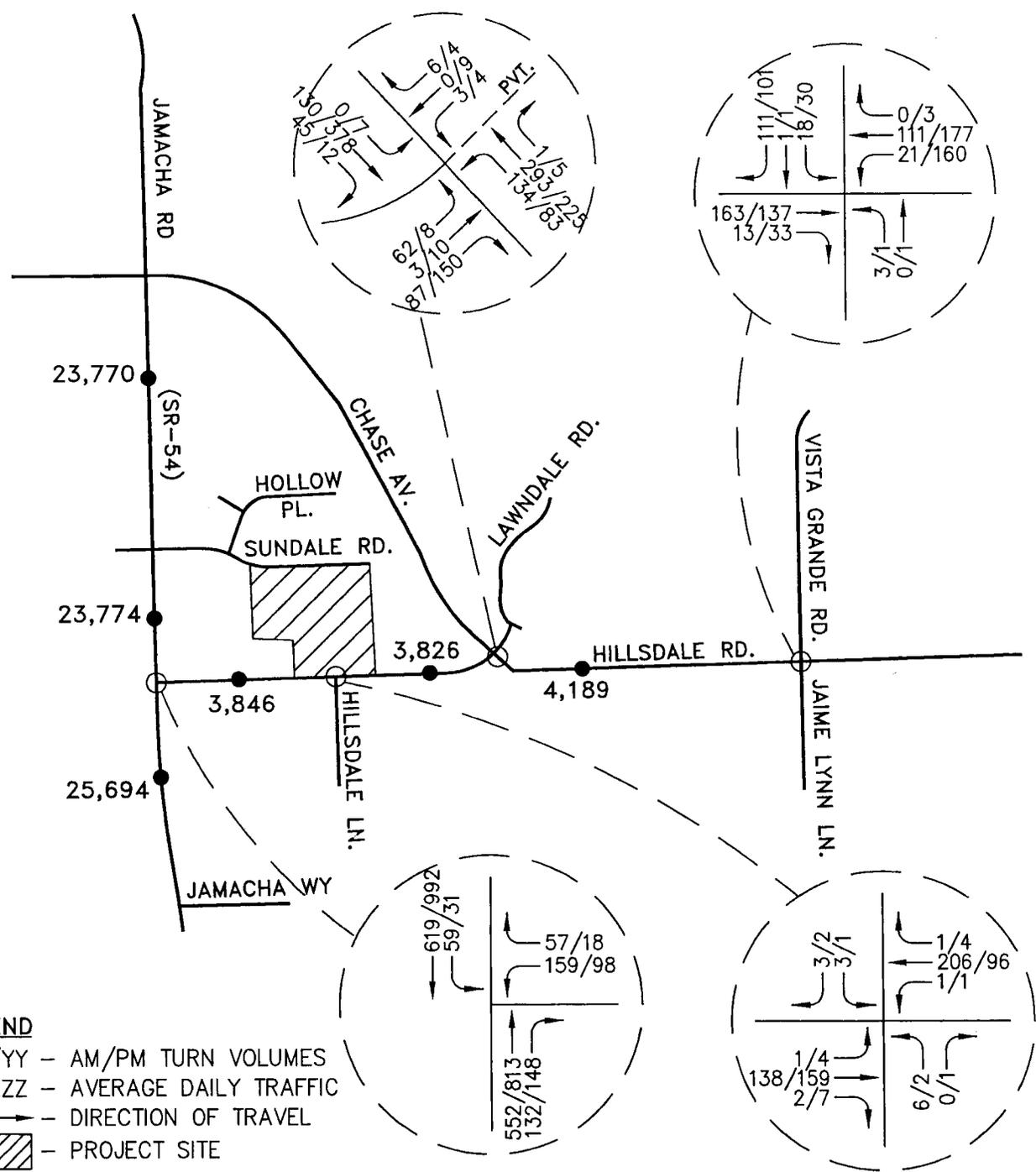
As discussed on page 17 of the County's *Guidelines for Determining Significance*, the addition of 20 peak hour trips to a critical movement, the threshold established for an unsignalized intersection operating at LOS E, would result in an increase of one (1) vehicle every 3.0 minutes or 180 seconds. “Assuming the wait time for a vehicle in the critical movement queue is less than 3.0 minutes, which is typical for LOS E conditions; this would not be noticeable to the average driver and would not be considered a significant impact.” The five (5) peak hour trip threshold established for an unsignalized intersection operating at LOS F, would result in an increase of one (1) vehicle every 12.0 minutes or 720 seconds. “This typically exceeds the wait time in the queue and would not be noticeable to the average driver.” (See page 17 of the County's *Guidelines for Determining Significance* provided in Appendix A.)

~~It should be noted that the significance thresholds summarized in Table 5 are currently only utilized by the County of San Diego to determine if a project has a significant direct and/or future impact. A project is considered to have a significant near term cumulative impact if it adds any traffic to a roadway segment and/or intersection that operates at LOS E or F under near term cumulative conditions.~~

~~Consistent with the *Public Facilities Element* the criteria described above was only applied to segments and intersections that operate at LOS E or LOS F.~~

EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project daily and peak hour traffic volumes are illustrated in Figure 7.



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FIGURE 7
EXISTING + PROJECT TRAFFIC VOLUMES

Roadway Segments

The roadway segments were analyzed with the traffic generated from the proposed project added to existing traffic volumes. The roadway segments daily levels of service are summarized in Table 6.

Table 6 - Existing + Project Roadway Segment Level of Service Summary								
Roadway Segment	Class	Capacity (a)	Existing		Project Traffic	Existing+ Project		Significant?
			ADT	LOS	ADT	ADT	LOS	
Jamacha Road (SR 54)								
-Chase Ave Avenue to Hillsdale Rd Road	MR	33,400	23,718	B	52	23,770	B	N/A
-Hillsdale Rd Road to Jamacha Wy Way	MR	33,400	25,626	C	68	25,694	C	N/A
Hillsdale Road								
-Jamacha Rd Road to Chase Avenue	LC	10,900	3,776	B	70	3,846	B	N/A
-Chase Ave Avenue to Vista Grande	TC	13,500	4,171	B	18	4,189	A	N/A
(a) Capacity is based on the upper limit of LOS D per the County of San Diego Level of Service Thresholds. ADT = Average Daily Traffic; LOS = Level of Service; LC = Light Collector; TC = Town Collector; MR = Major Road; Significant? = Significance is based on the County PFE and <i>Draft Guidelines for Determining Significance</i> . N/A = Not applicable because roadway segments operate at LOS D or better								

As shown in Table 6, ~~Analysis found that~~ all key roadway segments continue to operate at an acceptable LOS C or better under existing plus project conditions. Thus, the proposed project is not considered to have a direct impact on any of the segments analyzed.

Intersections

The intersections were analyzed with the traffic generated from the proposed project added to existing traffic volumes. A copy of the Synchro worksheets can be found in Appendix D. AM/PM peak hour LOS is summarized in Table 7.

As shown in Table 7, all key intersections continue to operate at LOS B or better under existing plus project conditions. Thus, the proposed project is not considered to have a direct impact on any of the intersections analyzed.

Table 7 - Existing + Project Intersection Level of Service Summary								
AM Peak Hour								
Intersection	Critical Movement	Existing		Existing + Project				
		Delay	LOS	Delay	LOS	ΔDelay	Project Trips	Significant?
Hillsdale Rd @ Jamacha Rd (sig)	Intersection	9.7	A	9.8	A	0.1	2	N/A
Hillsdale Rd @ Hillsdale Ln - Colina del Sol (OWSC)	NB Approach	11.9	B	12.8	B	0.9	0	N/A
	SB Approach	-	-	11.0	B	-	3	
Hillsdale Rd @ Chase Ave (sig)	Intersection	9.9	A	9.9	A	0.0	2	N/A
Hillsdale Rd @ Road @ Vista Grande Rd (AWSC)	EB Approach	8.4	A	8.4	A	0.0	0	N/A
	WB Approach	7.8	A	7.8	A	0.0	0	
	NB Approach	8.7	A	8.7	A	0.0	0	
	SB Approach	7.8	A	7.8	A	0.0	0	
	Intersection	7.9	A	7.9	A	0.0	0	
PM Peak Hour								
Intersection	Critical Movement	Existing		Existing + Project				
		Delay	LOS	Delay	LOS	ΔDelay	Project Trips	Significant?
Hillsdale Rd @ Jamacha Rd (sig)	Intersection	7.0	A	7.0	A	0.0	3	N/A
Hillsdale Rd @ Hillsdale Ln - Colina del Sol (OWSC)	Northbound	9.9	A	10.2	B	0.3	0	N/A
	Southbound	-	-	9.7	A	-	2	
Hillsdale Rd @ Chase Ave (sig)	Intersection	10.4	B	10.5	B	0.1	2	N/A
Hillsdale Rd @ Road @ Vista Grande Rd (AWSC)	EB Approach	9.0	A	9.0	A	0.0	0	N/A
	WB Approach	9.7	A	9.7	A	0.0	0	
	NB Approach	9.3	A	9.3	A	0.0	0	
	SB Approach	8.7	A	8.7	A	0.0	0	
	Intersection	9.0	A	9.0	A	0.0	0	

OWSC = one-way stop-controlled; AWSC = all-way stop-controlled; Delay = seconds of delay per vehicle;
LOS = Level of Service; NB = northbound; SB = southbound; EB = eastbound; WB = westbound;
Δ Delay = Increase in delay; N/A = Not applicable because intersection operates at LOS D or better,
Significant? = Significance is per the County PFE and *Draft Guidelines for Determining Significance*;

CUMULATIVE IMPACTS

County TIF Facilities

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

The proposed project generates 180 average daily trips. These trips will be distributed on circulation element roadways in the County that were analyzed by the TIF program, some of which currently or are projected to operate at inadequate levels of service. The potential growth represented by the proposed project was included in the growth projections upon which the TIF program is based. Therefore, payment of the TIF, which will be required at issuance of building permits, in combination with other components of the program described above, will mitigate potential cumulative traffic impacts to less than significant.

Caltrans Maintained Facilities

Jamacha Road (SR-54) is a Caltrans maintained facility and is thus not covered by the County's TIF program. Review of SANDAG's 2010 forecasts found that that the segment of Jamacha Road (SR-54) between Chase Avenue and Jamacha Way is projected to carry 32,000 ADT by the year 2010. Based on the SANDAG forecasts and the existing cross-section and capacity of the facility, Jamacha Road (SR-54) between Chase Avenue and Jamacha Way will operate at an acceptable LOS D under near term (2010) conditions. Thus there will not be a significant cumulative impact on Jamacha Road.

Concern has been raised by the County that the proposed project may contribute to the existing capacity issues at the Jamacha Road (SR-54)/Campo Road (SR-94) intersection. Per the SANDAG 2010 Select Zone forecast (see Appendix B for a copy of the select zone forecast), only 13% of the project traffic or 23 ADT, 2 two-way AM peak hour trips, and 2 two-way PM peak hour trips will be added to the Jamacha Road (SR-54)/Campo Road (SR-94) intersection. This volume of traffic does not exceed the County's thresholds for determining project direct impacts, thus the proposed project will not have a significant direct impact to the Jamacha Road (SR-54)/Campo Road (SR-94) intersection. The project, will, however, be a small portion of the cumulative impacts to the intersection. See Section VI for a discussion on how the developer will mitigate its potential cumulative impacts to the Jamacha Road (SR-54)/Campo Road (SR-94) intersection.

SECTION V – PROJECT ACCESS AND INTERNAL CIRCULATION

As shown on the project site plan (see Figure 2), six (6) dwelling units will take access directly onto Sundale Road and the remaining nine (9) dwelling units will take access to Hillsdale Road via the cul-de-sac Colina del Sol. Sundale Road currently dead-ends at the set of barricades located east of the proposed project. The cul-de-sac is proposed to be located directly across from Hillsdale Lane.

The project proposes to add eleven feet of right-of-way to Sundale Road, yielding a graded width of 52 feet. The Colina del Sol cul-de-sac dedication is proposed to have a paved width of 32 feet, within a 52-foot right-of-way. The proposed cul-de-sac radius will be 38 feet of paved width within 48 feet of right-of-way. The proposed cul-de-sac width, radius, and length are in accordance with County Public Road Standards. Excerpts from the County of San Diego *Public Road Standards* are provided in Appendix A.

The project will be responsible for allowing for adequate sight distance at the Colina del Sol/Hillsdale Road intersection in accordance with County standards.

As discussed in Section IV, the stop controlled Colina del Sol/Hillsdale Road intersection will operate at LOS B during the AM peak hour, and at LOS A during the PM peak hour (see Table 7 – Hillsdale Road/@Hillsdale Lane – Colina del Sol).

SECTION VI – PROJECT MITIGATION

DIRECT IMPACTS

The proposed project does not have any significant direct roadway or intersection impacts. Therefore, mitigation by the proposed project is not required.

CUMULATIVE IMPACTS

County TIF Facilities

The County Board of Supervisors adopted the County of San Diego Transportation Impact Fee (TIF) ordinance in April 2005. This fee covers roadway improvements in the County of San Diego. The Transportation Impact Fee will be assessed at the time of issuance of building permits. The proposed project is located within the Valle de Oro County TIF area. As of March 7, 2006, the current TIF rate for the Valle de Oro area is \$6,914 per estate residential dwelling unit. Based on this rate, the proposed project will be required to pay a Transportation Impact Fee in the amount of \$103,710. It should be noted that the actual fee is subject to change as the TIF Ordinance is updated annually and the fees are adjusted to reflect the engineering cost index.

Table 8 illustrates the calculation of the Transportation Impact Fee for the proposed development that will be required to pay to mitigate its potential cumulative impacts. A copy of the County of San Diego TIF Program Fee Schedule for the Valle de Oro area is provided in Appendix A.

Table 8 - Transportation Impact Fee Calculation					
TIF Area	Land use	No. of Units	Unit	Fee/Unit (a)	Total Fee
Valle de Oro	Estate residential	15	DU	\$6,914	\$103,710
(a) Fees are based on the rates published on March 7, 2006; DU = Dwelling Unit Note: Actual fee is subject to change as the TIF Ordinance is updated annually and the fees are adjusted to reflect the engineering cost index.					

Caltrans Maintained Facilities

Jamacha Road (SR-54) is a Caltrans maintained facility and is thus not covered by the County's TIF program. As discussed in Section IV, Jamacha Road in the vicinity of the project is expected to operate at an acceptable LOS D under 2010 conditions, thus there will not be a significant cumulative impact on Jamacha Road.

Concern has been raised by the County that the proposed project may contribute to the existing capacity issues at the Jamacha Road (SR-54)/Campo Road (SR-94) intersection. As discussed in Section IV, the project will add 23 ADT, 2 two-way AM peak hour trips, and 2 two-way PM peak hour trips to the Jamacha Road (SR-54)/Campo Road (SR-94) intersection and will thus, be a small portion of the cumulative impacts to the intersection.

The County of San Diego is currently working on a Capital Improvement Program (CIP) project to improve the Jamacha Road (SR-54)/Campo Road (SR-94) intersection. The improvements are expected to be completed by the fall of 2007. To mitigate the project's potential cumulative impacts to the intersection, the developer will make a fair-share contribution towards the County's CIP project for the Jamacha Road (SR-54)/Campo Road (SR-94) intersection. Based on the SANDAG 2010 forecasts, 65,500 ADT will travel through the Jamacha Road (SR-54)/Campo Road (SR-94) intersection under 2010 conditions. Thus the project's fair-share percentage towards the intersection improvements is 0.035% (i.e. 23 project ADT/65,500 Total Intersection ADT = 0.00035 = 0.035%).

SECTION VII – SUMMARY OF FINDINGS AND CONCLUSIONS

- The developer proposes to construct a fifteen (15) lot estate residential subdivision on 8.38 acres located east of Jamacha Road between Hillsdale Road and Sundale Road in the Valle de Oro area of San Diego County.
- The proposed project is estimated to generate 180 average daily trips, 14 AM peak hour trips, and 18 PM peak hour trips.
- The project does not have any significant direct impacts.
- To mitigate the project's cumulative traffic impacts, the developer will agree to pay the County of San Diego's Transportation Impact Fees (TIF) and make a fair-share contribution towards the County's CIP project for the Jamacha Road (SR-54)/Campo Road (SR-94) intersection. See as discussed in Section VI for the estimated TIF the project will be required to pay and the project's fair-share contribution percentage towards the Jamacha Road (SR-54)/Campo Road (SR-94) CIP project.
- Project access and on-site circulation will adequately accommodate project traffic.