N. TRANSPORTATION AND CIRCULATION

This section of the EIR was prepared by Fehr and Peers. This section documents the transportation-related impacts associated with the proposed project, including the subsequent development of a dude ranch. Technical information is available in Appendix G.

1. Existing Conditions

a. Road Network

The project site is located northeast of the U.S. Highway 101/Los Berros Road/North Thompson Avenue interchange in an unincorporated area of San Luis Obispo County, north of the community of Nipomo. Regional access to the site is provided via this interchange on Highway 101. Primary access to the project site would be provided from Upper Los Berros Road, which connects to U.S. Highway 101 via North Dana Foothill Road, Sheehy Road, and North Thompson Avenue. Secondary vehicle access, proposed for emergency use only, will be provided via the existing Laetitia Winery entrance (i.e., Laetitia Vineyard Drive) at Highway 101. Figure V.N.-1 shows the project site, study area, and study intersections. The impacts of the proposed project to the transportation system were evaluated during the morning (a.m.) and evening (p.m.) peak hours for the following locations:

Intersections

1. Highway 101/Laetitia Vineyard Drive
2. Los Berros Road/Highway 101 Southbound Ramps
3. North Thompson Road/Highway 101 Northbound Ramps
4. North Thompson Road/Sheehy Road
5. North Dana Foothill Road/Sheehy Road

Roadway Segments

1. Northbound Highway 101 - North of Los Berros Road/North Thompson Road
2. Southbound Highway 101 - North of Los Berros Road/North Thompson Road
3. Northbound Highway 101 - South of Los Berros Road/North Thompson Road
4. Southbound Highway 101 - South of Los Berros Road/North Thompson Road
5. Sheehy Road - North Thompson Road to North Dana Foothill Road
6. North Dana Foothill Road - Rim Rock Road to Riata Lane
7. Upper Los Berros Road - Sycamore Creek Lane to Spring Canyon Lane

Freeway Merge/Diverge Sections

1. Highway 101 Northbound Off-ramp
2. Highway 101 Northbound On-ramp
3. Highway 101 Southbound Off-ramp
4. Highway 101 Southbound On-ramp

1) U.S. Highway 101

U.S. Highway 101 (Highway 101) is a north-south regional roadway extending north through the Bay Area and south to the Los Angeles basin and includes freeway, highway, and expressway segments. From the Los Berros interchange south through Nipomo and into Santa Barbara County, Highway 101 is a freeway facility. Just north of the U.S. Highway 101/Los Berros Road/North Thompson Avenue interchange, Highway 101 becomes a four-lane divided expressway with at-grade intersections. Within the study area, Highway 101 includes two lanes in each direction.

2) Thompson Road

Thompson Road is a two-lane arterial roadway through the community of Nipomo that becomes Los Berros Road at Highway 101. Within the project study areas, the speed limit is not posted; therefore the design speed is 55 miles per hour (mph).

3) Sheehy Road

Sheehy Road is a two-lane, rural road connecting Thompson Avenue to North Dana Foothill Road. It is designated as a collector in the *South County Area Plan* There is no posted speed limit.

4) North Dana Foothill Road

North Dana Foothill Road is a two-lane rural collector road that runs northwest-southeast in the project area. The segment southeast of Sheehy Road is identified in the *South County Area Plan* as a proposed collector. North Dana Foothill Road becomes Upper Los Berros Road just northeast of Sycamore Creek Lane.

5) Upper Los Berros Road

Upper Los Berros Road is a two-lane local road that runs parallel to Los Berros Creek. It continues east from the project site to numerous isolated homes and agricultural parcels.

b. Pedestrian and Bicycle Facilities

Typical pedestrian facilities include sidewalks, curb ramps, crosswalks, and pedestrian signals at signalized intersections. There are no existing pedestrian facilities in the study area.

Bicycle facilities include any network of bike paths, bike lanes, and bike routes located within the study area. Bike paths (Class I) are paved pathways separated from roadways. Bike lanes (Class II) are lanes for bicyclists adjacent to the outside vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bike routes are generally located on low traffic volume streets that provide alternative routes for recreational, and in some cases, commuter and school-age cyclists. These facilities are designated Class III and are signed for bike use, but do not necessarily have any separated bike right-of-way or lane striping. There are no existing bicycle facilities in the study area. The *South County Area Plan* recommends the construction of a Class II bike lane on Los Berros Road from Valley Road to the Thompson Road/Highway 101 interchange, continuing on North Thompson Road to Cuyama Lane/Highway 166.

c. Transit Facilities

The San Luis Obispo Regional Transit Authority (SLORTA) operates intercity fixed route service and a dial-a-ride Americans with Disabilities Act (ADA)-compliant paratransit program called Runabout. Relevant services are described below.

1) RTA Route 10

RTA Route 10 provides fixed route service to the study area, servicing San Luis Obispo, Shell Beach, Pismo Beach, Grover Beach, Arroyo Grande, Nipomo, and Santa Maria. On weekdays, Route 10 operates on two-hour headways from 6:00 a.m. to 8:00 p.m. Saturday service is provided, with four hour headways from 7:15 a.m. to 7:00 p.m. The transit stop closest to the project site is located on North Thompson Road between the Highway 101 Northbound Ramps and Sheehy Road, approximately two miles from the project site main entrance.

2) Runabout

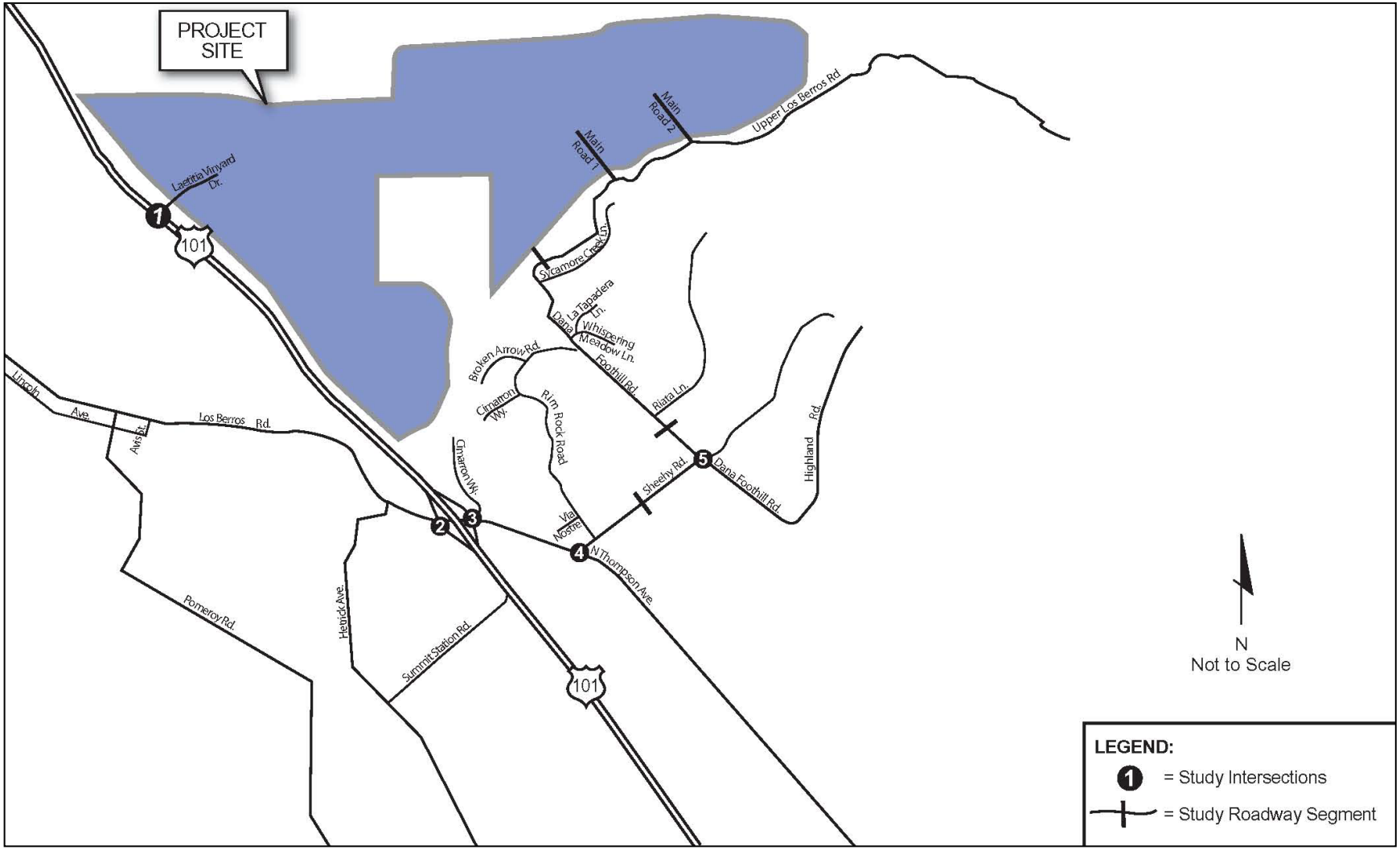
Runabout is a county-wide paratransit program that provides ADA accessible service to eligible riders within 0.75 mile of fixed routes. Service is provided Monday through Saturday from 6:00 a.m. to 6:00 p.m. within the study area.

3) Amtrak

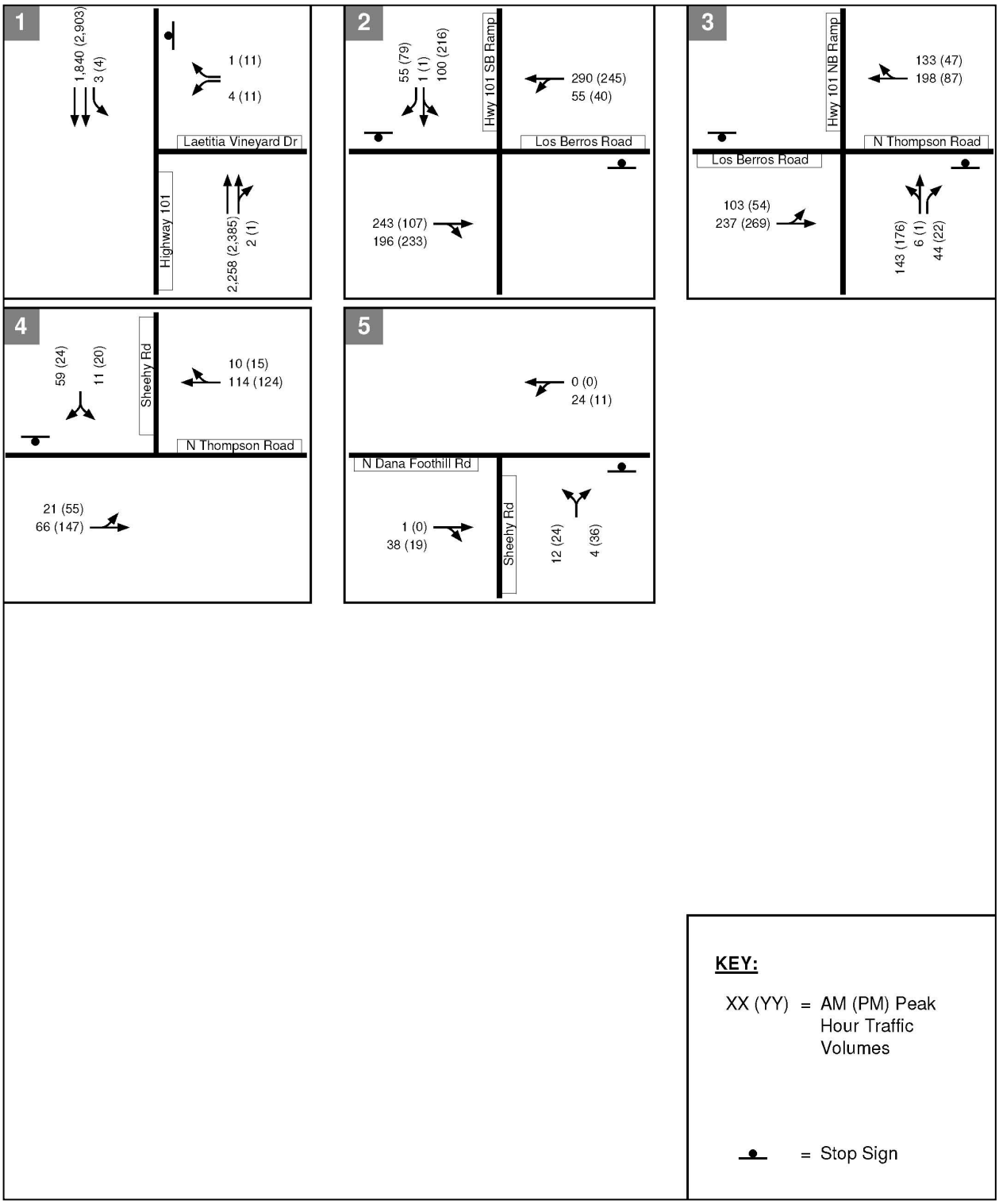
Amtrak provides interstate passenger rail service, and operates on the Union Pacific Railway near the project site. The Pacific Surfliner route (service between Paso Robles and San Diego) stops at the Grover Beach station, approximately ten miles from the project site.

d. Existing Traffic Volumes and Intersection Configurations

Existing a.m. and p.m. peak hour traffic volumes at the two Highway 101/Los Berros Road/North Thompson Road intersections were obtained from the *South County Traffic Model* report (Omni-Means, 2005). The peak hour represents the highest one hour volumes during the peak periods of 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to -6:00 p.m. Traffic counts were conducted at the remaining three intersections ~~in~~ on January 3 and 4 2006. Roadway segment counts on Sheehy Road were obtained from the County. Traffic counts were conducted in January 2006 at two additional roadway segments to supplement available information. Traffic counts on Highway 101 north of the Highway 166 interchange were obtained from Caltrans, and were adjusted to account for volume drops/gains at the Tefft Street interchange using ramp volume data from the *US 101/Willow Road Interchange Project Traffic Operations Report* (Fehr & Peers, 2004). The 85th percentile volumes were used for counts provided by Caltrans. Traffic count data is provided in Appendix G. The existing turning movement volumes, lane configurations, and traffic control at each of the study intersections are shown on Figure V.N.-2. All study intersections are unsignalized. Existing roadway segment and freeway volumes are shown on Figure V.N.-3.

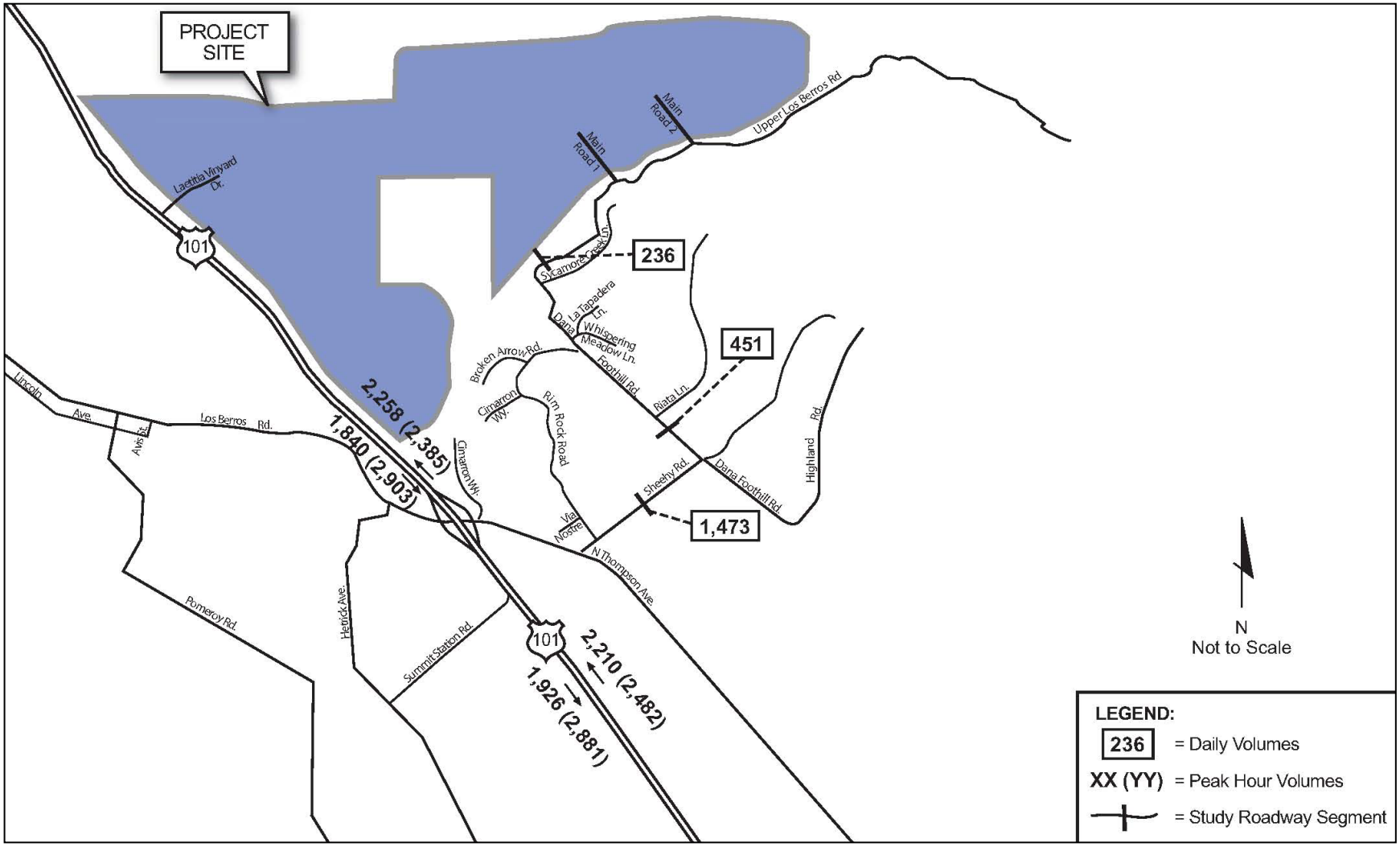


Study Roadway Segments and Intersections
FIGURE V.N.-1



Source: Fehr and Peers, 2007.

Existing Peak Hour Traffic Volumes, Lane Configurations, and Traffic Control
FIGURE V.N.-2



Source: Fehr and Peers, 2007.

Existing Study Roadway Segment Volumes
FIGURE V.N.-3

e. Existing Levels of Service

The operation of intersections and roadway segments is measured in terms of Level of Service (LOS). LOS is a qualitative measure of traffic conditions ranging from LOS A (representing free-flowing conditions with little or no delay) to LOS F (representing congested conditions with long delays and lengthy vehicle queues). LOS E represents at-capacity conditions. The County maintains LOS C as the minimum acceptable level of service for rural intersections (i.e., LOS D, E, and F are considered unacceptable operations). The *South County Area Plan* considers the areas outside of the Nipomo Urban Reserve Line to be rural. Caltrans strives to maintain operations at the LOS C/D threshold on state-operated facilities in the study area. Operational analysis of the study intersections is based on the methods and procedures described in the 2000 *Highway Capacity Manual* (*HCM*) published by the Transportation Research Board.

1) Existing Intersection Operations

Signalized intersection operations were analyzed using the SYNCHRO software program. This program is a comprehensive analysis tool that produces a variety of output data for intersection and arterial roadway operating performance. Table V.N.-1 presents the service level criteria used for signalized intersections based on average control delay per vehicle as described in Chapter 16 of the 2000 *HCM*, where control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Although all study intersections are currently controlled by stop signs, information regarding signalized intersection operations was included to explain operations with signalization as a potential mitigation measure.

TABLE V.N.-1
Signalized Intersection Service Level Criteria

Level of Service	Description	Average Control Delay Per Vehicle (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	≤ 10
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10 and ≤ 20
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20 and ≤ 35
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35 and ≤ 55
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55 and ≤ 80
F	Operations with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	> 80

Source: Highway Capacity Manual, Transportation Research Board, 2000

Unsignalized intersections were analyzed using the methodology described in Chapter 17 of the 2000 *HCM*. This methodology calculates the overall intersection control delay for intersections controlled by stop signs. At two-way or side street-controlled intersections, the control delay is calculated for each movement, not for the intersection as a whole. For approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. Table V.N.-2 shows the ranges of control delay and corresponding levels of service for unsignalized intersections.

TABLE V.N.-2
Unsignalized Intersection Service Level Criteria

Level of Service	Description	Average Total Delay Per Vehicle (Seconds)
A	Little or no delay	≤ 10
B	Short delays	> 10 and ≤ 15
C	Average delays	> 15 and ≤ 25
D	Moderate delays	> 25 and ≤ 35
E	Lengthy delays.	> 35 and ≤ 50
F	Intolerable delays.	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2000.

The existing peak hour volumes, peak hour factors, and lane configurations were input to the SYNCHRO program to calculate the level of service at each of the study locations. A global peak hour factor (PHF) of 0.85 was applied to all intersections in both the a.m. and p.m. analysis to ensure consistency with the results from the South County Traffic Model. Table V.N.-3 summarizes the existing intersection a.m. and p.m. peak hour Levels of Service. The level of service calculations are contained in Appendix G.

TABLE V.N.-3
Existing Intersection Levels of Service

Intersection	Traffic Control	Time Period	Average Delay (sec/veh)[1]	LOS[2]
Highway 101/Laetitia Vineyard Drive	Two-Way Stop Controlled[1]	a.m. p.m.	0.1 (111.1) 0.5 (182.9)	A (F) A (F)
SB Highway 101 Ramps/Los Berros Road	Two-Way Stop Controlled[1]	a.m. p.m.	4.0 (19.6) 8.7 (25.6)	A (C) A (D)
NB Highway 101 Ramps/North Thompson Road	Two-Way Stop Controlled[1]	a.m. p.m.	7.4 (27.5) 6.3 (18.2)	A (D) A (C)
Sheehy Road/North Thompson Road	Two-Way Stop Controlled[1]	a.m. p.m.	3.0 (9.6) 2.5 (10.7)	A (A) A (B)
Sheehy Road/North Dana Foothill Road	Two-Way Stop Controlled[1]	a.m. p.m.	4.0 (8.9) 6.7 (8.8)	A (A) A (A)

[1] *Overall intersection delay is presented followed by delay for the most severely impacted turning movement in parentheses.*
[2] *LOS = Level of Service*

The intersection of Highway 101/Laetitia Vineyard Drive operates at LOS F in both the morning and evening peak hours. Vehicles entering and exiting the Laetitia Winery experience long delays as they wait for an acceptable gap in the high-speed traffic on Highway 101. The Southbound Highway 101 Ramps/Los Berros Road intersection operates at an acceptable LOS in the morning peak hour, but operations degrade to LOS D during the evening peak hour. The Northbound Highway 101 Ramps/North Thompson Road intersection operates at LOS D during the morning peak hour and LOS C during the evening peak hour. The intersections of Sheehy Road/North Thompson Road and Sheehy Road/North Dana Foothill Road both operate at LOS B or better during the morning and evening peak hours. The intersection of Sheehy Road/North Dana Foothill Road is a T-intersection without traffic control on any of the approaches. For the purposes of this analysis, it was assumed that the northbound approach was stop controlled, while the eastbound and westbound approaches are uncontrolled. This most closely matches driver behavior observed in the field.

2) Existing Roadway Segment Operations

The operations of roadway segments are generally evaluated by comparing the measured (counted) volume to the threshold volumes. Table V.N.-4 presents threshold volumes from the 2000 *HCM*, based on the roadway facility type and number of lanes, for various types of roadways. These threshold volumes include adjustments for divided or undivided facilities and for roadways with left-turn lanes. The threshold volumes are approximate in nature and serve primarily as a general guide as to whether the roadway is over or under capacity. In urban environments, where intersections become the constraint points along roadway segments, intersection level of service is typically used to determine the roadway's level of service.

TABLE V.N.-4
Level of Service Threshold Volumes for Various Roadway Types

Roadway Type	Maximum Daily Volume (both directions)				
	LOS A	LOS B	LOS C	LOS D	LOS E
4-Lane Divided Highway	28,000	43,200	61,600	74,400	80,000
2-Lane Arterial (with left-turn lane)	11,000	12,500	14,500	16,000	18,000
2-Lane Arterial (no left-turn lane)[1]	5,000	6,250	7,750	10,000	11,250
2-Lane Collector/Local Street[1]	3,500	4,750	6,000	6,750	8,500

[1] *Threshold volumes obtained by taking the average value of the range presented in the South County Traffic Model Update, derived from the Highway Capacity Manual 2000. This accounts for the nonstandard design features of collector roads in the study area, such as narrow lane widths and dirt shoulders.*

Source: Highway Capacity Manual, Transportation Research Board, 2000.

Table V.N.-5 shows the existing roadway segment levels of service for the study segments. Based on the volumes thresholds from the *HCM,* all of the study roadway segments operate at LOS A.

TABLE V.N.-5
Existing Street Roadway Segment Daily Traffic Conditions

Roadway Segment	Location	Type	Daily Volume	LOS[1]
Sheehy Road	North Thompson Road to North Dana Foothill Road	2-Lane Collector/Local Street	1473	A
North Dana Foothill Road	Sheehy Road to Riata Lane	2-Lane Collector/Local Street	451	A
Upper Los Berros	North of Sycamore Creek Lane	2-Lane Collector/Local Street	236	A

[1] *LOS thresholds are shown in Table V.N.-4*

3) Existing Freeway Operations

The Highway 101 freeway mainline segments and ramp junctions were analyzed using the Highway Capacity Software (HCS), which is consistent with the 2000 *HCM*. The service level for a freeway section is based on density (passenger cars/lane/mile). Freeway LOS is a qualitative description of traffic flow based on speed, travel time, delay, and freedom to maneuver. Table V.N.-6 shows a summary of the relationship between density and level of service for freeway mainline sections. The LOS for freeway ramp junctions is also based on density, as summarized in Table V.N.-7 but includes different density ranges from mainline criteria.

TABLE V.N.-6
Freeway Service Level Criteria

LOS	Description	Density[1]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 11
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 11 to 18
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 18 to 26
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 26 to 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35 to 45
F	Represents a breakdown in flow.	*

[1] *Density in passenger cars per mile per lane.*

Source: Highway Capacity Manual, Transportation Research Board, 2000.

TABLE V.N.-7
Freeway Ramp Merge/Diverge LOS Criteria

LOS	Description	Density[1]
A	Free-flow speeds prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	≤ 10
B	Free-flow speeds are maintained. The ability to maneuver with the traffic stream is only slightly restricted.	> 10 to 20
C	Flow with speeds at or near free-flow speeds. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.	> 20 to 28
D	Speeds decline slightly with increasing flows. Freedom to maneuver with the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort.	> 28 to 35
E	Operation at capacity. There are virtually no usable gaps within the traffic stream, leaving little room to maneuver. Any disruption can be expected to produce a breakdown with queuing.	> 35 to 43
F	Represents a breakdown in flow.	> 43

[1] *Density in passenger cars per mile per lane.*

Source: Highway Capacity Manual, Transportation Research Board, 2000.

Table V.N.-8 summarizes the existing mainline and ramp junction operation results. As shown, most of the study locations operate at LOS C or better, with the worst traffic operations occurring on the mainline. During the p.m. peak hour, southbound Highway 101 and the northbound and southbound Highway 101 off-ramps operate at LOS D. The southbound on-ramp also operates at LOS D during the p.m. peak hour. All of the remaining ramp junctions at the Los Berros Road/North Thompson Road interchange operate at LOS C or better. Appendix G contains the results of the existing freeway analysis.

TABLE V.N.-8
Existing Condition Freeway Mainline and Ramp Junction Analysis

Mainline or Ramp	Time Period	Number of Lanes	Density[1]	LOS
Mainline Analysis				
NB Highway 101 n/o Los Berros Rd/North Thompson Rd	a.m. p.m.	2	22 24	C C
SB Highway 101 n/o Los Berros Rd/North Thompson Rd	a.m. p.m.	2	18 29	C D
NB Highway 101 s/o Los Berros Rd/North Thompson Rd	a.m. p.m.	2	20 23	C C
SB Highway 101 s/o Los Berros Rd/North Thompson Rd	a.m. p.m.	2	18 26	B D
Ramp Junction Analysis				
NB Highway 101 North Thompson Rd Off-Ramp	a.m. p.m.	1	25 28	C D
NB Highway 101 North Thompson Rd On-Ramp	a.m. p.m.	1	22 24	C C
SB Highway 101 Los Berros Rd Off-Ramp	a.m. p.m.	1	22 32	C D
SB Highway 101 Los Berros Rd On-Ramp	a.m. p.m.	1	19 28	B D

1. Density in passenger cars per mile per lane.

2. Baseline Conditions

Baseline conditions typically reflect the sum of the existing volumes, as identified in the Existing Conditions, plus traffic from approved but not yet constructed developments in the vicinity of the proposed project. Since there are no approved but not yet constructed projects in the study area, the Existing Conditions scenario will be used to establish the baseline for evaluating project impacts.

3. Regulatory Setting

Transportation system requirements for the unincorporated areas of the county are subject to the policies and plans of the County of San Luis Obispo (County). The County outlines policies and standards regarding use of public roads in the *South County Area Plan.* The County is responsible for review and approval of proposed projects and traffic study reports. All new developments are required to meet the parking space and access improvement standards specified by the County.

The California Department of Transportation (Caltrans) has jurisdiction over all state-maintained facilities including US Highway 101. Caltrans strives to maintain operations at the LOS C/D threshold on all of its facilities but acknowledges that numerous roadway segments under its control in urban areas will operate at LOS D or worse. Any modifications to facilities within Caltrans right-of-way must be approved by the State.

4. Thresholds of Significance

The determinations of significance of project impacts are based on applicable policies, regulations, goals, and guidelines defined by CEQA and the County.

a. CEQA Guidelines

The significance of potential transportation and circulation impacts are based on thresholds identified within Appendix G of the CEQA Guidelines. According to the Guidelines, transportation impacts are considered significant if the proposed project will:

- Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access;
- Result in inadequate parking capacity; or,
- Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts or bicycle racks).

b. County of San Luis Obispo Guidelines

In addition to the CEQA Guideline considerations, any adverse transportation and circulation impacts are considered to be significant if they would result in an inconsistency with the thresholds identified in the *County of San Luis Obispo General Plan*.

1) Intersection and Roadway Segment Impacts

San Luis Obispo County has established LOS C as a goal for rural roadways, County roads, intersections, and Highway 101. Caltrans strives to maintain a target LOS on State highways including Highway 101 at the transition between LOS C and D.

Transportation impacts at signalized intersections are considered significant when:

- The addition of project traffic causes the intersection's level of service to degrade from LOS C or better to LOS D, E, or F.
- Project traffic is added to an intersection operating at LOS D, E, or F.

Transportation impacts at unsignalized intersections are considered significant when:

- The addition of project traffic to an unsignalized intersection increases the level of service to an unacceptable level and satisfies the peak-hour signal warrant from the Manual on Uniform Traffic Control Devices (MUTCD).
- The project's access to a major street causes a potentially unsafe situation or requires a new traffic signal.

Evaluation of arterial roadway segments reflects planning-level conditions along a street, whereas analysis of the intersections reflects detailed conditions of the arterial. Typically, poor operating conditions on an arterial are due to constraints at the intersections, and can be mitigated at the intersection. Therefore, if an arterial roadway segment analysis shows poor operating conditions, but individual intersections operate within acceptable standards, the mitigation measures defer to the intersection.

For US Highway 101 ramps, Highway 101 mainline segments, or a County roadway segment already operating at LOS D, E, or F without the project, the addition of any significant project traffic to that location is considered a significant impact.

2) Pedestrian and Bicycle Impacts

An impact to pedestrians and bicyclists would be considered significant if implementation of the proposed project would conflict with existing or planned bicycle facilities or would generate pedestrian and bicycle demand without providing adequate and appropriate facilities for safe non-motorized mobility.

3) Transit Impacts

Impacts to transit would be considered significant if the proposed project would conflict with existing or planned transit facilities or will generate potential transit trips and would not provide adequate facilities for pedestrians and bicyclists to access transit routes and stops.

5. Impact Assessment and Methodology

Impacts were assessed by comparing roadway operations with the addition of project-generated traffic to those under Existing Conditions and applying the appropriate criteria from thresholds of significance described above. Potential impacts to bicycle, pedestrian and transit facilities and services were also identified by comparing project conditions to Existing Conditions. Site access and on-site circulation were evaluated to determine if the project would potentially result in any hazards or non-standard operating conditions.

In addition to project-specific impacts, the EIR analysis identifies long-term impacts under a cumulative conditions scenario, representing future conditions in Year 2025. This scenario includes twenty years of growth in the study area in addition to background traffic growth.

6. Project-specific Impacts and Mitigation Measures

a. Proposed Intersection and Roadway Improvements

As part of the proposed project, numerous on-site access roads would be built and/or improved. Vehicle access to the project site is proposed via two site roadways intersections on Upper Los Berros Road. Access to the residential component of the site through the existing Laetitia Vineyard Drive roadway (at Highway 101) would be limited to emergency vehicles only. The following impact analysis assumes the existing roadway configurations would be maintained. A network of on-site roadways will be constructed to provide access to the proposed residential units and the hotel.

b. Intersection and Roadway Impacts

1) Project Trip Generation, Distribution, and Assignment

The amount of traffic added to the roadway system by a proposed development project is estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. The first step estimates the amount of added traffic to the roadway network. The second step estimates the direction of travel to and from the project site. The trips are assigned to specific street segments and intersection turning movements during the third step. These steps are described below.

Traffic generated by the proposed project was estimated using "Single-Family Detached Housing" and "Resort Hotel" trip rates from *Trip Generation* (7th Edition) published by the Institute of Transportation Engineers (ITE). Table V.N.-9 summarizes the estimated trip generation of the proposed project. The proposed project would generate approximately 1,234 daily trips, 108 morning peak hour trips (40 inbound, 68 outbound) and 145 evening peak hour trips (84 inbound and 61 outbound). These calculations assume that no special events (limited to residents and guests of the dude ranch) ~~at the equestrian facility~~ will begin or end during weekday commute peak periods (7:30-8:30 a.m. and 4:30-5:30 p.m.). No public special events are proposed. Private special events would likely occur during the early evenings and during the weekends. Operation of the wastewater treatment plant would not result in trips generated on a daily basis; occasional trips would occur during sludge removal, and maintenance activities by the treatment operator.

TABLE V.N.-9
Estimated Project Vehicle Trip Generation

Land Use	Weekday Daily Trips	a.m. Peak			p.m. Peak		
		In	Out	Total	In	Out	Total
Single Family Homes (101 Units)[1]	1,049	20	60	80	68	40	108
Resort Hotel (75 Lodging Units)[2, 3]	185	20	8	28	16	21	37
Net New Trips	**1,234**	**40**	**68**	**108**	**84**	**61**	**145**

1. Trip generation for residential units determined from fitted curve equations for Single Family Residences (Land Use 210) in ITE's Trip Generation (7th Edition). Detailed equations are presented in Appendix G.
2. Trip generation for dude ranch determined from average rates for Resort Hotel (Land Use 330) in ITE's Trip Generation (7th Edition)
3. Because the Resort Hotel Land Use does not include an estimate for daily trips, they are assumed to be five times the p.m. peak hour trips. This factor was developed by comparing the difference between the p.m. and daily trip rates for a Hotel (ITE Land Use 310)

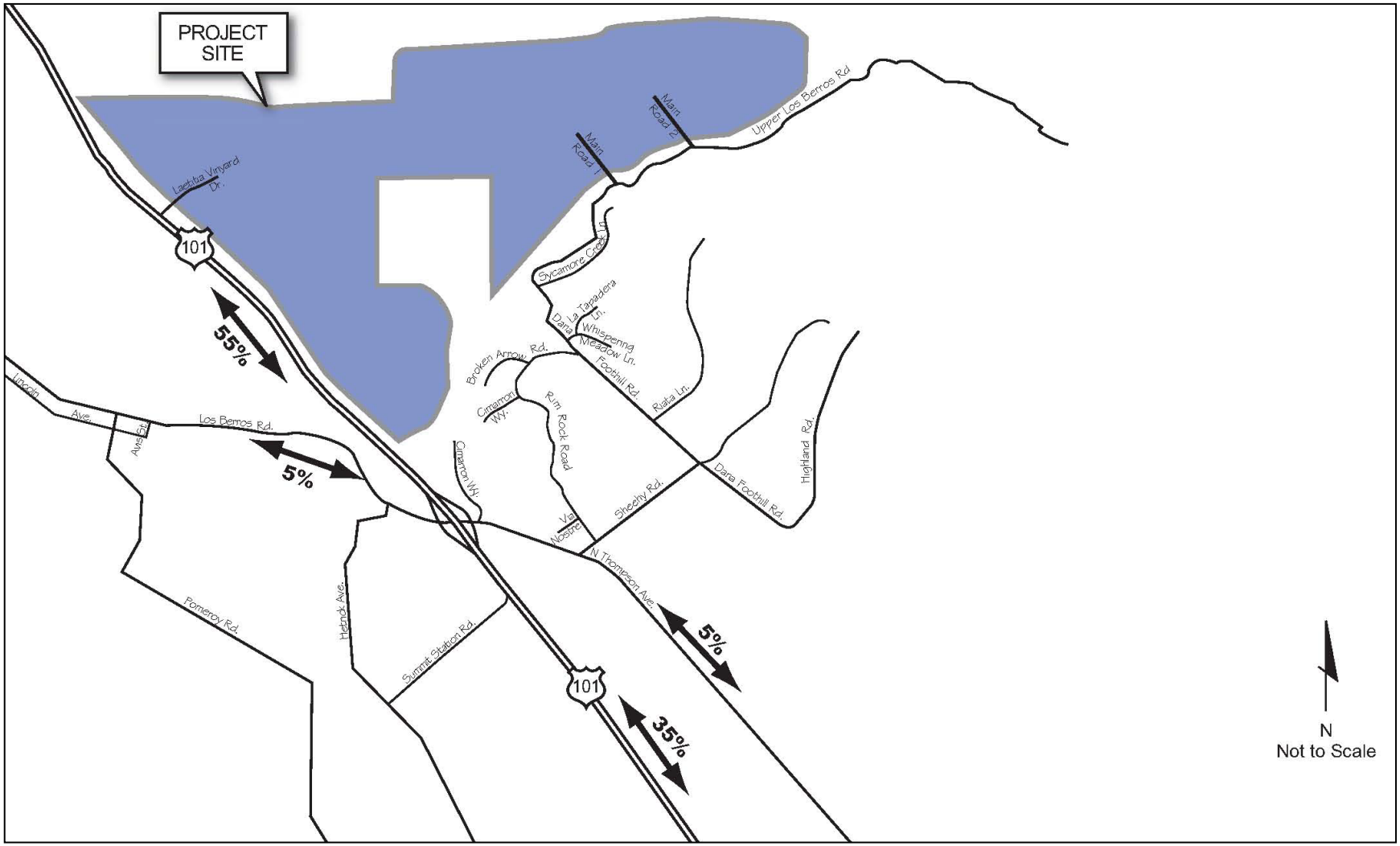
Source: ITE; Fehr & Peers, 2006.

The estimated directions of approach and departure for the proposed project trips to the existing roadway network are illustrated on Figure V.N.-4. The distribution pattern is based on existing travel patterns in the area and discussions with the County Department of Public Works, Caltrans, and San Luis Obispo Council of Governments (SLOCOG) staff.

The project-generated trips were assigned to the roadway system based on the distribution pattern discussed above. Figure V.N.-5 shows the trip assignment at the study intersections. These trips were added to the volumes under Existing Conditions to represent Existing with Project Conditions. Figure V.N.-6 illustrates the peak hour volumes under Existing with Project Conditions.

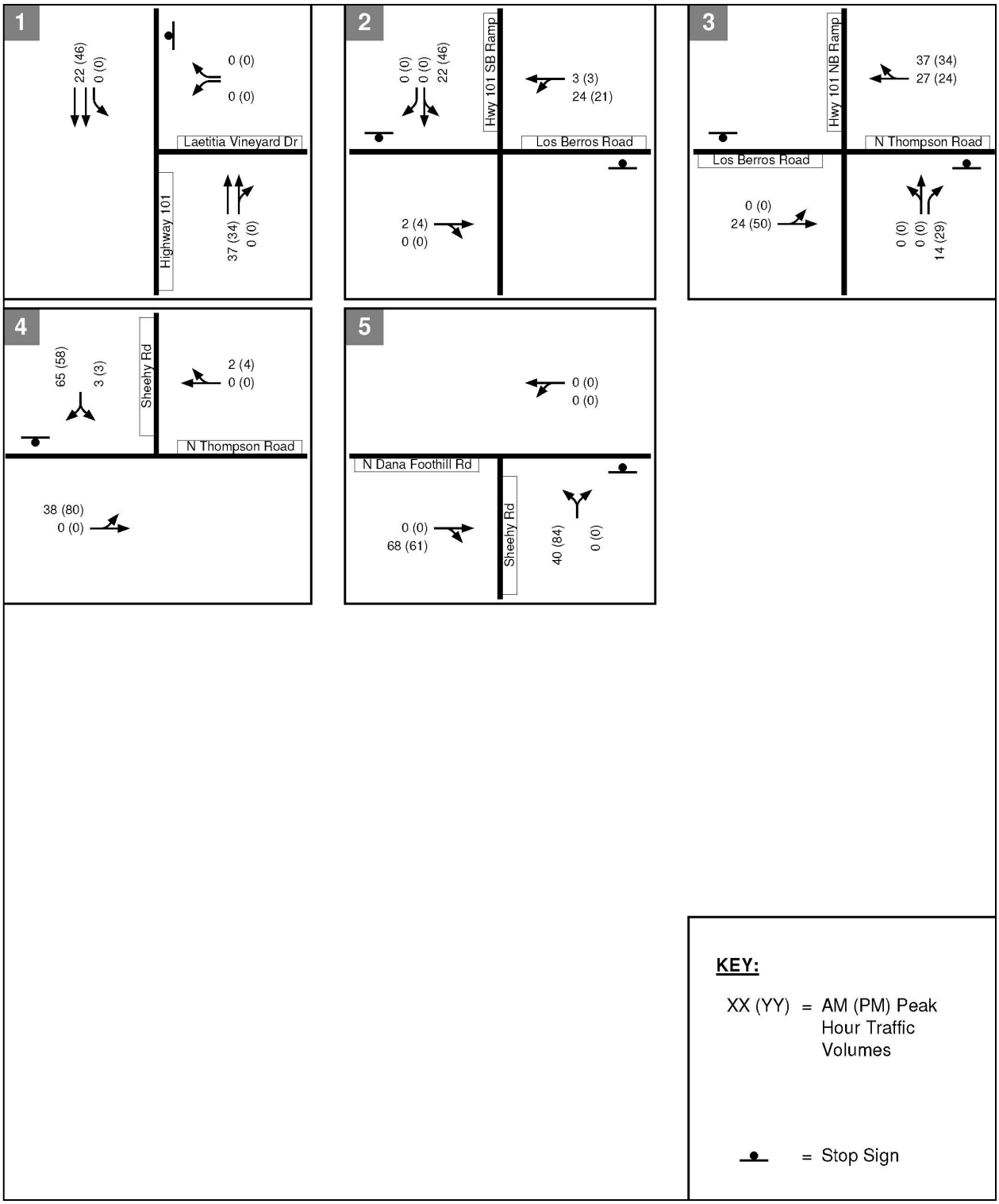
2) Existing With Project Intersection Operations

Intersection operations were re-calculated with the traffic volumes presented on Figure V.N.-6. Detailed LOS calculation sheets are presented in Appendix G. Table V.N.-10 shows the levels of service under Existing and Existing with Project Conditions. Potentially significant impacts at the study intersections are discussed below.



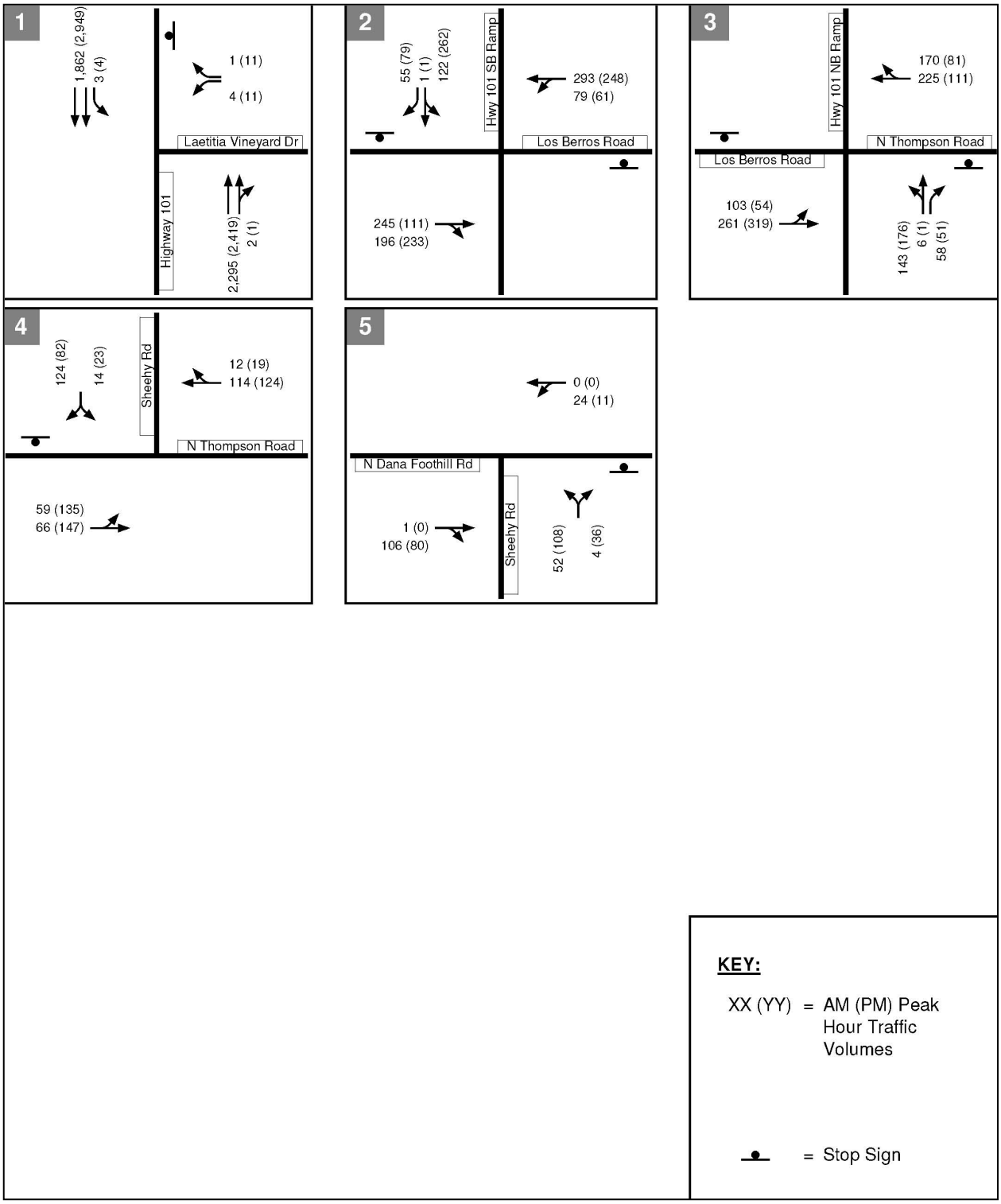
Source: Fehr and Peers, 2007.

Project Trip Distribution
FIGURE V.N.-4



Source: Fehr and Peers, 2007.

Project Trip Assignment
FIGURE V.N.-5



Source: Fehr and Peers, 2007.

Existing with Project Traffic Volumes
FIGURE V.N.-6

TABLE V.N.-10
Existing and Existing with Project Intersection Levels of Service

Intersection	Traffic Control	Time Period	Existing		Existing With Project	
			Average Delay (sec/veh)[1]	LOS[2]	Average Delay (sec/veh)[1]	LOS[2]
Highway 101/ Laetitia Vineyard Dr	Two-Way Stop Controlled[1]	a.m. p.m.	0.1 (111.1) 0.5 (182.9)	A (F) A (F)	0.1 (118.3) 0.5 (196.8)	A (F) A (F)
SB Highway 101 Ramps/ Los Berros Rd	Two-Way Stop Controlled[1]	a.m. p.m.	4.0 (19.6) 8.7 (25.6)	A (C) A (D)	5.8 (26.8) **18.4 (51.7)**	A (D) **C (F)**
NB Highway 101 Ramps/ North Thompson Rd	Two-Way Stop Controlled[1]	a.m. p.m.	7.4 (27.5) 6.3 (18.2)	A (D) A (C)	**8.9 (35.6)** 6.9 (21.6)	**A (E)** A (C)
Sheehy Rd/ North Thompson Rd	Two-Way Stop Controlled[1]	a.m. p.m.	3.0 (9.6) 2.5 (10.7)	A (A) A (B)	4.8 (10.1) 4.5 (11.3)	A (B) A (B)
Sheehy Rd/ North Dana Foothill Rd	Two-Way Stop Controlled[1]	a.m. p.m.	4.0 (8.9) 6.7 (8.8)	A (A) A (A)	3.8 (9.5) 6.3 (9.6)	A (A) A (A)

[1] Overall intersection delay is presented followed by delay for the most severely impacted turning movement in parentheses.
[2] LOS = Level of Service
*Significant impacts are highlighted in **bold.***

(a) Highway 101/Laetitia Vineyard Drive Intersection

The addition of project traffic on Highway 101 north of Los Berros Road would worsen operations at the intersection of Highway 101/Laetitia Vineyard Drive. Vehicles turning left out of the Laetitia Winery would experience increased delay, from 81.3 seconds to 86.2 seconds during the morning peak hour, and from 131.2 seconds to 140.5 seconds during the afternoon peak hour. Due to the low volumes exiting the winery during the peak hour, this increase in delay would affect few drivers. Signal warrant calculation sheets are included in Appendix G. The intersection does not meet peak hour signal warrants, so it is a less-than-significant impact and no mitigation is required.

The minor street approach to the Highway 101/Laetitia Vineyard Drive intersection is anticipated to operate at LOS F with and without the project during the a.m. and p.m. peak hours. The project would increase delay (but not traffic) to the minor street approach, assuming Laetitia Vineyard Drive is not used by the proposed project for non-emergency ingress or egress. This intersection does not meet peak hour signal warrants. Caltrans staff has indicated that this intersection is deficient, and any additional trips using the driveway would worsen the existing deficient condition. Caltrans has also stated that "no new vehicle trips, either for commercial or residential development, be added or granted access" (James Kilmer, 2006). The applicant does not propose to use this intersection for primary access; however, California Department of Forestry and Fire Protection (CAL FIRE) requires this to be used as secondary access. The applicant proposes to install a guarded gate restricting access from Laetitia Vineyard Drive eastbound into the proposed residential subdivision, and non-emergency access from the subdivision onto Laetitia Vineyard Drive. Per CAL FIRE requirements, the gate would be

required to open upon approach by westbound vehicles. Signage would be installed at the gate to limit this access to emergencies only (i.e., wildland fire), and the applicant proposes to restrict non-emergency access by the permanent employment of a guard. Based on the assumed compliance with these limitations, the proposed project would not add any traffic trips to the Highway 101/Laetitia Vineyard Drive intersection; therefore this impact would be considered *less than significant (Class III)*. Any inadvertent and unauthorized use of Laetitia Vineyard Drive for access into and out of the residential subdivision would result in *significant and unavoidable (Class I)* impacts to the intersection, including contribution to the LOS F designation and unsafe traffic conditions, and may result in enforcement action by the California Department of Transportation, which may include closure of the intersection (refer to TR Impact ~~9~~10).

(b) Highway 101 Southbound Ramps/Los Berros Road

The addition of project trips to the intersection of Highway 101 Southbound Ramps/Los Berros Road is anticipated to worsen operations from LOS C to LOS D during the a.m. peak hour and from LOS D to LOS F during the p.m. peak hour. This intersection meets peak hour signal warrant criteria for the p.m. peak hour, but not for the a.m. peak hour. Signal warrant calculation sheets are included in Appendix G. Installation of a traffic signal and a westbound left-turn pocket at the intersection of Highway 101 Southbound Ramps/Los Berros Road is warranted. This would improve operations to LOS A during the p.m. peak hour. The signalization of this intersection is included in the County's Capital Improvement Projects list. Approximately 71 percent of the cost of this signal is to come from the South County's Traffic Impact Fee Program, with the remaining 29 percent from other sources. The Capital Improvement Program funding at this intersection is not anticipated to be needed until 2025 without the project. Therefore, it will be necessary for the project applicant to fund and construct the signal to mitigate its impact. Please refer to TR Impact 1 below.

(c) Highway 101 Northbound Ramps/North Thompson Road

The addition of project trips to the intersection of Highway 101 Northbound Ramps/North Thompson Road is anticipated to worsen operations from LOS D to LOS E during the a.m. peak hour. This intersection meets peak hour signal warrant criteria for the a.m. peak hour. Signal warrant calculation sheets are included in Appendix G. Installation of a traffic signal and an eastbound left-turn pocket at the intersection of Highway 101 Northbound Ramps/North Thompson Road is necessary to improve operations to LOS A during the a.m. peak hour. The signalization of this intersection is included in the County's Capital Improvement Projects list. Approximately 71 percent of the cost of this signal is to come from the South County's Traffic Impact Fee Program, with the remaining 29 percent from other sources. The Capital Improvement Program funding at this intersection is not anticipated to be needed until 2025 without the project. Therefore, it will be necessary for the project applicant to fund and construct the signal.

TR Impact 1 **The proposed project would cause operations at the intersection of Highway 101 Southbound Ramps/ Los Berros Road to degrade from LOS D to LOS F during the p.m. peak hour. The intersection meets the peak hour signal warrant during the p.m. peak hour. The proposed project would cause operations at the intersection of**

Highway 101 Northbound Ramps/North Thompson Road to degrade from LOS D to LOS E during the a.m. peak hour. The intersection meets the peak hour signal warrant during the a.m. peak hour.

TR/mm-1 Upon submittal of subdivision improvement plans, the applicant shall submit plans to the County Department of Public Works and Caltrans for a traffic signal and westbound left-turn pocket, or roundabout, at the intersection of Highway 101 Southbound Ramps/Los Berros Road. The applicant shall construct and implement the alternative improvements under a Caltrans encroachment permit or Project Study Report. Intersection widening, signalization, and striping improvements shall be done in accordance with plans on file with the County Public Works Department. No occupancy shall occur until all improvements are completed.

~~As these improvements would occur within Caltrans jurisdiction, only an encroachment permit from Caltrans would be required if the cost of the improvements is less than three million dollars. A Project Study Report and associated approval from Caltrans would be required if the cost of the improvement exceeds three million dollars.~~

TR/mm-2 Upon submittal of subdivision improvement plans, the applicant shall submit plans to the County Department of Public Works and Caltrans for a traffic signal and eastbound left-turn pocket or roundabout at the intersection of Highway 101 Northbound Ramps/North Thompson Road. The applicant shall construct and implement the alternative improvements under a Caltrans encroachment permit or Project Study Report. Intersection widening, signalization, and striping improvements shall be done in accordance with plans on file with the County Public Works Department. No occupancy shall occur until all improvements are completed.

~~As these improvements would occur within Caltrans jurisdiction, only an encroachment permit from Caltrans would be required if the cost of the improvements is less than three million dollars. A Project Study Report and associated approval from Caltrans would be required if the cost of the improvement exceeds three million dollars.~~

Residual Impact With implementation of the above measure, this impact would be considered *less than significant with mitigation, Class II.*

(d) Sheehy Road/North Thompson Road

The intersection of Sheehy Road/North Thompson Road is controlled at the Sheehy approach to North Thompson. A left turn channelization lane is not currently present. The addition of project traffic adds minor delay to the Sheehy Road/North Thompson Road intersection during both peak hours. Based on consultation with Public Works, implementation of the project may increase the potential for rear end collisions resulting from the left turn movement (Glen

Marshall, 2008). A left turn channelization lane is warranted at this intersection (refer to Appendix G).

TR Impact 2 **The proposed project would increase the potential for rear-end collisions resulting from left turn movements from North Thompson Road onto Sheehy Road.**

TR/mm-3 Upon approval of subdivision improvement plans, the applicant shall submit plans to the County Department of Public Works showing installation of a left turn channelization lane at the North Thompson Road/Sheehy Road intersection. The channelization lane shall be implemented prior to final inspection of tract improvements.

Residual Impact With implementation of the above measure, this impact would be considered *less than significant with mitigation, Class II.*

(e) Sheehy Road/North Dana Foothill Road

The intersection of Sheehy Road/North Dana Foothill Road is currently uncontrolled on all approaches so that vehicle right-of-way is not clearly defined. This is a deficient condition that could lead to driver confusion. The analysis presented above assumes a stop sign on the Sheehy Road approach, which most closely matches existing driver behavior. The addition of project trips would exacerbate an existing deficient condition. Installation of a stop sign on the Sheehy Road approach would improve the intersection to standard operating conditions.

TR Impact 3 **The proposed project would exacerbate an existing deficient condition at the Sheehy Road/North Dana Foothill intersection.**

TR/mm-4 Upon approval of subdivision improvement plans, the applicant shall submit plans to the County Department of Public Works showing installation of a stop sign and stop bar striping on the Sheehy Road approach. The stop sign and associated striping shall be implemented prior to final inspection of tract improvements.

Residual Impact With implementation of the above measure, this impact would be considered *less than significant with mitigation, Class II.*

3) Existing With Project Roadway Segment Operations

Table V.N.-11 shows the roadway levels of service for the study segments under Existing and Existing with Project Conditions. All of the study roadway segments will operate acceptably at LOS A with the addition of project traffic. Thus, no impacts to the study roadway segments were identified under Existing with Project Conditions, and no mitigation is required.

TABLE V.N.-11
Existing and Existing With Project Street Roadway Segment Daily Traffic Conditions

Roadway Segment	Location	Type	Existing		Existing With Project		
			Daily Volume	LOS	Project Daily Trips	Daily Volume	LOS
Sheehy Road	North Thompson Road to North Dana Foothill Road	2-Lane Collector/ Local Street	1,473	A	1,234	2,707	A
North Dana Foothill Road	Sheehy Road to Riata Lane	2-Lane Collector/ Local Street	451	A	1,234	1,685	A
Upper Los Berros	North of Sycamore Creek Lane	2-Lane Collector/ Local Street	236	A	1,234	1,470	A

Source: Fehr & Peers, 2006.

4) Existing With Project Freeway Operations

Table V.N.-12 shows the freeway levels of service for the study ramp junctions and mainline locations under Existing and Existing with Project Conditions. During the a.m. peak hour, both the mainline segments and the ramp junctions operate at LOS C or better both with and without the addition of project traffic. During the p.m. peak hour, numerous mainline segments and ramp junctions operate at LOS D. A more detailed discussion of specific impacts is included below.

TABLE V.N.-12
Existing and Existing with Project Conditions
Mainline and Ramp Merge Diverge Analysis

Mainline or Ramp	Time Period	Number of Lanes	Existing		Existing with Project	
			Density[1]	LOS	Density[1]	LOS
Mainline Segment						
NB Highway 101 n/o Los Berros Road/ North Thompson Road	a.m. p.m.	2	22 24	C C	23 24	C C
SB Highway 101 n/o Los Berros Road/ North Thompson Road	a.m. p.m.	2	18 29	C D	18 30	C D
NB Highway 101 s/o Los Berros Road/ North Thompson Road	a.m. p.m.	2	20 23	C C	20 23	C C
SB Highway 101 s/o Los Berros Road/ North Thompson Road	a.m. p.m.	2	18 26	B D	18 27	B D
Ramp Junction						
NB Highway 101 North Thompson Road Off-Ramp	a.m. p.m.	1	25 28	C D	26 28	C D

Mainline or Ramp	Time Period	Number of Lanes	Existing		Existing with Project	
			Density[1]	LOS	Density[1]	LOS
NB Highway 101 North Thompson Road On-Ramp	a.m. p.m.	1	22 24	C C	23 24	C C
SB Highway 101 Los Berros Road Off-Ramp	a.m. p.m.	1	22 32	C D	22 33	C D
SB Highway 101 Los Berros Road On-Ramp	a.m. p.m.	1	19 28	B D	20 28	B D

[1]*Density in passenger cars per mile per lane.*

Source: Fehr & Peers, 2006.

(a) Highway 101 Mainline

During the p.m. peak hour, southbound Highway 101 north and south of the Los Berros Road/North Thompson Road interchange operates at LOS D both with and without the project. Implementation of the project would contribute to the existing deficiency. The addition of any project traffic to Highway 101 ramps or mainline segments already operating at LOS D, E, or F without the project ~~is considered a significant impact~~would contribute to existing congestion. Capacity improvements along Highway 101 would be necessary to mitigate this impact. The 2005 Regional Transportation Plan (RTP) notes that the study segments of Highway 101 are expected to be widened to six lanes in the future, but funding is not secured for this project. Widening Highway 101 to six lanes would improve mainline operations to LOS C or better under Existing with Project Conditions. Based on review by the San Luis Obispo Council of Governments (James Worthley, November 8, 2008), there is "no funding in the next 20 years for this improvement or in the foreseeable future." ~~Based on the current and anticipated lack of funding, this impact would be considered significant and unavoidable~~The proposed project would contribute to this deficient condition by adding trips to the Highway 101 mainline, which would exacerbate congestion. ~~Refer to TR Impact 3~~ 4 ~~below.~~

(b) Highway 101/Los Berros Road/North Thompson Road Ramp Junctions

During the p.m. peak hour, the northbound Highway 101/North Thompson Off-ramp and the southbound Highway 101/Los Berros Road On-ramp and Off-ramp all operate at LOS D both with and without the project. Implementation of the project would contribute to this existing deficient condition during the p.m. peak hour by adding 29 trips to the northbound Highway 101 off-ramp, 34 trips to the northbound Highway 101 on-ramp, 46 trips to the southbound Highway 101 off-ramp, and 21 trips to the southbound Highway 101 on-ramp. This would result in the addition of one vehicle per mile, and would not reduce existing LOS. ~~The addition of any project traffic to Highway 101 ramps or mainline segments already operating at LOS D, E, or F without the project is considered a significant impact.~~ Capacity improvements along Highway 101 would be necessary to mitigate this impact. The 2005 Regional Transportation Plan (RTP) notes that the study segments of Highway 101 are expected to be widened to six lanes in the future, but funding is not secured for this project. Widening Highway 101 to six lanes would improve ramp operations at these locations to LOS C or better under Existing with Project Conditions.

Lengthening the deceleration lane at the southbound and northbound off-ramps by 50 feet and lengthening the northbound on-ramp merge acceleration lane by 25 feet would also mitigate this impact. A funding mechanism for these projects is not currently available, and the feasibility of such improvements depends on Caltrans review and approval.

TR Impact 4 **The proposed project would add traffic to southbound Highway 101 during the p.m. peak hour and exacerbate an existing deficient condition according to Caltrans standards. Congestion under LOS D conditions would be limited. The proposed project would exacerbate existing deficient conditions at the Highway 101/Los Berros Road/North Thompson Road ramp junctions during the p.m. peak hour.**

TR/mm-5 Upon submittal of subdivision improvement plans, the applicant shall submit plans to the County Department of Public Works and Caltrans to lengthen the deceleration lane at the southbound and northbound off-ramps by 50 feet and lengthen the northbound on-ramp merge acceleration lane by 25 feet. The applicant shall construct and implement the improvements under a Caltrans encroachment permit or Project Study Report, as determined by Caltrans. No occupancy shall occur until all improvements are completed.

Residual Impact If the construction and occupation of residences occurs prior to completion of the above improvements, associated impacts would remain. Although the proposed mitigation would reduce the impacts to the extent possible, due to the uncertainty regarding Caltrans approval of improvements within their jurisdiction, it cannot be assured that all improvements would be feasibly constructed prior to occupation of the proposed residences. As a result, impacts would remain *significant and unavoidable, Class I.*

c. Pedestrian Impacts

The proposed project is expected to generate pedestrian trips between the residential units~~,~~ and the ranch headquarters/homeowners association facilities~~, and the equestrian center~~. As proposed, the project would provide pedestrian facilities in the vicinity of the ranch headquarters/homeowners association facilities. These facilities would consist of decomposed granite walkways and accented pavement pedestrian crossings. No other pedestrian paths or other facilities are shown on the site plan.

TR Impact 5 **The proposed project would generate pedestrian trips where sidewalks or pathways are not currently proposed.**

TR/mm-6 Prior to approval of subdivision improvement plans, the project applicant shall submit a pedestrian circulation plan for review and approval by the County Department of Public Works and Department of Planning and Building. The applicant shall construct any pedestrian improvements called for in the plan. This plan should, to the maximum extent feasible, use existing ranch roads as pedestrian paths connecting the residential

clusters with the ranch headquarters/homeowners association facilities ~~and equestrian facilities,~~ and other residential clusters. Appropriate signage should be included on the plan to notify drivers of pedestrians sharing the roadway. Due to the rural character of the site and the expected low pedestrian volumes, sidewalks are not appropriate throughout the residential and agricultural portions of the site.

Secondary Impact Implementation of this mitigation measure would result in secondary impacts to agricultural resources by introducing recreational uses (i.e., walking, running, bicycling, etc.) within productive agricultural areas.

Implement AG/mm-3.

Residual Impact Residual impacts are considered *less than significant, Class III*.

d. Bicycle Impacts

As proposed, the project does not provide bicycle facilities. The project would generate new bicycle trips between the residential clusters~~,~~ and the ranch headquarters/homeowners association facilities.~~, and the equestrian center.~~ It is expected that most, if not all of these trips will be recreational in nature (i.e., not commute trips), or to access internal components (ranch headquarters~~, equestrian facilities, etc.~~). Chapter 22.18.050 of the County's Development Code specifies that for parking lots with more than 20 parking spaces, bicycle racks should be provided at a rate of 1 per 10 parking spaces.

The County Parks and Recreation Element (December 2006) shows existing and proposed parks and trail facilities in areas throughout the County. In the vicinity of the project site, it shows several proposed multi-use trails. Multi-use trails are proposed along North Thompson Road, Sheehy Road, North Dana Foothill Road, and along the Los Berros Creek from Upper Los Berros Road to Los Berros Road beyond Highway 101. These trails would connect to destinations both north and south of the project site.

TR Impact 6 **The proposed project would generate bicycle trips where bicycle facilities are not provided.**

TR/mm-7 Prior to the issuance of building permits, the project applicant shall submit a bicycle circulation plan for review and approval by the County Department of Public Works, Department of Planning and Building, and Parks Division. The applicant shall construct any bicycle improvements called for in the plan. This plan should, to the maximum extent feasible, use existing ranch roads as bicycle paths connecting the residential clusters with the ranch headquarters/homeowners association facilities ~~and equestrian facilities,~~ and other residential clusters. The plan should provide clear connections to the proposed multi-use trails and appropriate traffic control devices at street crossing locations. Due to the rural character of the site, hilly terrain, and the expected low bicycle volumes, on-street Class II bike lanes are not appropriate throughout the residential and agricultural portions of the site. The project applicant shall provide a

bicycle rack capable of storing a minimum of five bicycles at the ranch headquarters/homeowners association facility to encourage internal site trips via bicycle.

Secondary Impact Implementation of this mitigation measure would result in secondary impacts to agricultural resources by introducing recreational uses (i.e., walking, running, bicycling, etc.) within productive agricultural areas.

Implement AG/mm-3.

Residual Impact Residual impacts are considered *less than significant, Class III*.

e. Transit Impacts

The proposed project is expected to generate a negligible number of new transit trips, as the nearest transit stop is approximately two miles from the project site. Residents of the proposed project may choose to park and ride using the dirt lot adjacent to the Highway 101 Northbound Offramp on North Thompson Road; however, the number of transit riders will be negligible. Thus, no project impacts to transit are anticipated, so no mitigation measures are warranted.

f. Neighborhood Impacts

The nearby residential areas along Upper Los Berros Road, North Dana Foothill Road, and Sheehy Road will serve higher vehicle volumes due to traffic added by the proposed project. However, the roadway segment analysis summarized in Table V.N.-11 indicates that each of these segments would operate acceptably with the addition of project traffic. While it is possible that project traffic could use routes other than Sheehy Road and North Dana Foothill Road to access the project site, these streets represent the most direct route and no diversion is expected. No significant neighborhood impacts are anticipated and no mitigation measures are warranted.

g. Project Access Impacts

1) Site Access

Local access to the proposed project would be via Sheehy Road, North Dana Foothill Road, and Upper Los Berros Road. Sheehy Road and North Dana Foothill Road are designated as collector roads in the *South County Area Plan*. Both roads consist of two 11.5 foot travel lanes with dirt shoulders. North Dana Foothill Road does not have any roadway striping, while Sheehy Road has centerline striping~~ and striping at the edge of pavement.~~ Upper Los Berros Road consists of two, ten foot lanes without a striping and dirt shoulders. Beyond the planned junction with Main Road 1, portions of Upper Los Berros Road are unpaved. Section A-1 (f) of the County's design standard calls for an 8-foot unpaved shoulder or a 4-foot paved shoulder with an asphalt berm where it is necessary to carry drainage flows on the road.

Emergency vehicle access would be provided via Upper Los Berros Road and Laetitia Vineyard Drive. The applicant has proposed installing a gate ~~controlled by a keypad and/or card, or a crash gate~~and manned guard station (24 hours a day, seven days a week, 365 days a year) at Laetitia Vineyard Drive to limit this access route for emergencies only. ~~The gate would be designed to open in the event of a power failure. The combination code to open the gate would~~

~~be included in the Homeowner Association documents with instructions that residents are not to use the gate except in case of an emergency.~~ Based on consultation with County and Caltrans staff, these gate controls would not ensure that the secondary access would be limited to emergency use only. As previously noted, any additional non-emergency trips generated by the project at the Highway 101 / Laetitia Vineyard Drive intersection would result in a significant, adverse, and unavoidable impact based on the existing LOS (F). In addition, the existing encroachment permit for the Highway 101 / Laetitia Vineyard Drive intersection is limited to trips generated by the existing vineyard and winery.

To improve local roads to meet county standards, shoulder improvements are needed along Sheehy Road, North Dana Foothill Road, and Upper Los Berros Road, and centerline and lane striping is required on North Dana Foothill Road and Upper Los Berros Road. In addition, the unpaved sections of Los Berros Road up to the proposed dude ranch access point should be paved to meet County road standards. County funding for these improvements is not secured; therefore, it will be necessary for the project applicant to fund and construct the improvement.

TR Impact 7 **Sheehy Road currently has unpaved shoulders and no edge of road striping. The proposed project would exacerbate this deficient condition.**

TR/mm-8 Prior to approval of subdivision improvement plans, the applicant shall submit road improvement plans to the County Department of Public Works for review, showing the improvement of the shoulders in conformance with County Standard A-1(f) along Sheehy Road. The road improvement plans shall be implemented prior to final inspection of tract improvements.

Residual Impact With implementation of the above measure, this impact would be considered *less than significant with mitigation, Class II.*

TR Impact 8 **North Dana Foothill Road currently does not have paved shoulders or roadway striping. The proposed project would exacerbate this deficient condition.**

TR/mm-9 Prior to approval of subdivision improvement plans, the applicant shall submit road improvement plans to the County Department of Public Works for review, showing roadway improvements in conformance with County Standard A-1(f) along North Dana Foothill Road. Funding for these improvements is not secured. Therefore, it will be necessary for the project applicant to fund and construct the improvement. No occupancy shall occur until all improvements are completed.

Residual Impact With implementation of the above measure, this impact would be considered *less than significant with mitigation, Class II.*

TR Impact 9 **Upper Los Berros Road currently does not have paved shoulders or roadway striping, and is unpaved in sections. The proposed project would exacerbate this deficient condition.**

TR/mm-10 Prior to approval of subdivision improvement plans, the applicant shall submit road improvement plans to the County Department of Public Works and CAL FIRE for review showing roadway improvements in conformance with County Standard A-1(f) along Upper Los Berros Road, up to any proposed residential access road approaches to Upper Los Berros Road. Proposed road improvements shall maintain or improve existing culverts and under-crossings for wildlife migration under the roadway, and shall be subject to review by the U.S. Fish and Wildlife Service and California Department of Fish and Game, as associated with required permits and authorizations. ~~In addition,~~ Prior to construction of the Dude Ranch, the unpaved sections of Los Berros Road up to the proposed Dude Ranch access point shall be paved in accordance with County standards. No occupancy shall occur until all improvements are completed.

Residual Impact With implementation of the above measure, this impact would be considered *less than significant with mitigation, Class II.*

TR Impact 10 **The proposed control of the emergency vehicle access at Laetitia Vineyard Drive does not guarantee emergency-only access, because ~~residents could open and close~~ the gate could physically be opened for non-emergency use, resulting in a significant project-specific impact.**

TR/mm-11 Prior to approval of subdivision improvement plans, the applicant shall submit a revised site plan showing the proposed access control at Laetitia Vineyard Drive for County Department of Planning and Building, ~~and~~ California Department of Forestry and Fire Protection (CAL FIRE), and California Department of Transportation (Caltrans) review and approval. This site plan shall detail the features to be installed that will allow emergency access while limiting typical residential traffic. Potential access control measures could include, but not be limited to, a gate controlled by opticom transmitters and detectors, a gate that does not open to allow east-bound ingress of non-emergency vehicles, use of a "KNOX" box to permit emergency vehicle access, and signage. No occupancy shall occur until all improvements are completed. A 24-hour per day, 7 days per week, 365 days per year guard will be stationed at the access control point on Laetitia Vineyard Drive.

Residual Impact With implementation of mitigation, the potential for unauthorized access would be reduced; however, implementation of gate controls that meet both Caltrans and CAL FIRE requirements is not feasible. In addition, due to the severity of impact, and existing traffic hazard at this

intersection, a single unauthorized trip would result in an impact considered *significant and unavoidable, Class I.*

h. Project Access Secondary Impacts

Based on the transportation and circulation analysis conducted for the proposed project, and consultation with county engineers, off-site road improvements are warranted, which will require road widening, soil compaction and paving, and vegetation removal. Road improvements are required as mitigation measures, and plans have not been submitted by the applicant. Implementation of road improvements would result in secondary impacts to cultural and biological resources. Additional studies were conducted to estimate potential secondary impacts using an assumed area of effect based on existing road conditions and county road standards.

1) Secondary Cultural Resources Impacts

Based on a Phase One surface survey conducted within the road right-of-way, no historic or prehistoric cultural materials were observed (Gibson, 2008); however, road improvements on Upper Los Berros Road would be located in close proximity to documented historic and archaeological sites. Preparation and implementation of a County-approved monitoring program would mitigate potential impacts to less than significant.

Secondary Impact Implementation of mitigation measures TR/mm-8, TR/mm-9, and TR/mm-10 would result in secondary impacts to cultural resources, including documented historic and archaeological sites.

Implement AR/mm-5, AR/mm-6, and AR/mm-7.

2) Secondary Biological Resources Impacts

Pursuant to California Department of Fish and Game guidelines, Morro Group biologists conducted surveys during the typical blooming periods for rare plant species within the road right-of-way. The surveyors focused on identifying habitats present, presence or absence of special-status species, and presence of potential waters of the U.S. and State.

Sheehy Road, North Dana Foothill Road and Upper Los Berros Road traverse through a variety of vegetative communities including ruderal, agricultural, annual grassland, coastal scrub, and Central Coast sycamore/coast live oak riparian forest (refer to Figure V.N.-9). No special-status plant or animal species were observed during the surveys; however, these vegetation communities provide habitat for common and special-status species.

Improvements to Sheehy Road, North Dana Foothill Road and Upper Los Berros Road have the potential to impact jurisdictional waters of the U.S. and State, Central Coast sycamore/coast live oak riparian forest, California red-legged frog, South-central California Coast Steelhead, and nesting birds protected by the Migratory Bird Treaty Act. The following sections briefly discuss impacts potentially occurring as a result of the road improvements.

Jurisdictional Waters of the U.S. and State. Sheehy Road, North Dana Foothill Road and Upper Los Berros Road currently cross over Nipomo Creek, Los Berros Creek and three unnamed drainages in seven different locations (refer to Figure V.N.-9). Nipomo Creek, Los Berros Creek

and the unnamed drainages maintain characteristics of ACOE and CDFG jurisdiction. Improvements to the existing culverts and bridges are anticipated to occur during road construction activities. Such improvements would result in direct and indirect impacts to the jurisdictional features. Direct impacts would occur as a result of road, bridge, and culvert construction and use within or adjacent to the creeks and unnamed drainages. Indirect impacts could occur during construction and include use, maintenance, or staging of construction equipment in areas adjacent to drainages, which increases the risk of fuel spills or leaks into jurisdictional areas. These creeks and tributaries also provide migration corridors for special-status and common wildlife species. Implementation of BIO/mm-1 through BIO/mm-12 and WAT/mm-11 through WAT/mm-14 would mitigate secondary impacts to less than significant.

Central Coast Sycamore / Coast Live Oak Riparian Forest. Most of Upper Los Berros Road is located immediately adjacent to Los Berros Creek. Los Berros Creek supports a dense overstory of Central Coast sycamore / coast live oak riparian forest with riparian scrub understory. These vegetation communities are intermixed within the riparian corridor and consist of mature coast live oaks, sycamores, cottonwoods, and various riparian scrub species. Road improvement activities would require removal and/or impacts to tree species within and adjacent to the road right-of-way. Road improvements would require the removal and/or impact of approximately 94 coast live oak trees and 16 sycamores (1.8 acres Central Coast sycamore / coast live oak riparian forest).

Implementation of mitigation measures BIO/mm-6 and BIO/mm-14 through BIO/mm-16 would partially mitigate identified secondary impacts; however, based on the significant loss of oak trees and riparian forest, and the time required for replacement vegetation to develop similar habitat values as the impacted riparian forest, residual impacts would occur and potential impacts would be considered significant and unavoidable (refer to BIO Impact 3).

California Red-legged Frog. Portions of Los Berros Creek can contain suitable habitat for California red-legged frog during wetter years. Rincon Consultants have observed nine California red-legged frogs within tributaries to Los Berros Creek. The portions of Los Berros Creek located adjacent to the study area tend to be dry during the summer months rendering these areas marginal for red-legged frog usage. However, in times of favorable seasonal rainfall some small pools may persist and serve as suitable summer habitat for the species. Considering the potential for red-legged frog to occupy areas adjacent to road improvement activities, implementation of mitigation measure BIO/mm-20 is recommended to minimize the potential for take of the species during road improvement activities.

South-central California Coast Steelhead. Currently much of Upper Los Berros Road is surfaced with road base, which does not contain petroleum products and is partially permeable. It is assumed that improvements to Upper Los Berros Road would include installing an asphalt surface that is not permeable and comprised of petroleum based products. During storm events, sheet flows over the new road surface would collect petroleum based pollutants and deposit them in the creek. Installation of a non-permeable asphalt surface would increase the deposition of petroleum based pollution into Los Berros Creek resulting in indirect impacts to South-central California Coast Steelhead critical habitat. In addition, indirect impacts could occur during construction and include use, maintenance, or staging of construction equipment in areas adjacent to the creek, which would increase the risk of fuel spills or leaks into the creek.

Implementation of BIO/mm-9 through BIO/mm-12 and WAT/mm-11 through WAT/mm-13 is recommended to mitigate potential impacts to less than significant.

Impacts to Nesting Birds. The riparian corridor along Upper Los Berros Creek Road provides roosting, nesting, and foraging habitat for a variety of bird species, including several that are considered sensitive by resource agencies. In addition, swallows were observed nesting in the existing culverts at Crossings 2, 4, and 5 (refer to Figure V.N.-9). Nesting birds could be directly and/or indirectly impacted by construction activities occurring any time during the typical nesting season (from March 1 to August 30). Tree-nesting birds could have nests directly damaged or destroyed during tree or bridge removal activities, or their nesting and foraging behaviors could be indirectly affected by noise and other sources of construction related disturbance. Implementation of BIO/mm-19 is recommended to mitigate potential impacts to less than significant.

Secondary Impact Implementation of mitigation measures TR/mm-8, TR/mm-9, and TR/mm-10 would result in secondary impacts to biological resources, including jurisdictional waters, sycamore and oak riparian forest, California red-legged frog, south-central California coast steelhead, and nesting birds.

Implement BIO/mm-1 through BIO/mm-12, BIO/mm-14 through BIO/mm-16, BIO/mm-19, BIO/mm-20, and WAT/mm-11 through WAT/mm-14.

3) Internal Circulation

The circulation system for the proposed project shows a series of residential clusters connected by a single primary road, Main Road 1. Several residential clusters are located on cul-de-sacs and small loop roadways off of the main road, while some of the residences are located directly on Main Road 1. A number of the internal intersections and the main entryways are located on horizontal and/or vertical curves. To ensure adequate sight distance, three sight distances must be considered: (1) stopping sight distance for a vehicle on Main Road 1 to a avoid a vehicle abruptly exiting a residential side street, (2) stopping sight distance for a vehicle on Main Road 1 approaching a stopped vehicle on Main Road 1 waiting to turn into one of the residential side streets, and (3) the corner sight distance for a vehicle exiting a residential side street. Stopping sight distance is the distance required by a driver of a vehicle on Main Road 1 to stop after an object on the road becomes visible (i.e., a vehicle abruptly exiting a residential side street). Corner sight distance is the sight distance available for a driver waiting at a residential side street to enter the Main Road 1 traffic stream. Based on the Caltrans *Highway Design Manual*, approximately 210 feet and 360 feet of stopping sight distance and corner sight distance, respectively, should be provided for a design speed of 30 miles per hour and posted speed limit of 25 miles per hour.

The current project application package does not include enough detail to accurately determine sight distances on all horizontal and vertical curves. Based on a review of the preliminary locations of internal roadways, no locations were identified where insufficient sight distance was provided. In addition to roadway curvature, sight distances are a function of building and driveway locations, landscaping location and height, and other visually impenetrable features such as fences, gates, and signs.

TR Impact 11 **The project would generate vehicle traffic on on-site roadways where sight distance may be inadequate at some on-site intersections and driveways.**

TR/mm-12 Prior to the issuance of building permits, the applicant shall ensure that sight distances at all on-site intersections and driveways, including street access from Upper Los Berros Road, conform to the standards set forth in the Caltrans Highway Design Manual.

Residual Impact With implementation of the above measure, this impact would be considered *less than significant with mitigation, Class II.*

4) Parking

The proposed 3,000 square foot HOA Facility would include an office, storage area, game room, meeting room, and an outdoor patio with a fire pit and barbeque. The proposed ranch headquarters would include an 1,800-square foot outdoor swimming pool; 80-square foot outdoor spa; a tennis court; and a 3,600-square foot pool house with a gym, restrooms, and pool equipment storage. The site plan shows 29 parking spaces (three of which are ADA-compliant spaces) and an unspecified amount of overflow parking in the meadow lots east of the Main Road 1 entrance.

Because parking demand at the HOA and ranch headquarters facilities would be generated primarily by residents of the proposed project, those uses would likely generate parking demand at different rates than similar facilities that are open to the public. Therefore, the off-street parking standards specified in Chapter 22.18.050 of the County's Development Code are not strictly applicable to these facilities.

TR Impact 12 **The project would generate parking demand greater than the proposed parking supply.**

TR/mm-13 Prior to the approval of subdivision improvement plans, the project applicant shall submit a revised site plan to the County for review and approval showing the proposed size of the recreational facilities by use and the associated parking. The applicant shall construct the parking as shown in the approved site plan.

Residual Impact With implementation of the above measure, this impact would be considered *less than significant with mitigation, Class II.*

7. Cumulative Impacts

a. Year 2025 Cumulative Impacts

The impacts of the proposed project were evaluated under Cumulative Conditions (Year 2025) with and without the proposed project. This scenario includes 20 years of growth in the study area in addition to background traffic growth on the area's through corridors.

b. Cumulative Planned Roadway Improvements

The *2005 Regional Transportation Plan* (RTP) published by SLOCOG provides an overview of the planned region-wide improvements in the South County area. This document also notes the status of funding for expected improvements. In the study area, the RTP identifies one project that would affect traffic operations. Project SLO1603-01, sponsored by Caltrans, calls for the widening of Highway 101 to six lanes from the Highway 101/Highway 166 interchange to the Highway 101/El Campo Road intersection. This project is currently unfunded, and the improvements are expected to occur beyond the 2025 planning horizon identified in the RTP. As noted by SLOCOG upon review of the Draft EIR, "there is no chance of funding this project by 2030….Capacity improvements on Route 101 are not forthcoming" (James Worthley, November 8, 2008).

c. Cumulative Intersection and Roadway Impacts

1) Cumulative Traffic Volumes

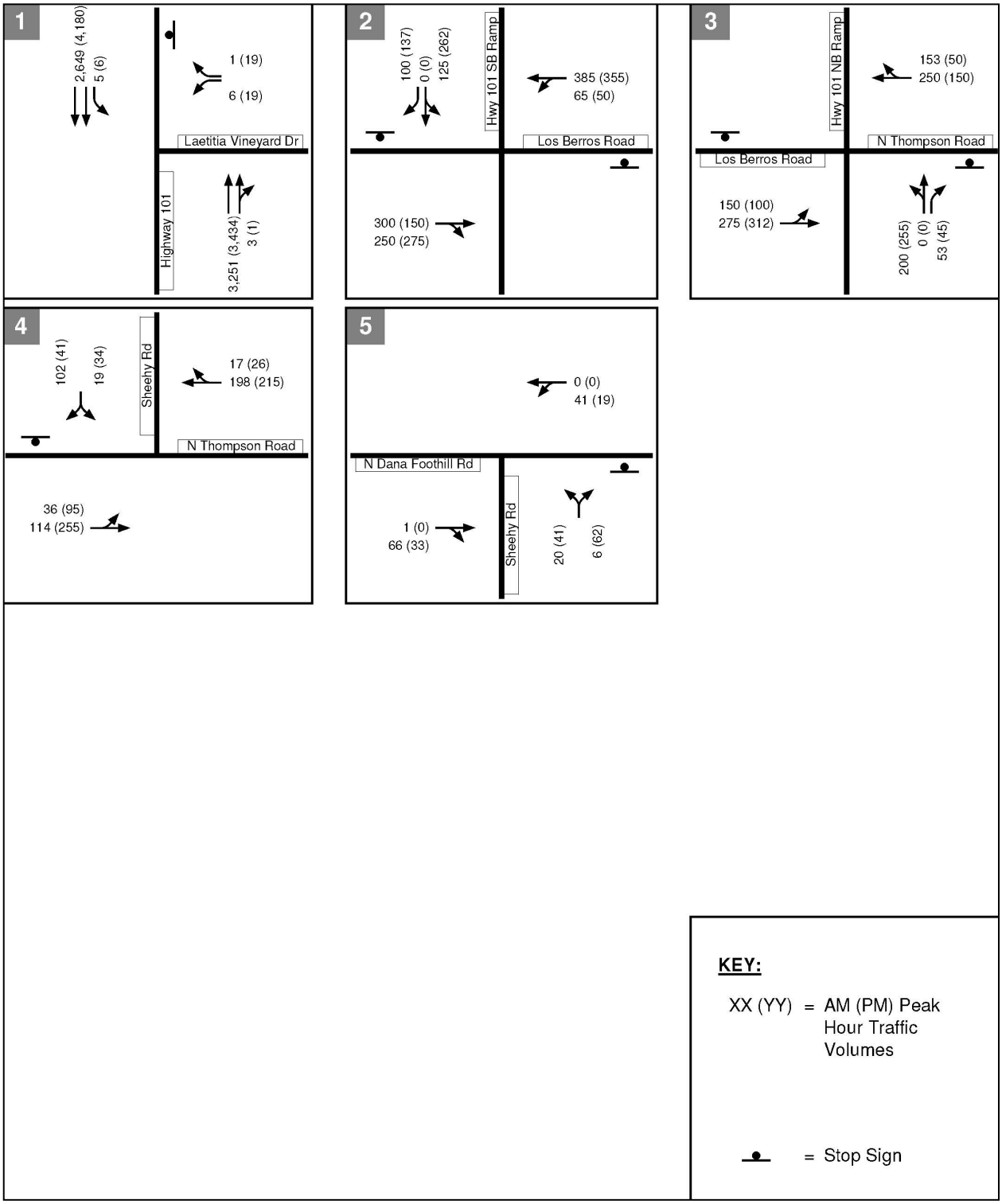
The *South County Traffic Model Update* report (Omni-Means, 2005) was used to develop future forecasts, supplemented by historical count data. This model uses parcel-level land use data obtained from the County and the County's General Plan to forecast future trip patterns in the South County Area. The land use data included in the model represents the existing level of development plus the new development expected to occur in the next 20 years.
The model was calibrated to Existing Conditions and validated by comparing existing counts at key locations to the model's forecasted volumes at those locations. The model includes the Los Berros Road, Thompson Road, and Highway 101 corridors in its network. Traffic volume forecasts for the segment of each of these corridors in the study area were within the acceptable range for validation tests. Thus, volumes at the intersections of Highway 101 Southbound Ramps/Los Berros Road and Highway 101 Northbound Ramps/North Thompson Road were taken directly from the *South County Traffic Model* report.

An annual growth rate of 2.8 percent was applied to the remaining three study intersections and roadway segments other than Highway 101 to develop future year volumes. This is the area-wide growth rate projected by the *South County Traffic Model.* Over 20 years, 2.8 percent annual growth corresponds to a total growth in volume of 74 percent.

An annual growth rate of 1.8 percent was applied to the Highway 101 mainline segments. This corresponds to a total growth in freeway volume of 44 percent. This factor was developed using historical Caltrans count data, and is consistent with the *South County Traffic Model.* Figures V.N.-7 and V.N.-8 show the Cumulative and Cumulative with Project peak hour traffic volumes, respectively.

2) Cumulative Intersection Operations

Table V.N.-13 shows the levels of service under Cumulative and Cumulative with Project Conditions. Detailed LOS calculation sheets are included in Appendix G. The addition of project trips will degrade and/or worsen operations to unacceptable levels at the SB Highway 101 Ramps/Los Berros Road and NB Highway 101/North Thompson Road intersections under Cumulative Conditions. Intersection-specific impacts are discussed below.



Source: Fehr and Peers, 2007.

Cumulative Peak Hour Traffic Volumes
FIGURE V.N.-7

TABLE V.N.-13
Cumulative and Cumulative With Project Intersection Levels of Service

Intersection	Traffic Control	Time Period	Cumulative		Cumulative With Project	
			Average Delay (sec/veh)[1]	LOS[2]	Average Delay (sec/veh)[1]	LOS[2]
1. Highway 101/ Laetitia Vineyard Dr	Two-Way Stop Controlled[1]	a.m. p.m.	0.4 (297.9) 2.1 (782.1)	A (F) A (F)	0.4 (317.4) 2.3 (832.2)	A (F) A (F)
2. SB Highway 101 Ramps/ Los Berros Rd	Two-Way Stop Controlled[1]	a.m. p.m.	4.6 (21.4) 14.1 (41.8)	A (C) B (E)	**6.7 (29.7)** **32.2 (92.3)**	**A (D)** **D (F)**
3. NB Highway 101 Ramps/ North Thompson Rd	Two-Way Stop Controlled[1]	a.m. p.m.	11.7 (43.3) 10.9 (29.9)	B (E) B (D)	**14.8 (58.8)** **14.7 (43.4)**	**B (F)** **B (E)**
4. Sheehy Rd/ North Thompson Rd	Two-Way Stop Controlled[1]	a.m. p.m.	3.2 (10.4) 2.8 (12.7)	A (B) A (B)	4.6 (11.1) 4.5 (13.7)	A (B) A (B)
5. Sheehy Rd/ North Dana Foothill Rd	Two-Way Stop Controlled[1]	a.m. p.m.	4.0 (9.2) 6.9 (9.0)	A (A) A (A)	3.9 (9.7) 6.6 (9.8)	A (A) A (A)

1. Overall intersection delay is presented followed by delay for the most severely impacted turning movement in parentheses.
2. LOS = Level of Service
Significant impacts are highlighted in ***bold***

Source: Fehr & Peers, 2006.

(a) Highway 101/Laetitia Vineyard Drive Intersection

The addition of project traffic would worsen operations at the intersection of Highway 101/Laetitia Vineyard Drive. Vehicles turning left out of the Laetitia Winery would experience increased delay, from 297.9 seconds to 317.4 seconds during the morning peak hour, and from 782.1 seconds to 832.2 seconds during the evening peak hour. Due to the low volumes exiting the Winery during the peak hour, this delay would affect few drivers. Signal warrant calculation sheets are included in Appendix G. The intersection does not meet peak hour signal warrants, so it is a less-than-significant impact not requiring mitigation.

The minor street approach to the Highway 101/Laetitia Vineyard Drive intersection is anticipated to operate at LOS F with and without the proposed project during the a.m. and p.m. peak hours under Cumulative Conditions. The project would increase delay to the minor street approach. This intersection does not meet peak hour signal warrants. This is considered a less-than-significant cumulative impact (Class III). As previously noted, any unauthorized use of Laetitia Vineyard Drive for access into and out of the residential subdivision would result in significant and adverse impacts, and enforcement action by Caltrans, which may include closure of the intersection.

TR Impact 13 **The proposed control of the emergency vehicle access at Laetitia Vineyard Drive does not guarantee emergency-only access, because ~~residents could open and close~~ the gate could physically be opened for non-emergency use, significantly contributing to the cumulative degradation of this intersection.**

Implement TR/mm-11.

Residual Impact With implementation of mitigation, the potential for unauthorized access would be reduced; however, implementation of gate controls that meet both Caltrans and CAL FIRE requirements is not feasible. In addition, due to the severity of impact, and existing traffic hazard at this intersection, a single unauthorized trip would result in an impact considered *significant and unavoidable, Class I.*

(b) Highway 101 Southbound Ramps/Los Berros Road

The addition of project trips to the intersection of Highway 101 Southbound Ramps/Los Berros Road is anticipated to worsen operations from LOS C to LOS D during the a.m. peak hour and from LOS E to LOS F during the p.m. peak hour. This intersection meets peak hour signal warrant criteria for the both the a.m. and p.m. peak hours. Signal warrant calculation sheets are included in Appendix G. As previously discussed, installation of a traffic signal and a westbound left-turn pocket at the intersection of Highway 101 Southbound Ramps/Los Berros Road would improve operations to LOS A during the a.m. and p.m. peak hours. The signalization of this intersection is included in the County's Capital Improvement Projects list. Approximately 71 percent of the cost of this signal is to come from the South County's Traffic Impact Fee Program, with the remaining 29 percent from other sources. The Capital Improvement Program funding at this intersection is not anticipated to be needed until 2025 without the project. Therefore, it will be necessary for the project applicant to fund and construct the signal. Refer to TR Impact 14 ~~13~~ below.

(c) Highway 101 Northbound Ramps/North Thompson Road

The addition of project trips to the intersection of Highway 101 Northbound Ramps/North Thompson Road is anticipated to worsen operations from LOS E to LOS F during the a.m. peak hour and from LOS D to LOS E during the p.m. peak hour. This intersection meets peak hour signal warrant criteria for the a.m. and p.m. peak hours. Signal warrant calculation sheets are included in Appendix G. As previously discussed, installation of a traffic signal and an eastbound left-turn pocket at the intersection of Highway 101 Northbound Ramps/North Thompson Road would improve operations to LOS A during the a.m. and p.m. peak hours. The signalization of this intersection is included in the County's Capital Improvement Projects list. Approximately 71 percent of the cost of this signal is to come from the South County's Traffic Impact Fee Program, with the remaining 29 percent from other sources. The Capital Improvement Program funding at this intersection is not anticipated to be needed until 2025 without the project. Therefore, it will be necessary for the project applicant to fund and construct the signal.

TR Impact 14 **The proposed project would cause operations at the intersection of Highway 101 Southbound Ramps/ Los Berros Road to degrade from LOS C to LOS D during the a.m. peak hour and from LOS E to LOS F during the p.m. peak hour under Cumulative Conditions. The intersection meets the peak hour signal warrant during both the a.m. and p.m. peak hours. The proposed project would cause operations at the intersection of Highway 101 Northbound Ramps/North Thompson Road to degrade from LOS E to LOS F during the a.m. peak hour and from LOS D to LOS E during the p.m. peak hour under**

Cumulative Conditions. The intersection meets the peak hour signal warrant during the a.m. and p.m. peak hours.

Implement TR/mm-1 and TR/mm-2.

Residual Impact With implementation of the above measure, this impact would be considered *less than significant with mitigation, Class II.*

3) Cumulative Roadway Segment Operations

Table V.N.-14 presents the existing roadway segment levels of service for the study segments. Based on the volumes thresholds from the *Highway Capacity Manual,* the roadway segments all operate at LOS B or better under Cumulative and Cumulative with Project Conditions.

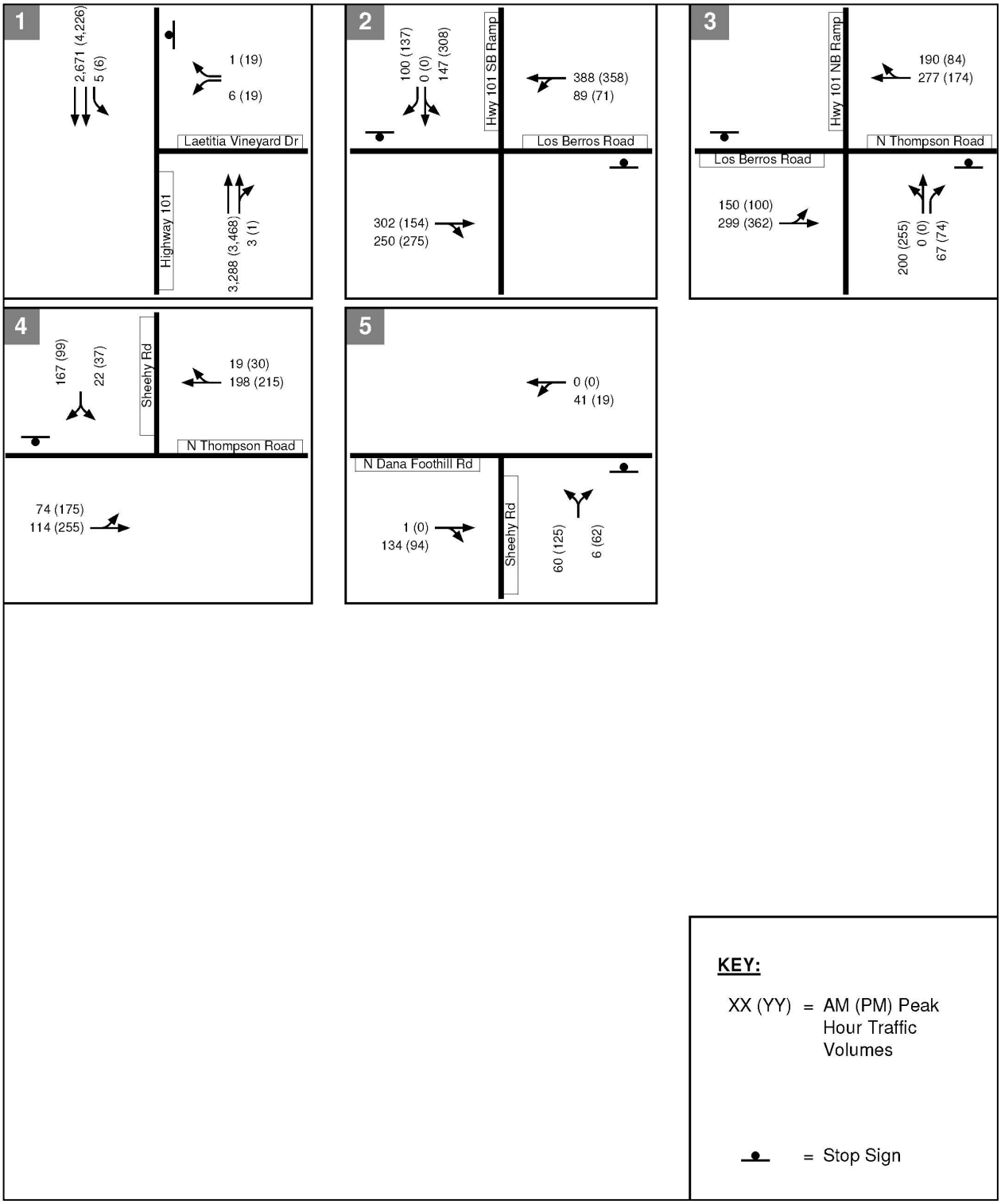
TABLE V.N.-14
Cumulative Roadway Segment Daily Traffic Conditions

Roadway Segment	Location	Type	Cumulative		Cumulative With Project		
			Daily Volume	LOS	Project Daily Trips	Daily Volume	LOS
Sheehy Road	North Thompson Road to North Dana Foothill Road	2-Lane Collector/ Local Street	2,563	A	1,234	3,797	B
North Dana Foothill Road	Sheehy Road to Riata Lane	2-Lane Collector/ Local Street	785	A	1,234	2,019	A
Upper Los Berros	North of Sycamore Creek Lane	2-Lane Collector/ Local Street	411	A	1,234	1,645	A

Source: Fehr & Peers, 2006.

4) Cumulative Freeway Operations

Table V.N.-15 summarizes the cumulative mainline and ramp junction operation results. As shown, all of the study locations would operate at LOS D or worse during the morning and/or afternoon peak hour under Cumulative Conditions. Appendix G contains the detailed results of the cumulative freeway analysis.



Source: Fehr and Peers, 2007.

Cumulative with Project Peak Hour Traffic Volumes
FIGURE V.N.-8

TABLE V.N.-15
Cumulative and Cumulative with Project Conditions
Freeway Mainline and Ramp Junction Analysis

Mainline or Ramp	Time Period	Number of Lanes	Cumulative		Cumulative With Project	
			Density[1]	LOS	Density[1]	LOS
Mainline Segment						
NB Highway 101 n/o Los Berros Rd/North Thompson Rd	a.m. p.m.	2	31 33	D D	31 33	D D
SB Highway 101 n/o Los Berros Rd/North Thompson Rd	a.m. p.m.	2	24 *	C **F**	24 *	C **F**
NB Highway 101 s/o Los Berros Rd/North Thompson Rd	a.m. p.m.	2	27 32	D D	27 32	D D
SB Highway 101 s/o Los Berros Rd/North Thompson Rd	a.m. p.m.	2	23 42	C E	24 43	C E
Ramp Junction						
NB Highway 101 North Thompson Rd Off-Ramp	a.m. p.m.	1	33 37	D E	33 37	D E
NB Highway 101 North Thompson Rd On-Ramp	a.m. p.m.	1	30 33	D D	30 34	D D
SB Highway 101 Los Berros Rd Off-Ramp	a.m. p.m.	1	28 42	C F	28 43	D F
SB Highway 101 Los Berros Rd On-Ramp	a.m. p.m.	1	25 37	C **E**	26 38	C **F**

[1]Density in passenger cars per mile per lane.

Source: Fehr & Peers, 2006.

(a) Highway 101 Mainline

The mainline segments of Highway 101 operate unacceptably in the northbound direction during the a.m. peak hour and both northbound and southbound during the p.m. peak hour, both with and without the proposed project. Capacity improvements along Highway 101 would be necessary to mitigate this impact. The 2005 Regional Transportation Plan (RTP) notes that Highway 101 is expected to be widened to six lanes, but funding is not secured for this project. Widening Highway 101 to six lanes would improve mainline operations to LOS C or better at all study locations under Cumulative with Project Conditions. A funding mechanism for this project is not currently available, and an improvement of this magnitude is beyond the scope of a single development project. ~~Thus, no feasible measures are available to mitigate this impact to less than significant. Refer to TR Impact 15 below.~~

(b) Highway 101/Los Berros Road/North Thompson Road Ramp Junctions

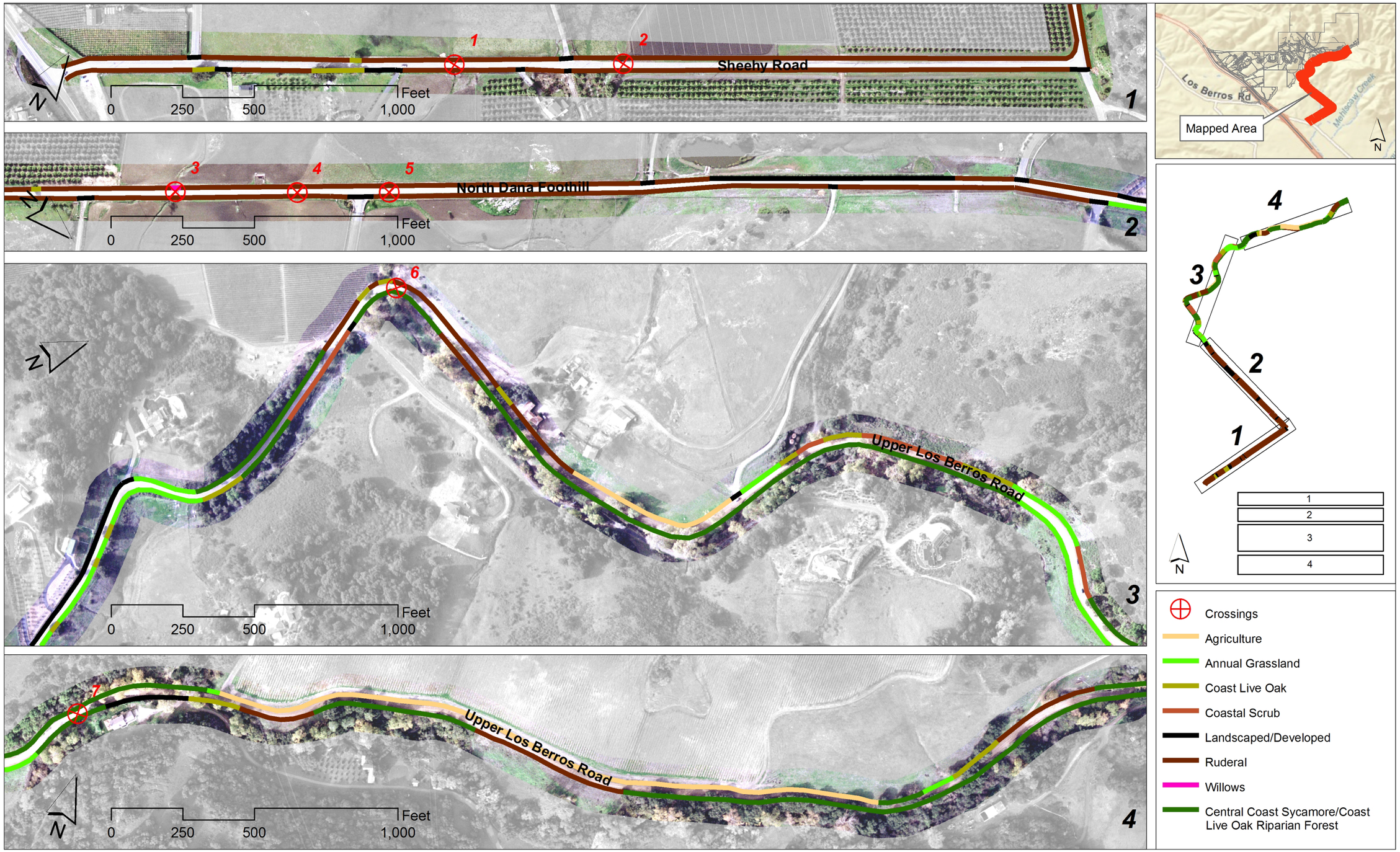
During the a.m. peak hour, the northbound Highway 101/North Thompson Road ramp junctions operate at LOS D both with and without the project. The addition of project traffic degrades operations from LOS C to LOS D at the southbound Highway 101/Los Berros Road Off-ramp

during the a.m. peak hour. All ramp junctions at this interchange operate unacceptably during the p.m. peak hour both with and without the project. Capacity improvements along Highway 101 or the ramp junctions would be necessary to mitigate this impact. The 2005 Regional Transportation Plan (RTP) notes that the study segments of Highway 101 are expected to be widened to six lanes in the future, but funding is not secured for this project. Widening Highway 101 to six lanes would improve ramp operations at these locations to LOS D or better under Cumulative with Project Conditions. A funding mechanism for this project is not currently available, and an improvement of this magnitude is beyond the scope of a single development project. Lengthening the deceleration lane at the southbound and northbound off-ramps by 50 feet and lengthening the northbound on-ramp merge acceleration lane by 25 feet would also mitigate this impact. A funding mechanism for these projects is not currently available, and the feasibility of such improvements depends on Caltrans review and approval.

TR Impact 15 **The proposed project would exacerbate projected deficient operations along Highway 101 during the a.m. and p.m. peak hours under Cumulative Conditions. The proposed project would exacerbate existing deficient conditions at the Highway 101/Los Berros Road/North Thompson Road ramp junctions during the p.m. peak hour under Cumulative Conditions.**

Implement TR/mm-5.

Residual Impact If the construction and occupation of residences occurs prior to completion of the above improvements, associated impacts would remain. Although the proposed mitigation would reduce the impacts to the extent possible, due to the uncertainty regarding Caltrans approval of improvements within their jurisdiction, it cannot be assured that all improvements would be feasibly constructed prior to occupation of the proposed residences. As a result, impacts would remain *significant and unavoidable, Class I.*



Source: Morro Group 2008 Field Surveys

Transportation and Circulation Secondary Impacts
FIGURE V.N.-9

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