4.11 TRANSPORTATION AND CIRCULATION

4.11.1 Existing Traffic and Transportation Conditions

The information in this section of the EIR was developed through several sources. A Transportation Impact Analysis was prepared by Fehr and Peers (2006) for the Santa Margarita Ranch project, and this report provides a compilation of background information relevant to traffic analysis in the community. The applicant for the quarry project addressed in this EIR submitted a Traffic Impact Study prepared by TPG Consulting Inc. (2009), which analyzed the morning and evening peak hour effects of the project under different scenarios at four intersections: the proposed quarry driveway, and three intersections in the region. That report was peer reviewed by Associated Transportation Engineers (ATE) as part of the preparation of this EIR. ATE also analyzed different traffic issues not addressed in the original TPG report, which were identified by the County and by representatives from Caltrans for inclusion in this EIR. These issues included roadway pavement conditions, the operation of the SR 58/US Highway 101 interchange (particularly the southbound on-ramp to US Highway 101) and the SR 58 operations through Santa Margarita in the vicinity of the existing park-and-ride facility. The passage of heavy trucks through these areas is of concern, and was also mentioned in comments received during the scoping period for this EIR. Finally, ATE updated the main intersection analysis for this study (SR 58 at Estrada Avenue/El Camino Real) based on more recent (increased) projections of both the project generated traffic and the traffic anticipated from existing and recently approved projects in the vicinity.

Appendix C to this EIR contains the data and tables related to the ATE analysis; this Appendix also contains copies of the previous traffic impact studies mentioned above. The following paragraphs describe the conditions in the study area and issues that were addressed in the preparation of this EIR.

Roadways and Traffic Volumes

The proposed rock quarry would be located on the north side of SR 58, just east of the Salinas River approximately three miles northeast of the Santa Margarita Community. Figure 4.11-1 shows the project location and the roadways, intersections and other features discussed in this section of the EIR. Table 4.11-1 below describes the streets in the project vicinity. The estimates of the existing Average Daily Traffic (ADT) volumes are from Caltrans and County Public Works Department data.

SR 58 originates at US Highway 101 west of Santa Margarita and crosses through the community of Santa Margarita parallel to the Union Pacific Railroad tracks on El Camino Real. At the northeastern edge of Santa Margarita, eastbound SR 58 turns right (southeastward) onto Estrada Avenue for four blocks, and then turns left and continues northeastward as Calf Canyon Highway. Through the downtown area of Santa Margarita, the

TABLE 4.11-1
STUDY AREA STREET SYSTEM

Street	Classification	Number of Lanes (2 Directions)	Posted Speed	Average Daily Traffic Volume
SR 58[1] (through Santa Margarita)	Principal Arterial	2	35–55	7,200[3]
El Camino Real (north of Santa Margarita)	Arterial	2	35–55	4,000[4]
Estrada Avenue	Arterial (SR 58 portion) and Local Street	2	25–35[2]	2,900 (3, east of J Street)
H Street	Local Street	2	25	Not counted
W Pozo Road	Arterial and Collector	2	55	1,112[4]
Calf Canyon Highway (SR 58 east of Santa Margarita)	Rural Road	2	55	925[3]

1 Portions of El Camino Real, Estrada Avenue, W. Pozo Road, and Calf Canyon Highway are all designated as State Route 58.

2 25 MPH posted for school zone.

3 Caltrans 2012.

4 San Luis Obispo County 2012 (traffic counts from the Department of Public Works).

highway consists of two 12-foot-wide travel lanes within a right-of-way that is up to 100 feet wide. There is a striped center left turn lane for three blocks between Murphy and Pinal Avenues. State Route 58 through Santa Margarita is classified as a Principal Arterial intended to carry traffic on trips connecting population centers (San Luis Obispo County 2003:page 5-4).

El Camino Real is classified as an arterial from the point where it meets SR 58 at Estrada Avenue, northward into and through the City of Atascadero. As an Arterial, its function is to carry traffic between principal arterial roads (i.e., SR 58) and centers of population (Atascadero). El Camino Real has two travel lanes and a striped (class 2) bike lane on its east side between Santa Margarita and Atascadero.

Estrada Avenue, between El Camino Real and J Street, serves as SR 58 and is classified as an arterial roadway by San Luis Obispo County (2007). South of J Street Estrada Avenue is classified as a local street. The Santa Margarita Elementary School is located just east of Estrada Avenue adjacent to the H Street intersection. More information about the crosswalk on Estrada Avenue is provided below.

H Street is a collector street parallel to SR 58 (El Camino Real) through Santa Margarita on the south side of the UPRR tracks. It crosses Estrada Avenue, and provides access to the Santa Margarita Elementary School.

Calf Canyon Highway starts on J Street just northeast of Estrada Avenue (on some maps), and is a two lane rural road through the rest of the County Las Pilitas Planning Area. From J

Street eastward to the intersection with West Pozo Road is about 1.28 miles, and from this point the highway turns to the northeast and continues another 1.8 miles to the project entrance. This segment is a typical rural highway with shoulders ranging from two to four feet in width and a 55 mile per hour speed limit. Caltrans lists SR 58 from J Street eastward as a 30-foot kingpin-to-rear-axle (KPRA) advisory route. This listing means that trucks with a longer KPRA length may not be able to remain within their travel lane. Such trucks may still legally use the highway, but their drivers may be subject to ticketing by the Highway Patrol if the trucks move outside of their travel lanes ("offtrack"). Besides the 90-degree curve on SR 58 at J Street where this advisory begins, there are two other segments of steep curves along the highway that are the subject of this listing. Both of these segments are eastward from the project site and would not generally affect project-related traffic. The tractor/semi-trailer/full trailer hopper trucks commonly used in the aggregate industry ("doubles") are capable of navigating the steep curvy portions of SR 58 without offtracking. The 90-degree curve at J Street is discussed in more detail below.

West Pozo Road is a two-lane County roadway, and is classified as an arterial within the Salinas River Area Plan (San Luis Obispo County 2008), and as a collector within the Las Pilitas Area Plan (San Luis Obispo County 2008).

School Crosswalk on Estrada Avenue

Field observation by ATE found that there are brief periods of the day when SR 58 traffic operations are affected by school traffic on Estrada Avenue and H Street. For the 2011–2012 school year, the school day currently begins at 8:20 a.m. for all students. Kindergarten dismissal is at 1:40 p.m. and Grades 1–6 are dismissed at 2:40 p.m. (except for Fridays, when Grades 1–6 are dismissed at 1:40 p.m.). Access to the school is provided via the east leg of the Estrada Avenue/H Street intersection. A school crossing guard is present at the crosswalk located at the intersection to assist school children crossing the street. Pedestrian counts collected at the intersection found a total of 12 pedestrians crossed Estrada Avenue at the H Street intersection during the morning period at the start of the school day and 29 crossed the intersection during the afternoon period at the end of the school day. The speed limit on Estrada Avenue is 25 MPH during the morning and afternoon periods when children are present. Based on the ATE observations, there are no significant operational issues at the school crossing and pedestrians and drivers were generally observant of one another. Morning and afternoon traffic peaks sometime cause queuing on Estrada Avenue, with the peak periods lasting approximately 10–15 minutes just prior to the start and end of the school day. Warning signs with pictures and text mark the presence of the school crossing from both directions on Estrada Avenue. The segment of Estrada Avenue southeast of H Street (school crossing) also has a slight rise that tends to obstruct the view of the school crossing itself for drivers heading northwest (towards the school crossing) from the southeast. For westbound traffic on J Street turning right onto Estrada Avenue, there is a 15 MPH curve warning sign (but no similar sign for eastbound traffic).

Truck Traffic Volumes

Truck traffic volumes on SR 58 in the project vicinity originate primarily from local sources (the existing rock quarries in the area, rail associated businesses and other heavy commercial centers in Santa Margarita). Caltrans (2012) indicates that the volume of heavy trucks (trucks with three or more axles) on SR 58 in this area is about three percent of the ADT.

SR 58 Curve on J Street

In the eastern corner of Santa Margarita, SR 58 makes a 90-degree turn from Estrada Avenue at J Street and continues towards the northeast. The addition of traffic to this segment and curve of SR 58 from the proposed Santa Margarita Ranch Agricultural Residential Cluster Subdivision was identified as a significant and not mitigated impact in the EIR for that project (San Luis Obispo County 2008, Final Environmental Impact Report for Santa Margarita Ranch 2008: ES-32, ARCS Impact T-1). The Agricultural Residential Cluster Subdivision was approved in 2008, and proposed 111 dwelling units along SR 58 southeast of Santa Margarita. Virtually all of that project traffic would use SR 58, and the increase of 1,154 ADT was considered a significant impact on the operation of traffic through the 90-degree curve on SR 58, in part because of the higher than average accident rate along SR 58 nearby (San Luis Obispo County 2008, Final Environmental Impact Report for Santa Margarita Ranch 2008:4.12-9). The Santa Margarita Ranch Final EIR identified mitigation measures for this impact including installing radar feedback signs and advisory speeds on each approach to the 90-degree curve on SR 58 near J Street (San Luis Obispo County, Final EIR for Santa Margarita Ranch 2008:4.12-25, and Conditions of Approval for Tract 2586, Condition 3a on page 13). The original mitigation measure also included widening both sides of SR 58 along this segment to provide four-foot shoulders and/or bike lanes in accordance with County standards; but at the time the project was approved this widening requirement along with other improvements within the Caltrans right-of-way was determined to be infeasible (San Luis Obispo County, 2008, Santa Margarita Ranch CEQA Findings: page 55). The final condition of approval (Condition 2k. on page 13) requires either widening of SR 58 along both sides of the cemetery frontage or a Class I bike path from the cemetery to J Street.

Existing Levels of Service (Intersections and Roadways) and Signal Warrants

There are several different ways to analyze traffic flows and intersections to determine their LOS. The particular method used depends on several factors such as whether a roadway segment or an intersection is being considered, whether or not there are traffic controls at an intersection, and the type of controls present.

The original traffic study for the project considered four intersections in the project vicinity with the potential to be affected by the proposed quarry traffic. Since the project site fronts on SR 58, and SR 58 provides access all the way to US Highway 101, all of these

intersections are on the state highway and involve crossings with various County roads. The intersections studied are listed in Table 4.11-2 below.

TABLE 4.11-2
STUDY AREA INTERSECTIONS

Intersection	Signalized/Unsignalized	Type
Estrada Ave/El Camino Real	Unsignalized	TWSC
Estrada Ave/H St	Unsignalized	TWSC
W Pozo Rd/Calf Canyon Hwy	Unsignalized	TWSC
Calf Canyon Hwy/Project Driveway	NA (does not yet exist)	NA

TWSC = Two-Way Stop Control.

Traffic counts for the three existing intersections in the vicinity are shown in Figure 4.11-2. The figures shown are actually the higher of traffic counts taken in 2006 as part of the Santa Margarita Ranch Transportation Impact Analysis (Fehr and Peers 2006) or those taken in the analysis for this project in 2009 (by TPG) and supplemented with later counts by Caltrans in 2010. In general terms, there has been a decrease in traffic volumes at all of the intersections over the period of 2006–2010.

Levels of Service for Roadways

The County Resource Management System references the Highway Capacity Manual in defining roadway Levels of Service (LOS) as follows (San Luis Obispo County Annual Resource Summary Report, 2011:page I-7):

- LOS "A" Free flow: unlimited freedom to maneuver and select desired speed.
- LOS "B" Stable flow: slight decline in freedom to maneuver.
- LOS "C" Stable flow: speed and maneuverability somewhat restricted.
- LOS "D" Stable flow: speed and maneuverability restricted. Small increases in volume cause operational problems.
- LOS "E" Unstable flow: speeds are low; freedom to maneuver is extremely difficult. Driver frustration is high during peak traffic periods.
- LOS "F" Forced flow: stoppages for long periods. Driver frustration is high at peak traffic periods.

Although the County General Plan (including the Inland Framework for Planning and the Salinas Area Plan) does not include an explicit objective or policy related to traffic Level of Service, the Resource Management System identifies a "Level of Severity" when a roadway Level of Service is predicted to drop to "D" within five years (San Luis Obispo County,

Annual Resource Summary Report, 2011: page I-6). Thus, the normal County standard for traffic LOS is "C" or better.

For the state highways in the project vicinity, Caltrans has determined that their route concept LOS for operations along US Highway 101 is peak hour LOS D. For SR 58 operations the concept is peak hour LOS E from US Highway 101 to West Pozo Road, and then peak hour LOS D for the remainder of SR 58 eastward to the Kern County line (Caltrans 2009: page 2). These concept LOS values represent projected conditions of the transportation corridor over a twenty-year planning vision assuming that recommended long-term improvements have been implemented (Caltrans 2003:5). The values are used in this EIR are one type of guidance in judging the significance of project effects or of future traffic volumes.

Levels of Service for Intersections

The particular approach used for the intersection analysis in this study is the "operations method" outlined in the Highway Capacity Manual, and was chosen by the project traffic engineers and is recommended by both the County and Caltrans. For the unsignalized intersections studied, this method relies on measuring or calculating the delay time expected during peak hour conditions at the intersection, with the following definitions:

- LOS A: delay less than or equal to 10.0 seconds
- LOS B: delay from 10.1 to 15.0 seconds
- LOS C: delay from 15.1 to 25.0 seconds
- LOS D: delay from 25.1 to 35.0 seconds
- LOS E: delay from 35.1 to 50.0 seconds
- LOS F: delay greater than 50.0 seconds

Table 4.11-3 shows the results of the analysis for the intersection LOS under the existing conditions. All of the existing LOS values are better than D, which is consistent with the fact that none of the intersections in the Santa Margarita community are identified with a "level of severity" in the County Resource Management System.

As part of the intersection analysis, ATE also evaluated existing conditions at the principal intersection of concern: El Camino Real at Estrada Avenue. This is the intersection where southbound El Camino Real makes a sweeping banked curve as it enters the eastern portion of Santa Margarita, and SR 58 makes an angular turn to or from El Camino Real onto Estrada Avenue. The current traffic control is a stop sign for traffic on Estrada Avenue turning onto El Camino Real. The Union Pacific Railroad track is also crossed by Estrada Avenue (SR 58) near this location. ATE performed a 24-hour traffic count at this intersection on a day when

TABLE 4.11-3
EXISTING LEVELS OF SERVICE – INTERSECTIONS

	Delay/LOS	
Intersection	A.M. Peak Hour	P.M. Peak Hour
Estrada Ave/El Camino Real		
WB Left + Thru	4.1 Sec./LOS A	3.8 Sec./LOS A
NB Approach	19.7 Sec./LOS C	12.7 Sec./LOS B
Estrada Ave/H St		
EB Approach	15.2 Sec./LOS C	11.0 Sec./LOS B
WB Approach	12.5 Sec./LOS B	10.2 Sec./LOS B
NB Approach	0.3 Sec./LOS A	0.6 Sec./LOS A
SB Approach	6.1 Sec./LOS A	0.9 Sec./LOS A
W Pozo Rd/Calf Canyon Hwy		
EB Left + Thru	4.6 Sec./LOS A	6.2 Sec./LOS A
SB Approach	9.3 Sec./LOS A	9.3 Sec./LOS A
Calf Canyon Hwy/Project Driveway		
EB Left + Thru	NA	NA
SB Approach	NA	NA

Sec. = seconds of delay.

Santa Margarita Elementary school was in session, and also counted pedestrian and bicycle movements at this location. ATE used criteria contained in the Manual of Uniform Traffic Control Devices published by Caltrans, and evaluated nine warrants to determine the need for traffic signal control at the intersection under the existing conditions. One of the Signal Warrants relates to accidents at the intersection. The minimum criterion for consideration of a traffic signal is five or more correctable accidents per year, and is typically based on the most recent three-year data compiled by Caltrans. There were no accidents at this intersection during the three-year period covered by accident data provided to ATE by Caltrans (2007–2010). A more recent compilation of accident data by Rick Engineering Co. (2012) showed a single collision at this intersection in January 2007, which occurred before the period covered by the ATE review. These results show a substantial reduction from the accident rate reported by Fehr and Peers (2006: Table 10), who listed six accidents for the same intersection with data from the three-year period from August 2002 to July 2005.

Table 4.11-4 below presents the results of the ATE Signal Warrant evaluation, and indicates that under the existing conditions, based on traffic volumes and roadway operational criteria, a signal at this location is not warranted. Based on Signal Warrant 9, however, which deals with peak hour traffic volume and the proximity of railroad crossings, under the existing conditions a signal may be warranted at this location. This is because under the Signal

Warrant 9 criteria, given the existing peak hour volumes, the minimum distance between the center of the nearest railroad track and the stop line should be 140 feet. On Estrada Avenue, this distance is about 78 feet: more than enough to accommodate a large truck, but still not meeting the Signal Warrant criteria. It should also be noted that the decision to install a traffic signal should consider other engineering factors, and must be made in consultation with Caltrans, for state routes. The specific language from this standard states: "The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal" (Caltrans 2012:Section 4C.01). In addition, the State Public Utilities Commission has advised, relative to railroad crossings: "the new traffic signals must be interconnected with the existing railroad automatic warning devices for the system as a whole to operate effectively. Adding preemption (traffic signal prioritization) to the new signalized intersection will clear any vehicles queued at the crossing prior to train arrival."

TABLE 4.11-4
ESTRADA AVENUE/EL CAMINO REAL SIGNAL WARRANTS – EXISTING CONDITIONS

Warrant #	Type	Warrant Satisfied
1	Eight-Hour Vehicular Volume	No
2	Four-Hour Vehicular Volume	No
3	Peak Hour	N/A[1]
4	Pedestrian Volume	No
5	School Crossing	No
6	Coordinated Signal System	N/A[2]
7	Crash Experience Warrant	No
8	Roadway Network	No
9	Intersection Near (RR) Grade Crossing	Yes

[1] Peak Hour Warrant not applicable.

[2] Coordinated Signal System not applicable.

US Highway 101/SR 58 Ramps

In response to concerns raised during the scoping period, ATE performed an analysis of the operations along the US Highway 101 mainline and the merge/diverge/weave movements at the US 101 and SR 58 ramps. The traffic counts at these locations are shown in Figure 4.11-2. Following procedures in the Highway Capacity Manual, ATE analyzed each of the locations at the interchange based on the density of traffic expressed as passenger car equivalents per lane per mile. The relationship between traffic density and LOS is different for the highway mainline and the ramps; more information is provided in the traffic appendix (specifically, in Fehr and Peers 2006:11-13). The results, along with the corresponding LOS for the existing conditions are shown in Table 4.11-5 below. During the peak hours, the

northbound main segment of US Highway 101 and all of the ramps at this interchange, operate at LOS D. ~~All locations under the existing conditions are consistent with or better than the Caltrans route concept of peak hour LOS D for US Highway 101 operations.~~

TABLE 4.11-5
EXISTING LEVELS OF SERVICE –
US 101/SR 58 INTERCHANGE

			Operations[1]	
Mainline or Ramp	Time Period	Lanes	Density	LOS
Mainline Segment				
U.S. 101 northbound n/o SR 58	A.M. Peak	2	9.1	LOS A
	P.M. Peak		24.1	LOS C
U.S. 101 northbound s/o SR 58	A.M. Peak	2	9.0	LOS A
	P.M. Peak		26.8	LOS D
U.S. 101 southbound n/o SR 58	A.M. Peak	2	21.0	LOS C
	P.M. Peak		11.4	LOS B
U.S. 101 southbound s/o SR 58	A.M. Peak	2	23.7	LOS C
	P.M. Peak		11.7	LOS B
Ramp Junction				
SR 58 northbound on-ramp	A.M. Peak	1	14.2	LOS B
	P.M. Peak		29.7	LOS D
SR 58 northbound off-ramp	A.M. Peak	1	15.1	LOS B
	P.M. Peak		34.8	LOS D
SR 58 southbound on-ramp	A.M. Peak	1	29.2	LOS D
	P.M. Peak		16.9	LOS B
SR 58 southbound off-ramp	A.M. Peak	1	29.3	LOS D
	P.M. Peak		18.0	LOS B

[1] Density = passenger car equivalents per lane per mile. LOS based on density.

TABLE 4.11-6
US HIGHWAY 101/SR 58 ACCIDENT RATES

	Accident Rates	
Facility	Actual	State Average
SR 58 southbound on-ramp to U.S. 101	0.99	0.35
SR 58 southbound off-ramp from U.S. 101	0.00	1.10
SR 58 northbound on-ramp to U.S. 101	0.00	0.30
SR 58 northbound off-ramp from U.S. 101	0.00	0.35

Accident rates expressed as # accidents per million vehicle miles.

Accident rate data was also reviewed for this interchange, and compared with that for ramps with similar characteristics. In the recent three-year period (August 1, 2007 through July 31, 2010) there were two accidents in this interchange, both on the SR 58 to US 101 southbound ramp. One involved a single vehicle striking a fixed object (sign pole or tree) and the other was a rear-end collision involving two passenger vehicles. The accident rates are shown in Table 4.11-6 below, and are compared with state averages for ramps with similar characteristics. This comparison indicates that the recent accident rate at this interchange is generally lower than statewide averages. This result is an improvement when compared to the collision rate over the period of August 2002 – July 2005 that was reported by Fehr and Peers (2006: Table 10).

SR 58 Park-and-Ride Lot

At the request of Caltrans, ATE performed observations and a review of traffic operations along SR 58 in the vicinity of the park-and-ride on the south side of the highway, just east of US 101. Caltrans (2012) indicates that there are 16 spaces in this lot. There are striped points for entry and exit, but no curbs or other control structures are present. A utility access frontage road also joins SR 58 at this park-and-ride lot, but a gate restricts access to authorized vehicles only. Operations at the park-and-ride lot were assessed by determining if sufficient gaps are available in the SR 58 traffic stream for vehicles to enter and exit the park-and-ride. Traffic counts were collected during the A.M. and P.M. commuter periods at the park-and-ride lot. Gap analysis was performed using Highway Capacity Manual procedures. The analysis found minimal delays for vehicles entering/exiting the park-and-ride lot during the A.M. and P.M. peak commuter periods, indicating that gaps are sufficient for turning into and out of the lot. Delays are less than 10 seconds for vehicles entering the lot and less than 15 seconds for vehicles leaving the lot. The field review determined that the sight distances are adequate for vehicles to enter/exit the lot. No operational issues were observed at the park-and-ride lot. The San Luis Obispo Council of Governments (SLOCOG) lists restriping and expansion of this park and ride lot as a mid-term project expected in the period of 2016 to 2020, in its 2010 Regional Transportation Plan (SLOCOG 2010:Table 6-1, page 6-23).

The remaining transportation topics were researched by TPG for the project traffic report, and were reviewed and confirmed by ATE for this EIR. The following paragraphs are based primarily on the TPG descriptions for these facilities.

Transit Service

Currently, the Regional Transit Authority (RTA) operates one transit route in the study area. Route 9, operates between San Miguel, Paso Robles, Templeton, Atascadero, Santa Margarita, and San Luis Obispo; however, the San Luis Obispo Regional Transit Authority, as an independent public agency, may change its routes and schedules from time to time, to

accommodate ridership patterns. Since this route does not currently operate a stop within walking distance of the Project site, no employee trips are anticipated to utilize transit.

School Bus Service

The Atascadero Unified School District operates three bus routes that travel through the study area. Routes 7 and 8 pick students up from Pozo and Santa Margarita and deliver them to Santa Margarita Elementary (Route 8) and Atascadero High School and Junior High (Route 7). Route 9 picks up students from the rural area between Santa Margarita and Atascadero and delivers them to Santa Margarita Elementary and Atascadero High School and Junior High.

Bike Facilities

Portions of SR 58, in the study area, are designated as a Bike Route with appropriate signing. Shoulder widths vary along SR 58 and cannot always accommodate bicyclists. Bike lanes are located on El Camino Real east/north of its intersection with Estrada Avenue. Bike lanes are located east of SR 58 (outside of the Community of Santa Margarita) starting at Pozo Road and heading southeast. No other designated bicycle facilities are located in the study area by Caltrans or the County of San Luis Obispo.

Pedestrian Facilities

Due to the rural nature of Santa Margarita, sidewalks are limited in the study area. The only sidewalk in the study area is located on the north side of H Street, east of Estrada Avenue. A pedestrian bridge is also located on the north side of H Street, west of Estrada Avenue, to cross a small creek (Yerba Buena Creek). A marked crosswalk is also located on the north side of the Estrada Avenue at H Street intersection. These limited pedestrian facilities serve the Santa Margarita Elementary School.

SR 58 through Santa Margarita is along El Camino Real and consists of two traffic lanes within a 100-foot wide right of way with parking on both sides. There is one striped pedestrian crossing just east (or north) of Encina Avenue, at the Pacific Beverage Company. The Santa Margarita Ranch EIR describes up to 30 pedestrians during both the morning and evening peak hour crossing El Camino Real in Santa Margarita. Most of these pedestrians are shoppers who park their cars and cross at mid-block, disregarding the striped pedestrian crossing (San Luis Obispo County, Final EIR for Santa Margarita Ranch, 2008:4.12-10).

The Santa Margarita Design Plan (San Luis Obispo County 2001: pages I-1, and I-3) identifies a "...landscaped median that provides safer pedestrian crossings..." as part of the vision for Santa Margarita, along with other measures to make El Camino Real/SR 58 more pedestrian-friendly. The Design Plan suggests that future traffic volumes will not justify widening the highway to four lanes, so the existing two lane configuration with left turn

pockets can be retained. The remaining area within the 100-foot right of way can then be used for "...parking and tree-lined pedestrian pathways or sidewalks" (San Luis Obispo County, Santa Margarita Design Plan 2001: II-8). The pedestrian crossing of El Camino Real/SR 58 at Encina Avenue is within the central business area or "downtown" of Santa Margarita. Within this area, the Design Plan indicates that landscaping and parking should be provided along both sides of the roadway, and a landscaped median should be provided along the center portion of the roadway (San Luis Obispo County, Santa Margarita Design Plan 2001:II-10).

The Final EIR for the Santa Margarita Ranch Agricultural Residential Cluster Subdivision identified potential automobile-pedestrian conflicts as a potential significant impact that could be mitigated. Approval of that project included a condition to install pedestrian flashing warning lights at the pedestrian crossing of El Camino Real at Encina Avenue (San Luis Obispo County 2008 Santa Margarita Ranch Final EIR 2008:4.2-32, and Conditions of Approval for Tract Map 2586, Condition 3c, on page 14).

4.11.2 San Luis Obispo County Plans and Policies

The County of San Luis Obispo General Plan Circulation Element objectives and policies for the project vicinity are found in Chapter 5 of the Inland Framework for Planning document (San Luis Obispo County 2009) and Chapter 5 of the Salinas River Area Plan (San Luis Obispo County 2009 SR). For the most part, circulation objectives and policies are oriented towards the planning of the overall circulation system, defining and accomplishing improvements for various roadway categories, and promoting alternative transportation modes such as transit, and bicycle and pedestrian trail use. Most of these policies do not apply to or directly relate to the proposed quarry project. Applicable policy statements, some of which are only indirectly related to the proposed project, from the Circulation Element are summarized in Table 4.11-7 below.

Several funding sources are used by the County in order to provide capital improvements for the transportation facilities and related improvements to implement the policies noted above. The most important relative to this project is the imposition of traffic impact fees; this mechanism is described in the County paragraphs at the end of the following section.

4.11.3 Regulatory Setting

Federal Regulations

Title 49 of the Code of Federal Regulations includes equipment specifications and other operation requirements related to truck traffic used in interstate commerce and intrastate operations. 49 CFR Parts 171–177 govern the transportation of hazardous materials, including definitions of such materials, placarding requirements, and other items related to safety. 49 CFR Part 300 deals with motor carrier safety in general, and includes equipment

TABLE 4.11-7
SUMMARY OF COUNTY CIRCULATION POLICIES

Source	Policy Statement	Discussion	Preliminary Determination
Inland Framework for Planning, Planning Principle 5: Provide for a variety of transportation choices.	2. Reduce and minimize the generation of air pollutants and greenhouse gases from existing and future development, with emphasis on reducing vehicle miles traveled.	To the extent that the project provides a stable source of aggregate material relatively near the local market, it supports this policy. (Also, consistent with PRC 2711(d) related to developing local sources of roadway construction materials.)	Potentially Consistent
	4. Provide public transit, bicycle lanes, multi-use trails and pedestrian walkways that connect destinations within and between communities, to encourage alternative transportation. Implementation strategy 2 in this same section discusses multi-use trails and their connectivity, consistent with the Parks and Recreation Element.	The Salinas River trail corridor crosses the property but would not be affected by the quarry. It is anticipated the CUP will include a condition to provide a trail easement that will accommodate future development of this trail consistent with applicable Parks and Recreation policies.	Potentially Consistent
Inland Framework for Planning, Chapter 5 Circulation Element, C Goals and Objectives.	2. Plan transportation system improvements to provide for, but not exceed, the capacities that are needed to serve the travel demand generated by the year 2010 population, consistent with the land use patterns allowed by the Land Use Element and the cities' general plans, so that growth is not facilitated or induced in inappropriate amounts or locations.	Proposed quarry does not relate directly to planning or implementing transportation system improvements. It does provide raw material for the construction of highway, bridge, trail, and other improvements. It will contribute towards cumulative traffic increases, but will not directly necessitate roadway improvements beyond what is consistent with the existing land use pattern.	Potentially Consistent
	7. Design a transportation system that provides for safe travel within attainable, feasible economic and technical means.	Proposed project expected to comply with all transportation system requirements and will help provide continued economic source of roadway construction material.	Potentially Consistent
	9. Develop and enhance a system of scenic roads and highways through areas of scenic beauty without imposing undue restrictions on private property, or unnecessarily restricting the placement of agricultural support facilities in agricultural and rural areas.	No formally designated scenic highways in project vicinity. SR 58 is a "suggested scenic corridor" in the Conservation and Open Space Element (in COSE Table VR-2).	Potentially Consistent after the completion of reclamation and revegetation

and operation safety regulations. The Federal Department of Transportation, Federal Highway Administration, enforces the federal requirements; but in most cases, authority for enforcement is passed down to the states.

California Regulations

The California Vehicle Code (starting at Section 1500 Commercial Motor Vehicle Safety Program, and starting at Section 34600 Motor Carriers of Property Permit Act) adopts federal standards and requirements related to the safe operation of heavy trucks. Hazardous material transport is addressed in Section 32000. Size, weight, and load requirements start at Section 35400. California cannot prohibit trucks that meet federal standards for size and weight from traveling on state highways. The state identifies and publicizes "advisory routes" (also called yellow routes) where trucks with a KPRA length over a specified limit (typically 30 feet) may not be able to stay within the defined travelled lane through curves on the highway segment. Caltrans and the California Department of Motor Vehicles oversee the state permit and licensing requirements for heavy trucks, and the California Highway Patrol inspects and enforces regulations.

The specific issue of hauling aggregate loads and their enclosure requirements is addressed in Vehicle Code Section 23114. This section includes a general prohibition against allowing any part of a load to be lost, and include covering requirements. For aggregate loads, a top covering or tarp is not required if the load meets specified freeboard requirements (no part of the load may extend to within six vertical inches of the top of the enclosure).

The California Streets and Highways Code, starting at Section 670, establishes the permit procedure to allow encroachments into the state highway right-of-way. Such permits are necessary for the construction of driveways or any other improvement that will affect the right-of-way, and are obtained from Caltrans.

State Public Utilities Commission approval is required to modify an existing highway-rail crossing or to construct a new crossing. Completion and submittal of a General Order (GO) 88-B Request for Authorization will be required for any proposed work to the crossing along with appropriate project environmental documents per CEQA. The proposed mitigation measure of installing traffic signals at the El Camino Real/Estrada Avenue intersection falls under the criteria requiring a GO 88-B Authorization. Information on filing a GO 88-B Request for Authorization can be found on the Commission's website: http://www.cpuc.ca.gov/PUC/safety/Rail/crossings/go88b.htm.

County Regulations

The County of San Luis Obispo has established a variety of regulatory mechanisms to minimize or avoid potential environmental issues related to traffic during the review and establishment of conditions for development projects. With reference to the Significance

Criteria presented in Section 4.11.5 below, these mechanisms are briefly summarized as follows:

Standards to evaluate Traffic Volume Increases, in terms of acceptable Levels of Service in rural and urban areas are found in the Framework for Planning (Inland) – Chapter 3: Resource Management System; Section 3 – E: Roads/Circulation

Issues related to Traffic Safety and emergency access are addressed in the San Luis Obispo County Public Improvement Standards (adopted by Resolution No. 2011-312); County Code Chapter 22.50 – FIRE SAFETY

With regard to issues related to Access, Parking and Internal Traffic, the following are the relevant County regulations: County Code Chapter 22.18 – PARKING AND LOADING STANDARDS; San Luis Obispo County Public Improvement Standards (adopted by Resolution No. 2011-312)

Issues related to Alternative Transportation Modes are addressed in the Framework for Planning (Inland) – Chapter 5: Circulation Element; Sections C, H, I and J; and in County Code Title 24 – Airport Rules and Regulations

4.11.4 Assessment Methodology

Most of the procedures used in the original traffic study for the project (TPG 2009) and by ATE in their review and update of the traffic analysis are from the Highway Capacity Manual, published by the Transportation Research Board of the National Academy of Sciences (Transportation Research Board 2000). Depending on the specific situation being analyzed (intersection or roadway segment), the LOS was determined based on the particular operational analysis or procedure recommended by Caltrans Guide for the Preparation of Traffic Impact Studies (Caltrans 2002:5).

Following the Caltrans guidance, several scenarios were analyzed to determine the effects of the project on peak hour traffic conditions and LOS. These scenarios included: 1) existing conditions, 2) existing conditions plus project traffic, 3) future 2030 traffic, and 4) future 2030 traffic plus the project traffic. The estimates of future traffic volumes were generated based on a review of past traffic growth, and extrapolating that growth out to 2030. ATE compared these projections with earlier forecast traffic growth prepared for the Santa Margarita Ranch development proposal (Fehr and Peers 2006), and found them to be more conservative (i.e., higher) than the earlier forecast.

Data and worksheets for the analyses are contained in the separate traffic technical appendix (Appendix C to this EIR).

4.11.5 Significance Criteria

With appropriate consideration of the significance criteria presented in Appendix G of the CEQA Guidelines, the County of San Luis Obispo has developed and adopted the following significance criteria to determine project effects for Transportation and Circulation within San Luis Obispo County. Accordingly, the Las Pilitas Quarry project will have a significant impact if it will:

a. Increase vehicle trips to local or area-wide circulation system; and/or

b. Reduce existing LOS on public roadway(s); and/or

c. Create unsafe conditions on public roadways (e.g., limited access, design features, sight distance, slow vehicles); and/or

d. Provide for adequate emergency access; and/or

e. Result in inadequate parking capacity; and/or

f. Result in inadequate internal traffic circulation; and/or

g. Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., pedestrian access, bus turnouts, bicycle racks, etc.); and/or

h. Result in a change in air traffic patterns that may result in substantial safety risks.

For the purpose of this EIR, the following criterion is used to determine the significance of project impacts to roadway structural conditions:

i. Would increase the Traffic Index (TI) necessary to support heavy vehicle trips associated with the proposed project by more than 1.5 (existing TI = 10) on Highway 58 between the project site and Highway 101 (result in a substantial degradation of the roadway structural condition).

4.11.6 Project Impacts and Mitigation Measures

For discussion purposes, the above potential effects are organized into four groups or issue areas as follows:

1. Traffic Volume Increases: The initial study concluded on a preliminary basis that the first two of the above effects – both related to increases in traffic caused by the project – were potentially significant. The impact analysis of this potential effect uses the traffic "Level of Service" as the criteria for evaluating the roadway segments and intersections affected by the project.
2. Traffic Safety: Although the Initial Study concluded that the effects of the project on factors that may influence safety on the area roadways were less than significant, several of these issues were analyzed in response to comments raised during the scoping process or in agency meetings. These issues address item c. above.

3. Access, Parking and Internal Traffic: This discussion addresses items d, e, and f from the Initial Study.
4. Cumulative Effects: For the future conditions, the analysis includes traffic generation from the approved Santa Margarita Ranch Agricultural Residential Cluster subdivision plus a forecast increase in highway traffic based on Caltrans data.

The remaining items from the Initial Study (g, dealing with plans for alternative transportation; and h, dealing with air traffic operations) were identified as not involving a significant impact. These issues do not apply to this project, and are not analyzed in this EIR.

Traffic Volume Increases

The project will contribute towards existing traffic that passes through the intersection of SR 58 (Estrada Avenue) and El Camino Real, and will increase the potential need for a signal at this intersection. This effect is considered a potential significant impact that can be mitigated.

The project will cause increases in traffic volumes on local roadways, but will not substantially reduce the Level of Service at intersections, freeway ramps, or on US Highway 101, when added to existing traffic volumes. The project traffic effects on other roadways and intersections are considered less than significant.

The project traffic generation is based on data from the application and from the review of the project performed during preparation of this EIR. Section 2.3.3 describes the review and adjustments made to the estimates of project trip generation. The distribution of this traffic over time was performed in the original traffic study and reviewed by ATE, and is summarized in Table 4.11-8 below using the updated traffic generation estimate.

TABLE 4.11-8
REVISED PROJECT TRIP GENERATION

		A.M. Peak Hour			P.M. Peak Hour		
Trip Type	Daily Trips[1]	Inbound	Outbound	Total	Inbound	Outbound	Total
Employees	10	5	0	5	0	5	5
Trucks	273	19	19	38	15	15	30
Total	283	24	19	43	15	20	35

[1] Daily trip ends (1-directional).

The directional distribution of traffic is shown in Figure 4.11-3. This distribution is based on a review of the future market areas and assumes that most of the project traffic (80 percent) will use the US Highway 101 corridor. The remaining 20 percent would be distributed to local market areas north on El Camino Real (10 percent), southeast on Pozo Road (5 percent), and northeast along SR 58 (five percent).

El Camino Real/Estrada Avenue Intersection. This stop sign-controlled intersection is complicated by its angular geometry, the superelevation of El Camino Real to handle higher speed traffic, and by the presence of the Union Pacific Railroad tracks. A sign on Estrada Avenue indicates that there is only 50 feet between the tracks and the highway; but the actual distance between the tracks and the line at the stop sign is about 75 feet. This distance is sufficient for trucks to stop between the tracks and El Camino Real without extending into the latter. This distance is not sufficient, however, to avoid meeting traffic Signal Warrant 9 for intersections adjacent to railroad crossings. In any event, Mitigation Measure TRAFFIC-1a requires funding by the project towards improvements at the intersection of El Camino Real and Estrada Avenue, adjacent to the railroad crossing. It is anticipated that the design of this future intersection will meet the appropriate safety requirements specified by Caltrans District 5, County Public Works and the Public Utilities Commission (State agency responsible for rail safety). The addition of any additional traffic from the project, regardless of the LOS effects, will also meet the appropriate Signal Warrant. Meeting the Signal Warrant does not automatically mean that a traffic signal is necessary or desirable from a traffic operations viewpoint (that determination must be made by Caltrans). In their comment letter dated June 27, 2013, the California Public Utilities Commission also points out that the roadways and intersection at this location do not include lane striping through the intersection or raised medians, which would help to guide vehicle and bicycle traffic and reduce the potential for gate drive-around accidents. Because the quarry project will contribute traffic to this intersection, if and when Caltrans and the Department of Public Works determine that a signal is necessary based on LOS or other indicators this project should also contribute a proportional share towards the cost of the signalization. Intersection improvements would involve work in the railroad right-of-way, so they would also require review and approval by the California Public Utilities Commission.

Intersections and SR 58 through Santa Margarita. The resulting peak hour traffic due to the project at each intersection is shown in Figure 4.11-3, and the sum of existing plus project traffic is shown in Figure 4.11-4. Table 4.11-9 below shows the resulting peak hour traffic

TABLE 4.11-9
EXISTING + PROJECT LEVELS OF SERVICE

	Existing Delay/LOS		Existing + Project Delay/LOS	
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Estrada Ave/El Camino Real				
WB Left + Thru	4.1 Sec./LOS A	3.8 Sec./LOS A	4.2 Sec./LOS A	3.9 Sec./LOS A
NB Approach	19.7 Sec./LOS C	12.7 Sec./LOS B	22.2 Sec./LOS C	13.4 Sec./LOS B
Estrada Ave/H St				
EB Approach	15.2 Sec./LOS C	11.0 Sec./LOS B	15.9 Sec./LOS C	11.2 Sec./LOS B
WB Approach	12.5 Sec./LOS B	10.2 Sec./LOS B	12.9 Sec./LOS B	10.3 Sec./LOS B

NB Approach	0.3 Sec./LOS A	0.6 Sec./LOS A	0.3 Sec./LOS A	0.5 Sec./LOS A
SB Approach	6.1 Sec./LOS A	0.9 Sec./LOS A	5.6 Sec./LOS A	0.9 Sec./LOS A
W Pozo Rd/Calf Canyon Hwy				
EB Left + Thru	4.6 Sec./LOS A	6.2 Sec./LOS A	5.7 Sec./LOS A	6.7 Sec./LOS A
SB Approach	9.3 Sec./LOS A	9.3 Sec./LOS A	9.4 Sec./LOS A	10.1 Sec./LOS B
Calf Canyon Hwy/Project Driveway				
EB Left + Thru	NA	NA	3.0 Sec./LOS A	0.9 Sec./LOS A
SB Approach	NA	NA	9.2 Sec./LOS A	8.7 Sec./LOS A

delays and LOS results. The data for the Existing Conditions from Table 4.11-5 above has been repeated here for easy comparison. These comparisons show that the effect of the project generated traffic is not substantial, and that the LOS for all movements at all intersections will remain within the accepted Caltrans threshold for this portion of SR 58 (peak hour LOS E) and within the San Luis Obispo County standard (peak hour LOS C). This effect of the project when added to existing traffic volumes is, therefore, a less than significant impact.

For the SR 58 segment between Estrada Avenue and U.S. 101, the Project would add up about 11 inbound trucks and 11 outbound trucks per hour on average, and about 35 truck trips per the peak hour as shown in Figure 4.11-3. The total peak hour trip generation is 38 truck trips per hour as shown in Table 4.11-8, but a small number of these are expected to be to and from the north, and will not affect the SR 58 segment under discussion here. This segment is relatively flat and straight with standard travel lanes and paved shoulders within a wide right-of-way. Caltrans count data shows that this segment carries about 7,200 daily trips. The Project's addition of 273 daily trips (see Section 2.3.3 in the Project Description) or the 38 peak hour truck trips noted above, would not significantly impact traffic operation on this segment of SR 58 between Estrada Avenue and U.S. Highway 101.

While less than significant from a traffic perspective, this truck traffic would add to existing noise levels – an impact that is identified in Section 4.8 under Impact NOISE-1 and NOISE-5. The truck traffic and its attendant noise level also contributes towards the potential incompatibility with land use in the Santa Margarita village area, which is discussed in Section 4.14.

US Highway 101/SR 58 Interchange. The project traffic distribution discussed above assumes 80 percent of the quarry traffic will use US Highway 101. To assess the effect of this traffic on the ramp and highway operations, ATE first assumed that all of this traffic would move to and from the south. Table 4.11-11 below shows the results of this analysis, compared with the existing conditions. Examination of the table indicates that the project would cause small changes in the traffic density, but in no case would there be a change in the resulting peak hour LOS. In all cases, the peak hour LOS would be D or better.~~, which is~~

~~consistent with the target established by Caltrans for US Highway 101 operations.~~ ATE performed a similar analysis, but assuming that all of the project traffic to US highway would travel to and from the north instead. The results of this analysis are similar to the all-southbound assumption, so they are not repeated here but they are included in Appendix C. The effects of the project on the SR 58 ramps mainline operations of US Highway 101 are less than a significant impact, because the LOS would not be altered by the project-generated traffic.

Impacts to SR 58 resulting from increased heavy truck traffic (deterioration of roadway structural condition). The project will increase heavy truck traffic volumes along the proposed project's identified haul routes, including SR 58 between the project site and Highway 101. The Traffic Index (TI) is a logarithmic scale, which indicates the ability of the pavement structure to support repetitive wheel and axle-loads of large trucks. The total projected Equivalent Single Axle Load (ESAL) during the pavement design life is in turn converted into a Traffic Index (TI) that is used to determine minimum pavement thickness. TI calculations were prepared by URS, following Caltrans procedures outlined in the Highway Design Manual Chapter 610, Topic 613.3 to determine impacts resulting from project related trucks on SR 58. A 20-year pavement design life was used to calculate the TI associated with the proposed project's increase in heavy vehicles along with an existing TI for this entire stretch of SR 58 of 10.0 (based on Caltrans information contained in their November 21, 2013 letter).

The County of San Luis Obispo has established significance criteria associated with potential public roadway damage along SR 58 between the project site and Highway 101. Impacts to the roadway of SR 58 would be considered a significant impact if the project related heavy vehicle traffic increases the calculated Traffic Index by 1.5 or more from the existing roadway design (existing TI = 10). A change in the Traffic Index of 1.5 or more would represent a substantial shortening of the design life of SR 58 (deterioration of roadway condition) as a result of implementing the proposed project. To ensure that the structural integrity of the State highway system would not be adversely affected by the proposed project, this EIR provides County decision makers and other readers of this document with information about the effect of the increased volume of heavy trucks on SR 58 generated by the project.

Typically, TI ratings in the range of 7.0 +/- are calculated for roadways that are not expected to carry appreciable amounts of truck traffic. Higher TI values in the range of 9.0 to 10.0 are typical of major arterial roadways with heavy truck traffic, and values of 10.0 or more are common for freeways and freeway ramp systems. The effects on pavement life from passenger cars, pickups, and two-axle, four-wheel trucks are considered to be negligible. A summary of TI calculation for SR 58 are presented in Table 4.11-10. State highways, such as SR 58, generally are designed to handle a mix of vehicle types, including heavy trucks.

TABLE 4.11-10
SUMMARY OF TRAFFIC INDEX CALCULATIONS

Segment #	Current ADT	Current AADTT	Project AADTT	Total AADTT	Existing T.I. Per Caltrans	T.I.(with Quarry)	T.I. (No Quarry)	T.I. Difference (T.I. with Quarry – Existing T.I. Per Caltrans
1	7200	447	218	668	10	11	10	1
2	2900	180	246	426	10	10.5	9	0.5
3	1776	111	260	371	10	10.5	8.5	0.5

ADT – Average Daily Traffic
AADT – Average Annual Daily Truck Traffic (6.2& of ADT per Caltrans 2010 Data)

Based on the information contained in Table 4.11-10, the truck trips generated by the project would cause incremental damage and wear to roadway pavement surfaces along SR 58 because the calculated TI (with Quarry) would not exceed the existing design TI along any of the three segments of SR 58 by more than 1.5. The degree to which this wear and tear would occur depends on the roadway's design (pavement type and thickness) and its current condition. Information provided by Caltrans for SR 58 indicates that existing TI values are 10.0 for all three segments of SR 58 between the project site and Highway 101 (see Exhibit B to Appendix G). Table 4.11-10 indicates the project would increase the TI necessary to support heavy trucks associated with the proposed project for all three segments of the haul route along SR 58, but by no more than 1.0 for any individual segment. Project generated heavy trucks (based on the maximum production quantities described in the EIR) will increase heavy truck traffic along SR 58 such that a TI design standard of 11.0 would be required to handle the higher volume of heavy truck traffic without deteriorating the pavement surface (decrease in the design life of the highway) for segment #1. Segment #2 and #3 would require a TI of 10.5 to ensure the maximum production quantities associated with the proposed quarry would not decrease the design life of the highway. Based on the significance criteria established for this EIR, the project would have a less than significant impact to the roadway condition of SR 58. While the project would not result in a significant impact, it will contribute to the degradation of SR 58 due to the increase in heavy truck traffic (refer to cumulative impact discussion below).

Bicycle Level of Service (BLOS) SR 58. As discussed above, bike lanes are present along various segments of the identified truck routes (but not all segments) associated with the proposed project. The Highway Capacity Manual describes a method for measuring a level of service to bicycles that use state highways. Bicycle level of service for two-lane highway segments are based on a "Bicycle Level of Service" (BLOS) score, which is in turn based on a travel perception model. This score is based, in order of importance, on five variables:

- Average effective width of the outside through lane,
- Motorized vehicle volumes,
- Motorized vehicle speed,
- Heavy vehicle (truck) volumes, and
- Pavement condition.

The BLOS score represents a perception that would likely be held by bicyclists along a given segment of a roadway regarding their experience cycling on the roadway. Changes to the input levels of any one of the above mentioned variables can result in a skewed perception of BLOS.

Caltrans has provided information related to Bicycle Level of Service (BLOS) dated November 21, 2013 and included in Appendix G. The BLOS analysis performed by Caltrans indicates that the existing BLOS along SR 58 (under existing conditions) is "F" (BLOS score of 8.79). The primary contributing factors associated with Caltrans's calculated LOS "F" for this stretch of SR 58 are related to the existing and proposed percentage of heavy vehicles along this stretch of SR 58. When the proposed project is added to the existing conditions, the Bicycle Level of Service remains "F" (BLOS score of 14.14).

Review of the Highway Capacity Manual indicates that the BLOS model should not be used over large stretches of roadways with varied grades and / or traffic conditions. The Highway Capacity Manual indicates that the resulting score generally ranges from 0.5 to 6.5 and is stratified to produce a LOS A-F result. As noted above, Caltrans calculated the existing score as 8.79 (without project) and 14.14 (with project) which is well outside of the anticipated range of BLOS scores identified in the Highway Capacity Manual. The analysis provided by Caltrans resulted in scores that were so extreme that mitigation recommended by Caltrans (in the form of shoulder widening) does not mitigate either the BLOS existing or project scores.

Discussions with industry professionals indicate that the model used in determining the BLOS was developed for roads with very low heavy vehicle traffic (between 0 and 2 percent) and the formula does not accurately reflect BLOS on road segments with higher levels of heavy vehicle traffic. The Highway Capacity Manual (2010) states: "*The bicycle methodology was developed with data collected on urban and suburban streets, including facilities that would be defined as suburban two-lane highways. Although the methodology has been successfully applied to rural two-lane highways in different parts of the United States, users should be aware that conditions on many rural two-lane highways will be outside the range of values used to develop the bicycle LOS model. The range of values used in the development of the bicycle LOS model are shown below:*

- *Width of the outside through lane: 10 to 16 ft;*
- *Shoulder width: 0 to 6 ft;*
- *Motorized vehicle volumes: up to 36,000 annual average daily traffic (AADT);*

- *Posted speed: 45 to 50 mi/h;*
- *Heavy vehicle percentage: 0% to 2%; and*
- *Pavement condition: 1 to 5 on the Federal Highway Administration (FHWA) 5-point pavement rating scale.*

The bicycle LOS methodology also does not take differences in prevalent driver behavior into consideration, although driver behavior may vary considerably both regionally and by facility. In particular, the likelihood of drivers slowing down or providing additional horizontal clearance while passing cyclist plays a significant role in the perceived quality of service of a facility."

Based on the information provided by Caltrans, the information contained in the Highway Capacity Manual, and discussions with industry professionals; the County has determined that "Bicycle Level of Service" more appropriately describes the bicyclist's perception of the recreational experience they would perceive along a segment of roadway; accordingly, this topic is discussed further in Section 4.10 – Recreation.

In summary, the direct effect of the project on the potential need for a traffic signal at SR 58/El Camino Real and Estrada Avenue is considered a potentially significant impact, which can be mitigated. The direct effects of the proposed quarry project increase in traffic as measured by intersection delays and traffic density on US Highway 101 and the SR 58 freeway ramps are less than significant. The direct effect resulting from project generated heavy trucks operating along the haul route (SR 58) is a potentially significant impact that can be mitigated.

Description of Impact	Mitigation Measure	Residual Impact
IMPACT TRAFFIC-1a: Increase Traffic at El Camino Real/SR 58 and Estrada Avenue. The project will contribute additional traffic to this intersection adjacent to the UPRR rail crossing, where a potential need for signalization already exists. Potentially unsafe traffic conditions may be created at this location.	MM TRAFFIC-1a: Increase Traffic at El Camino Real/SR 58 and Estrada Avenue. Prior to the issuance of a Notice to Proceed, the applicant/quarry operator shall provide payment or a suitable financial guarantee to fund a portion of the cost of signalization and related intersection improvements at Estrada Avenue (SR 58) and El Camino Real. The amount is to be determined by the County Department of Public Works based on the proportion of total peak hour traffic through the intersection that is assignable to this project, using methods consistent with Caltrans guidelines. The timing for this requirement may be extended by the County into a later phase of the quarry project in the event Caltrans and the Department of Public Works determine that postponement of signalization of this intersection is appropriate. Any signal or other improvements at this intersection must meet Caltrans signal warrants	Less than significant

Description of Impact	Mitigation Measure	Residual Impact
	and design standards.	
IMPACT TRAFFIC-1b: Traffic Volume Increases – LOS. The project will cause small increases in the traffic delay at intersections in the project vicinity, and on the traffic density on US Highway 101 and the SR 58 freeway ramps. In all cases, these changes will not alter the existing Level of Service (LOS) and in all cases the existing LOS is within applicable standards.	MM TRAFFIC-1b: Traffic Volume Increases – LOS. Since this effect is less than significant, no mitigation is required.	Less than significant

TABLE 4.11-11
EXISTING + PROJECT LEVELS OF SERVICE – US HIGHWAY 101/SR 58
(ALL TRIPS TO/FROM THE SOUTH)

			Existing Operations		Existing + Project Operations	
Mainline or Ramp	Time Period	Lanes	Density	LOS	Density	LOS
Mainline US 101 northbound n/o SR 58	A.M. Peak	2	9.1	LOS A	9.1	LOS A
	P.M. Peak		24.1	LOS C	24.1	LOS C
Mainline US 101 northbound s/o SR 58	A.M. Peak	2	9.0	LOS A	9.2	LOS A
	P.M. Peak		26.8	LOS D	27.0	LOS D
Mainline US 101 southbound n/o SR 58	A.M. Peak	2	21.0	LOS C	21.0	LOS C
	P.M. Peak		11.4	LOS B	11.4	LOS B
Mainline US 101 southbound s/o SR 58	A.M. Peak	2	23.7	LOS C	23.9	LOS C
	P.M. Peak		11.7	LOS B	11.8	LOS B
Ramp: SR 58 northbound on-ramp	A.M. Peak	1	14.2	LOS B	14.2	LOS B
	P.M. Peak		29.7	LOS D	29.7	LOS D
Ramp: SR 58 northbound off-ramp	A.M. Peak	1	15.1	LOS B	15.1	LOS B
	P.M. Peak		34.8	LOS D	34.8	LOS D
Ramp: SR 58 southbound on-ramp	A.M. Peak	1	29.2	LOS D	29.4	LOS D
	P.M. Peak		16.9	LOS B	17.1	LOS B
Ramp: SR 58 southbound off-ramp	A.M. Peak	1	29.3	LOS D	29.3	LOS D
	P.M. Peak		18.0	LOS B	18.0	LOS B

Traffic and Pedestrian Safety

The project will generate heavy truck traffic during the morning and afternoon, which could interfere with traffic and pedestrian activity at the Santa Margarita Elementary School. This

is considered a potential significant impact that can be avoided with appropriate scheduling of truck activity associated with the project.

This issue involves traffic at the school crossing on Estrada Avenue (SR 58) at H Street and the nearby intersection at El Camino Real, and possible interference by truck traffic with pedestrians crossing El Camino Real/SR 58 in Santa Margarita. Vehicle movement in and out of the park and ride or interference with traffic trying to merge onto US Highway 101, and the movement of traffic through the 90-degree turn on SR 58 at H Street are also addressed here, but the project effects at these locations will be less than significant.

School Crossing. There is a crest vertical curve on Estrada Avenue (SR 58) south of H Street, which is the location of the Santa Margarita Elementary School crossing. This crest obscures driver views from the south of the school pedestrian crossing. This effect does not occur with heavy truck drivers, however, since their driving position is much higher above the street surface than that of automobile drivers. Truck drivers can see the crossing from about 350 feet away.

The crossing is striped and marked with signage in accordance with applicable Caltrans standards (Traffic Manual, Chapter 10, School Area Pedestrian Safety Caltrans 1996), and includes other safety features. School zone speed limits are posted and enforced in the area, and a driver feedback sign has been installed for northbound traffic. Caltrans and the County recently installed a manually-operated flashing beacon light on either side of the crosswalk. The crossing is monitored by school crossing guards during drop-off and pick-up times.

Although trucks and truck drivers may not directly affect the safety of the school crossing, the presence of additional truck traffic might interfere with pedestrian views and the ability of crossing guards to see and take note of oncoming traffic. This potential interference with visibility at the school crossing is considered a less than significant impact, since the crossing is on a state highway and is consistent with the applicable Caltrans guidelines and standards. The truck traffic at this location would contribute to the potential land use incompatibility of the project relative to the Santa Margarita community. This topic is discussed further in Section 4.14. Several Applicant Proposed Measures, which are intended to minimize the potential incompatibility, are presented in that section.

Pedestrian Crossing of El Camino Real/SR 58. The project will contribute approximately 35 peak hour truck trips through the downtown portion of Santa Margarita, and will contribute towards potential conflicts with pedestrian movements across El Camino Real at Encina Avenue. This is considered a potential significant impact, which can be offset by contributing towards improvements that will help to achieve the improvements envisioned for pedestrian safety in the Santa Margarita Design Plan.

Park and Ride. The counts and gap analysis performed by ATE on SR 58 adjacent to the park and ride lot indicate that there are no significant operational problems, sight distance

obstructions, or abnormal accident history at this location. The addition of up to 35 trucks during peak hour conditions is not expected to cause any operational or excessive safety problems at this location, particularly since there will be sufficient gaps available between the truck trips for cars to make turning movements.

US Highway 101 and SR 58 Ramps. The speed surveys by ATE indicated that heavy trucks entering US Highway 101 southbound from SR 58 had an average speed of 51.1 MPH, compared with a speed of 59.1 MPH for automobiles. The field observation and speeds survey found that large trucks merging onto the freeway do not significantly affect mainline operations. These results are consistent with the operational analysis performed using the Highway Capacity Manual, demonstrating that this southbound ramp junction operates at a peak hour LOS D~~, which is consistent with the Caltrans target LOS for US Highway 101~~.

SR 58 Curve on J Street. The issue of truck traffic from the proposed Oster/Las Pilitas Quarry, and its potential effect on the SR 58 and other roadways, was considered by reviewing agencies during the scoping period for this EIR and during preparation of the EIR itself. Although residents and others have raised a concern about the safe operation of trucks through the 90-degree curve, for several reasons the quarry related truck traffic represents a less than significant effect relative to traffic operations at this curve location. These reasons are as follows:

- The radius of curvature for the roadway at this location is adequate to accommodate large trucks within the travelled lanes, with possible use of the paved shoulder by some trucks, without "offtracking" outside of the travelled lanes (see Figure 4.11-5).
- The truck traffic volume from the proposed quarry would contribute approximately 38 peak hour truck trips.
- Truck traffic is generally slower than the passenger vehicles from residential uses.
- Truck drivers have an elevated driving position providing better forward vision when compared to most passenger vehicles.

For these reasons, the effect of the project related truck traffic on the safe highway operations at the 90-degree curve are considered less than a significant impact.

In summary, the additional heavy truck traffic in the vicinity of the Santa Margarita Elementary school may affect visibility of oncoming cars from the school crossing, and in this regard may considered incompatible with the land uses in the Santa Margarita community, but it is not considered a significant impact. A separate Applicant Proposed Measure addressing this issue is also discussed in Section 4.14, Land Use (APM LU-1A).

The potential effects of the project related truck traffic on the pedestrian crossing at Encina Avenue in downtown Santa Margarita is considered potentially significant, and mitigable through improvements that will increase pedestrian safety.

The project effects on the safety of roadways, intersections, the park and ride facility, the freeway ramps associated with US Highway 101, and other locations are not expected to be significant.

Description of Impact	Mitigation Measure	Residual Impact
IMPACT TRAFFIC-2a: Elementary School Crossing. Project generated heavy truck traffic may impair visibility of roadway traffic from the Santa Margarita Elementary school crossing on Estrada Avenue at H Street. Since the crossing design and improvements on this state highway are consistent with applicable standards, this effect is a less than significant impact.	MM TRAFFIC-2a: Elementary School Crossing. Since this effect is less than significant, no mitigation is required. NOTE: Applicant Proposed Measure APM LU-1A addresses this item as a land use compatibility issue.	Less than significant
IMPACT TRAFFIC-2b: Pedestrian Crossing at Encina Avenue. The project will increase traffic, and contribute towards pedestrian safety conflicts, at this crossing of El Camino Real in downtown Santa Margarita.	MM TRAFFIC-2b: Pedestrian Crossing at Encina Avenue. Prior to issuance of a Notice to Proceed with quarry operations, the applicant/quarry operator shall construct a pedestrian refuge island on SR 58 at the intersection of Encina Avenue, or related pedestrian safety improvement consistent with the Santa Margarita Design Plan, as approved by the County Department of Public Works and Caltrans. This improvement will require a Caltrans encroachment permit and compliance with applicable Caltrans design standards.	Less than significant

Access, Parking, and Internal Traffic

No operational impacts related to access and on-site parking and traffic are anticipated. The potential for off-site truck parking may represent a significant impact but this can be minimized through operational conditions on the quarry.

Under normal operations, no more than a few trucks are expected at the quarry site at any one time. Intersection analysis indicates that under both existing and future conditions, the proposed driveway access on SR 58 will function adequately ~~without additional highway widening, dedicated turn lanes, or other improvements.~~ but Caltrans has indicated that a left turn lane on SR 58 is needed to ensure safe access to the proposed project site (in correspondence received on the Draft EIR dated May 24, 2013 as well as a follow up memo dated September 5, 2014. The specific ~~design~~ location of the driveway intersection with SR 58 is considered adequate, but final design has not yet been approved by Caltrans. Also, since the driveway will connect to the state highway and involve construction within the right-of-

way, an Encroachment Permit will have to be approved by Caltrans. The review and approval of the Encroachment Permit by Caltrans will address appropriate traffic control and safety during construction, and ensure that the improvements are consistent with Caltrans standards.

Emergency service in the area is provided by Cal Fire from the Parkhill Road station, which is about 1.5 miles east of the project site. The proposed access drive would provide a paved road with two 12-foot travel lanes suitable for use by emergency vehicles if necessary. It would not alter or interfere with access to the existing residences and ranch structures elsewhere on the property. Thus, the project effects relative to emergency access would not be significant.

Specific construction projects or contracts may require larger volumes of aggregate material in shorter times, and these occurrences may lead to a larger number of trucks at the site simultaneously. The particular concern in this regard is the queuing or parking of trucks in nearby areas prior to the quarry opening in the mornings, or if sufficient parking is not available on-site. In addition to designated employee parking, the project design shows sufficient flat area in the vicinity of the scale house and office for parking six large aggregate trucks, without interfering with the loop road through the processing and stockpile area where trucks would be loaded. If trucks were also to be lined up on the paved access road, another 20 trucks could be accommodated. Thus, the issue related to off-site parking would be associated with early morning truck arrivals prior to the quarry opening. Potential disturbances to residential neighborhoods from off-site truck parking could occur if trucks arrive before the quarry opens, but it can be minimized through appropriate scheduling and operational controls at the quarry. The quarry operator can identify suitable off-site parking areas, or exclusion areas where parking of heavy trucks should not occur, and provide this information to all truck drivers dealing with the quarry. Such a procedure should also include publicizing the information to the community and providing communication points to receive complaints in response to illegal truck parking.

Description of Impact	Mitigation Measure	Residual Impact
IMPACT TRAFFIC-3a: Access. The proposed access drive will require construction within the SR 58 right-of-way causing temporary disruption of highway traffic, and long term adverse effects on traffic using the state highway.	MM TRAFFIC-3a: Access. Prior to the issuance of any construction permit by the County for the project access road, the applicant/quarry operator shall obtain an Encroachment Permit from Caltrans, and shall incorporate any conditions from Caltrans related to traffic controls or construction of the access road into its design, including a left turn lane from SR 58 at the project entrance. These conditions may include sight distance and other design features consistent with the Highway Design Manual, and compliance with subsequent Caltrans environmental review, if necessary, and other Encroachment Permit procedures.	Less than significant
IMPACT TRAFFIC-3b: Internal Traffic and Parking. Early morning parking by trucks waiting for the	MM TRAFFIC-3b: Internal Traffic and Parking. The applicant/quarry operator shall designate and publicize to customers and haulers, off-site limits within which trucks should	Less than significant

Description of Impact	Mitigation Measure	Residual Impact
quarry to open could disturb and adversely affect residential areas.	not operate or park while awaiting for the quarry gates to open in the morning. Prior to issuance of the Notice to Proceed for any off-site sale and transport of aggregate material, the applicant/quarry operator shall provide the Department of Planning and Building with documentation identifying these off-site limits and how they will be communicated to truck operators and to residents in the community. The documentation shall also identify by name and telephone number, where complaints may be made regarding unacceptable truck parking. NOTE: If Applicant Proposed Measure APM LU-1 is adopted, then MM-TRAFFIC-3b would be incorporated into the Traffic Control Management Plan.	

Cumulative Effects

The project is about one-half mile from the existing Hanson Santa Margarita Quarry. Both quarries are within the EX1 Extractive Resource Area Combining Designation, as shown on Figure 3-1. In this region, the EX1 Combining Designation is placed over the La Panza Granitics, a large area that is classified as MRZ-2 by the California State Geological Survey (1989:9). Since this Combining Designation is specifically intended to preserve mineral resources and protect mineral extraction, it is reasonable to expect that future quarries which would utilize SR 58 for access to the quarry will be approved and constructed in this area.

Future traffic increases in the area will cause degraded LOS at the intersection of Estrada Avenue and El Camino Real, and the project will contribute towards this impact. This is considered a potential significant impact that can be avoided with appropriate planning and implementation of traffic improvements by the County and Caltrans. The contribution of the project towards the cumulative impact will be mitigated through a proportionate funding of the costs of the improvements as required in Mitigation Measure TRAFFIC-1a above.

Similarly, future heavy truck traffic in the area, as well as the project's increase in heavy trucks along SR 58, would result in more rapid deterioration of the roadway surface along the proposed haul route. The contribution of the project's heavy truck traffic to existing heavy truck traffic and future heavy trucks along this route is considered a potentially significant impact that can be mitigated through implementation of mitigation measure Traffic-4b below. The intent of this measure is to ensure on-going maintenance of SR 58 along the proposed haul route such that the highway does not experience major degradation beyond the existing condition of the highway without the project.

Implementation of this measure will include review of required project improvements / repairs along SR 58 under Caltrans "Complete Streets Program" (most recent version is presented in Appendix G; updates may occur from time to time) prior to construction. The

California Complete Streets Act of 2008 (AB 1358) states: "*In order to fulfill the commitment to reduce greenhouse gas emissions, make the most efficient use of urban land and transportation infrastructure, and improve public health by encouraging physical activity, transportation planners must find innovative ways to reduce vehicle miles traveled (VMT) and to shift from short trips in the automobile to biking, walking and use of public transit*." Facilities may look different depending on the context and appropriate facilities in a rural community may be different from a dense urban area. This review will include an analysis to determine the appropriateness of providing shoulders, restriping and/or other improvements to ensure all travelers (including bicyclists) can be accommodated on the State highway system.

The issue of cumulative traffic effects is related to the overall growth in the Santa Margarita community, southern Atascadero, and the unincorporated neighborhoods in between. Regional growth in other areas may also contribute towards increases in traffic on SR 58 through Santa Margarita, but the peak hour conditions that define traffic impacts will be related more to local and nearby development. There are also other aggregate mines in the region similar to the proposed quarry. The overall production rate for aggregate material, however, and the generation of truck traffic to deliver it, is a function of the market for the material not the production capacity. Background information and a discussion demonstrating this market-driven relationship is provided in a memorandum by Sespe Consulting, Inc., dated October 28, 2011, and included as part of "Appendix B: Setting," which is in their larger Air Quality and Climate Change Impact Assessment contained in Appendix D of this EIR. Because of this strong market influence on the regional rate of aggregate production, the proposed project truck traffic will not completely add on to existing aggregate truck traffic in the region – it will displace at least some of it. The overall percentage of heavy truck traffic on SR 58 and area roadways is expected to remain in the existing three percent range.

Of the 21 future development projects anticipated in the region (see Section 5.3), Santa Margarita Ranch (Project ID# 16) is clearly the most notable – both in terms of its potential traffic effects within the community and because it is the only large private development that would be expected to contribute substantial funding towards major traffic improvements on area roads. The two major land development projects underway in the southern portion of the City of Atascadero [Dove Creek (Project ID# 20)] and Las Lomas/Woodridge Specific Plan [Project ID# 21] will construct an additional 350 to 400 dwelling units in the next 5 to 10 years. These projects, however, will generate little southbound peak hour traffic through Santa Margarita since they both have more direct access to US Highway 101 via Santa Barbara Road (only local deliveries from the proposed project will use Santa Barbara Road). Development of the Eagle Ranch Specific Plan area [Project ID# 1] in southwestern Atascadero may start within that timeframe, but would not likely be completed for another 10 to 20 years. In any event, that project will affect US Highway 101, but would have little or no traffic effects on SR 58 since its access to and from US Highway 101 is farther north.

To assess the effects of the project on future traffic volumes and operations, traffic conditions for the year 2030 were projected and then the project-generated traffic was added to those volumes to determine the relative significance of the project contribution towards overall traffic volumes. The 2030 projection includes a combination of current traffic, traffic from the Santa Margarita Ranch Agricultural Residential Cluster Subdivision (112 residential units), and general projections of future traffic based on an annual growth rate derived from Caltrans traffic data. Although not explicitly identified in the projection, the Hanson Santa Margarita Quarry is included since it is already operating and its truck traffic is part of the current baseline conditions. Future expansion of the Hanson Quarry is anticipated, but the daily operations rate and truck traffic generation are not expected to change significantly.

Figures 4.11-6 and 4.11-7 show the projected 2030 traffic volumes, with and without traffic from the proposed project. Table 4.11-12 below shows the projected intersection delay times and LOS for the year 2030 peak hour conditions without and with the proposed project.

The results above show that under the 2030 conditions without the project, two of the intersections in the area are expected to operate at a LOS that does not meet the San Luis Obispo County LOS C standard, with or without the proposed quarry project. These intersections are:

- Estrada Avenue at El Camino Real (both A.M. and P.M. peak hour)
- Estrada Avenue at H Street (A.M. peak hour)

Both of these intersections are along the portion of SR 58 where the Caltrans route concept LOS is E.

TABLE 4.11-12
2030 NO PROJECT AND 2030 + PROJECT LEVELS OF SERVICE

	2030 No Project Delay/LOS		2030 + Project Delay/LOS	
Intersection	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour
Estrada Ave/El Camino Real				
WB Left + Thru	4.7 Sec./LOS A	5.08 Sec./LOS A	4.8 Sec./LOS A	5.1 Sec./LOS A
NB Approach	255.7 Sec./LOS F	31.6 Sec./LOS D	302.1 Sec./LOS F	38.2 Sec./LOS E
Estrada Ave/H St				
EB Approach	30.2 Sec./LOS D	14.4 Sec./LOS B	32.7 Sec./LOS D	14.8 Sec./LOS B
WB Approach	24.7 Sec./LOS C	12.9 Sec./LOS B	26.9 Sec./LOS D	13.2 Sec./LOS B
NB Approach	0.3 Sec./LOS A	0.6 Sec./LOS A	0.3 Sec./LOS A	0.6 Sec./LOS A
SB Approach	6.8 Sec./LOS A	0.9 Sec./LOS A	6.6 Sec./LOS A	0.9 Sec./LOS A
W Pozo Rd/Calf Canyon Hwy				
EB Left + Thru	4.9 Sec./LOS A	8.1 Sec./LOS A	5.8 Sec./LOS A	8.8 Sec./LOS A

SB Approach	10.0 Sec./LOS B	12.3 Sec./LOS B	10.3 Sec./LOS B	15.0 Sec./LOS B
Calf Canyon Hwy/Proj. Driveway				
EB Left + Thru	NA	NA	2.3 Sec./LOS A	0.6 Sec./LOS A
SB Approach	NA	NA	9.7 Sec./LOS A	8.9 Sec./LOS A

As discussed above in Impact TRAFFIC-1a, the intersection of Estrada Avenue at El Camino Real currently meets Signal Warrant 9 due to the proximity of the railroad crossing. Mitigation measure TRAFFIC-1a requires a contribution towards funding the signalization of this intersection, but it is recognized that the timing for signalization would be established by the County Department of Public Works and Caltrans. Based on the TPG traffic analysis, signalization of the Estrada Avenue/El Camino Real intersection does not include widening the existing paved sections to accommodate additional lanes or shoulders; the existing lanes and turning movements could be retained. The Signal Warrant analysis by ATE confirms this conclusion, and indicates that installation of traffic signals would provide LOS B during the A.M. peak period and LOS A during the P.M. peak period for the 2030 plus project scenario. These discussions are also consistent with the analysis and mitigation recommendations for this intersection in the Santa Margarita Ranch EIR (San Luis Obispo County June 2008: page 4.12-24).

The common feature in the analyses summarized in the above paragraph is that the traffic volumes and calculated delays do not indicate the need for a dedicated left-turn lane from El Camino Real onto Estrada Avenue (SR 58), or a dedicated right turn lane from SR 58 onto Estrada Avenue. There are, however, other factors that complicate the design of the intersection at this location. These factors include the crest on Estrada Avenue (superelevation on El Camino Real) that allows southbound El Camino Real traffic to maintain speed as the road joins SR 58 entering Santa Margarita from the east. The Salinas River Area Plan and Santa Margarita Design Plan both indicate a bicycle lane along eastbound El Camino Real through downtown Santa Margarita and turning right onto Estrada Avenue to continue on SR 58. The Santa Margarita Design Plan also indicates a left turn lane on El Camino Real at locations “outside downtown” (San Luis Obispo County October 2001: page II-9). The Union Pacific Railroad tracks cross Estrada Avenue just east of this intersection, and must be considered in any improvements planned for this location. Alteration of improvements that cross the railroad right-of-way must be reviewed and approved by the Public Utilities Commission. Caltrans is responsible for improvements within its right-of-way, and must either undertake or approve any changes to be made with this intersection.

With respect to the Estrada Avenue/H Street intersection—the location of the pedestrian crossing for access to the Santa Margarita Elementary school—the analysis by ATE indicates that signalization at this intersection is not warranted under existing or 2030 conditions plus the project. The decreased levels of service on the H Street legs of this intersection in the

2030 and 2030 plus project scenarios are limited to the relatively short portions of the morning peak hour when school drop-off traffic is occurring. Mitigation measure TRAFFIC-2a will ensure that the project does not contribute this effect, but the project may still contribute some traffic during morning and afternoon peak hours. In the event that a future evaluation by the County determines that construction of a signal at this intersection should occur, the quarry project should contribute towards its funding in proportion to the impact of its traffic.

On the right angle turn of SR 58 at J Street, although future traffic from the Santa Margarita Ranch Agricultural Residential Cluster Subdivision may cause a significant impact due to its contribution towards unsafe conditions at this location, the proposed quarry traffic will involve slower moving trucks. The project may not improve the situation at this turn, but it should not exacerbate it.

Mitigation for the cumulative traffic impact, mainly for addressing the peak hour volume at Estrada Avenue and El Camino Real, requires a combination of efforts from different agencies. The Salinas River Area Plan identifies the County Planning and Public Works Department and Caltrans as being responsible for completing the circulation program within Santa Margarita (San Luis Obispo County 2003:Table 5-1, page 5-16). Several potential funding sources are mentioned: the San Luis Obispo Council of Governments (SLOCOG), Caltrans, State Transportation Improvement Plan, Assessment District, and private funding. Specific funding from governmental agencies has not yet been identified. An assessment district or similar funding mechanism for improvements in the Santa Margarita community has not yet been formed. Private funding in this context means funding through conditions placed on land development projects.

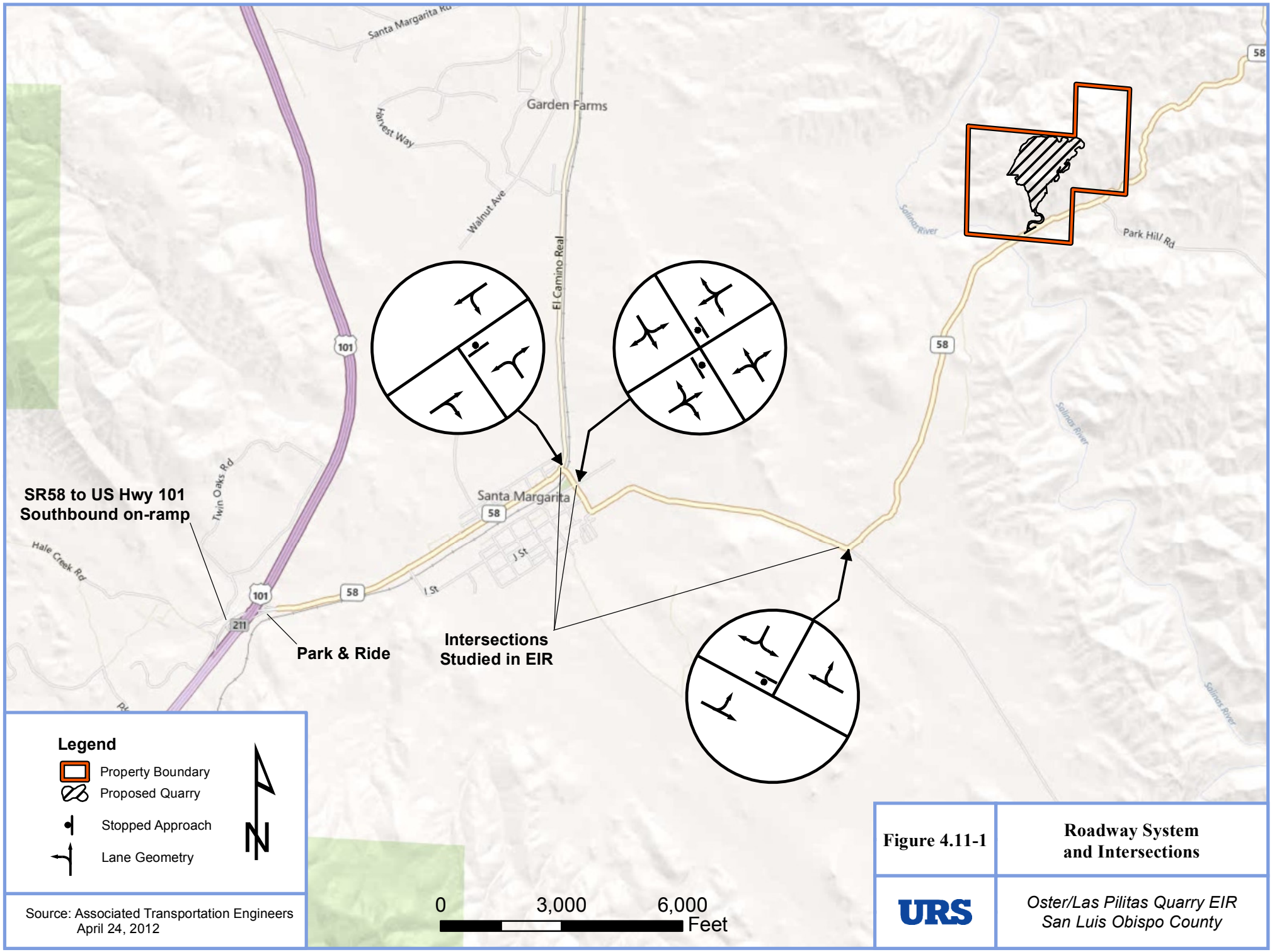
The only substantial potential land development project in the vicinity that would affect the intersections in question is the Santa Margarita Ranch project. The initial Agricultural Residential Cluster Subdivision of 111 lots was approved in 2008 without a condition to improve the intersection of Estrada Avenue and El Camino Real. The status of the “Future Development Program” within Santa Margarita Ranch is not certain at this time since it was not approved in 2008. It was determined that the Santa Margarita Ranch project would contribute trips to locations within the community of Santa Margarita with existing deficiencies and the impact was significant and unmitigable. Remaining projects in and around the Santa Margarita community are generally limited to lot splits or parcel maps or similar small traffic generators, which are presented in a Table in Section 5.3. These small projects have not been required to identify and mitigate traffic impacts, or to contribute funding towards roadway or traffic improvements.

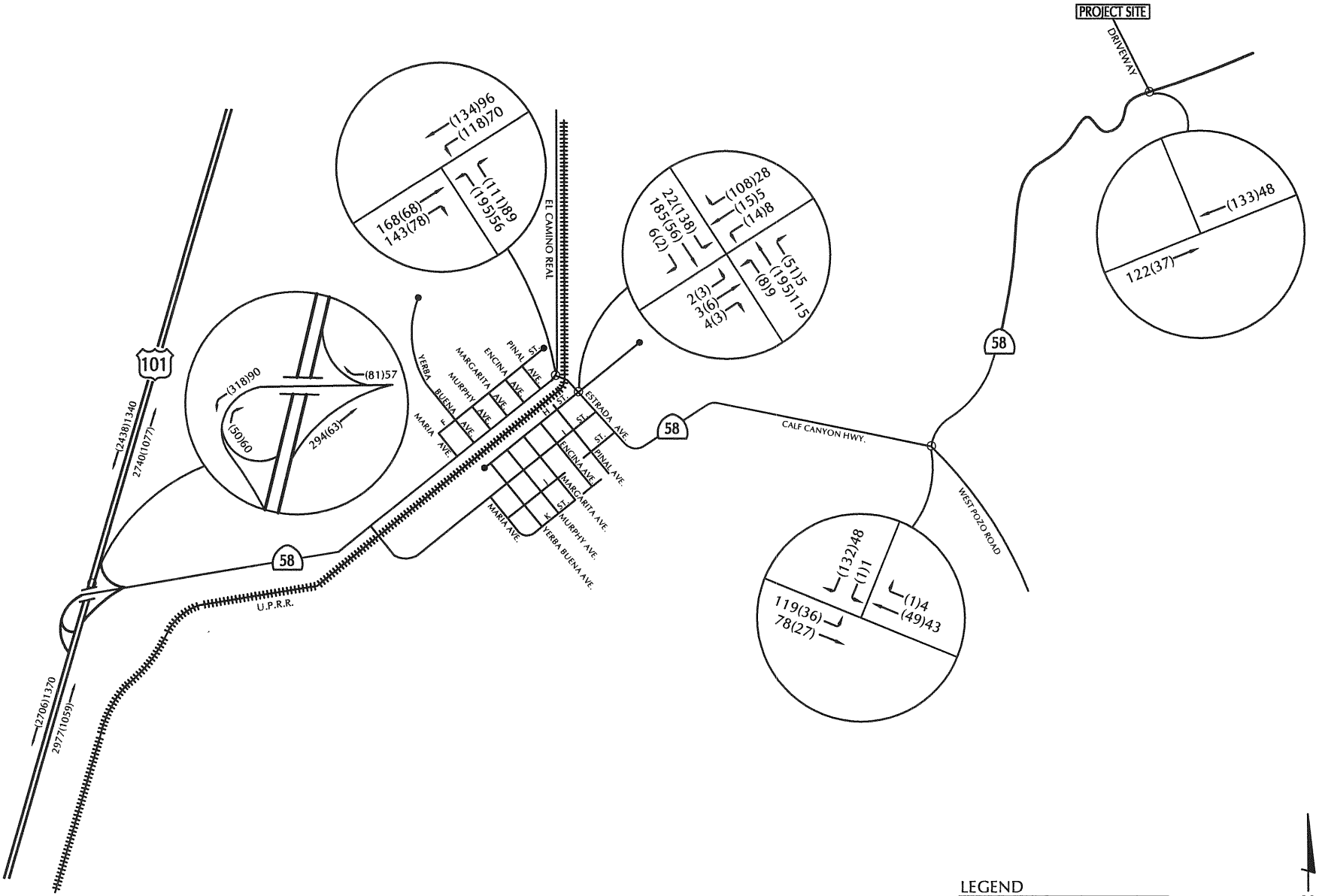
The proposed quarry project should be required to contribute funding towards the necessary intersection improvements in proportion to its effects on the intersection. That proportion has been estimated by ATE to be 8.1 percent based on the project contribution to the 2030 traffic

volume at Estrada Avenue and El Camino Real. If the traffic signal is deemed necessary before this time, then the proportionate contribution from the project would be higher. The dollar amount of this contribution, and the mechanism of its provision, must be determined by the County Public Works Department. The anticipated impact will not occur until future traffic volumes lead to degradation in the level of service or other conditions that lead the County Department of Public Works and Caltrans to decide that signalization is needed. Since these conditions may not develop for a number of years, it is appropriate to link this mitigation requirement to subsequent phases of the quarry. The situation is similar for the intersection of Estrada Avenue and H Street if a decision is made to signalize that intersection, but the project fair share contribution would be about 9.1 percent.

Description of Impact	Mitigation Measure	Residual Impact
IMPACT TRAFFIC-4a: Cumulative Contribution to 2030 Traffic Volumes. The project will contribute towards future (2030) traffic volumes including trips associated with the development of the Santa Margarita Ranch Agricultural Residential Cluster Subdivision, that will degrade the LOS at the intersection of Estrada Avenue (SR 58) and El Camino Real, and at the intersection of Estrada Avenue and H Street (location of the Santa Margarita Elementary School pedestrian crossing).	MM TRAFFIC-4a: Cumulative Contribution to 2030 Traffic Volumes. The applicant/quarry operator shall enter into an agreement with the County to pay their fair share of improvements necessary to identified intersections in the community of Santa Margarita. The applicable fair share is currently estimated at 8.1 percent based on proportional contribution by the project to traffic at the intersection of Estrada Avenue and El Camino Real. The estimated fair share for signalization at Estrada Avenue and H Street is 9.1 percent. The fair share contribution shall be evaluated and the agreement updated as necessary by the County in consultation with Caltrans, prior to the issuance of each Notice to Proceed for each phase of the quarry.	Although the proposed mitigation would reduce impacts to the extent possible, due to the uncertainty regarding Caltrans approval of improvements within their jurisdiction, and uncertainty regarding right-of-way acquisition, in cannot be assured that all improvements would be feasibly constructed prior to the time when they are needed. As a result, cumulative traffic impacts would remain significant and unavoidable.
IMPACT TRAFFIC-4b: Impacts to SR 58 (Deterioration of Roadway Structural Conditions). The project would cause incremental damage and wear to roadway pavement surfaces along SR 58.	MM TRAFFIC-4b: Impacts to SR 58 (Deterioration of Roadway Structural Conditions). The project applicant shall implement one of the following Options: Option 1: Prior to issuance of the Notice to Proceed, the Applicant shall prepare a pavement monitoring program for SR 58 between MM 0.00 and MM 5.44 for review and approval by the County in consultation with Caltrans. The program shall provide before and after video evidence of pavement conditions, require the posting of a pavement repair bond or other mechanism to fund the repair of roadway deterioration resulting from the project, and a mechanism that ensures the funds collected will only be used for improvements / repairs to SR 58 between MM 0.00 and MM	Less than significant

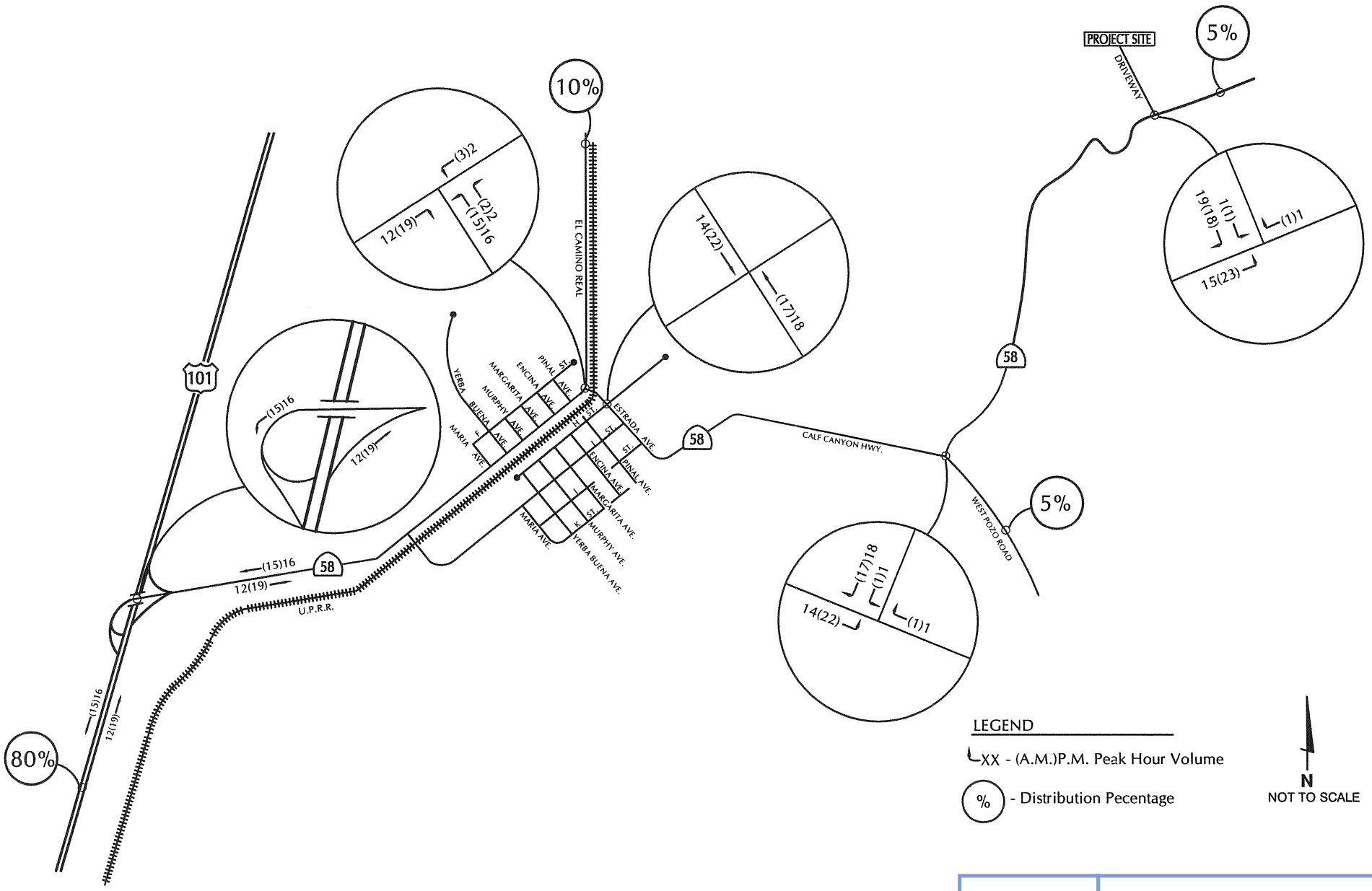
Description of Impact	Mitigation Measure	Residual Impact
	5.44. The Applicant shall coordinate with Caltrans regarding the details of the monitoring program and any requirements for road repair should they become necessary. The program shall include criteria for when maintenance is required and the type of repairs required for various pavement deterioration conditions that may result from heavy truck traffic. Any improvements / repairs resulting from the pavement monitoring program shall be made in accordance with the most current "Complete Streets Implementation Action Plan" prepared by Caltrans to implement Deputy Directive 64-R1. Option 2: Prior to issuance of the Notice to Proceed, the Applicant shall enter into an agreement in a form acceptable to the County of San Luis Obispo or Caltrans to pay for the project's fair share of impacts to SR 58 roadways (between MM 0.00 and MM 5.44). The agreement shall include a mechanism that ensures the funds collected will only be used for improvements/repairs to SR 58 between MM0.00 and MM5.44. The cost per load / cost per ton shall be established using project generated information and / or assumptions consistent with Caltrans standards including the cost associated with any improvements required by the most current "Complete Streets Implementation Action Plan" prepared by Caltrans to implement Deputy Directive 64-R1. The Applicant shall be responsible for costs associated with implementation of this measure as required by either the County of San Luis Obispo or Caltrans. The cost per load / cost per ton shall be subject to annual adjustment based on the Caltrans Construction Cost Index however, in no case shall a negative cost index be allowed to reduce the previous year's fee. The beginning index date shall be the date that the project receives approval by the hearing body.	


Santa Margarita Rd
Garden Farms
Harvest Way
Walnut Ave
El Camino Real
Park Hill Rd
Salinas River
Twin Oaks Rd
Hale Creek Rd
Santa Margarita
J St
I St
101
58
211
SR58 to US Hwy 101
Southbound on-ramp
Park & Ramp
Intersections
Studied in EIR
Legend
Property Boundary
Proposed Quarry
Stopped Approach
Lane Geometry
N
0
3,000
6,000
Feet
Source: Associated Transportation Engineers
April 24, 2012
Figure 4.11-1
Roadway System
and Intersections
URS
Oster/Las Pilitas Quarry EIR
San Luis Obispo County



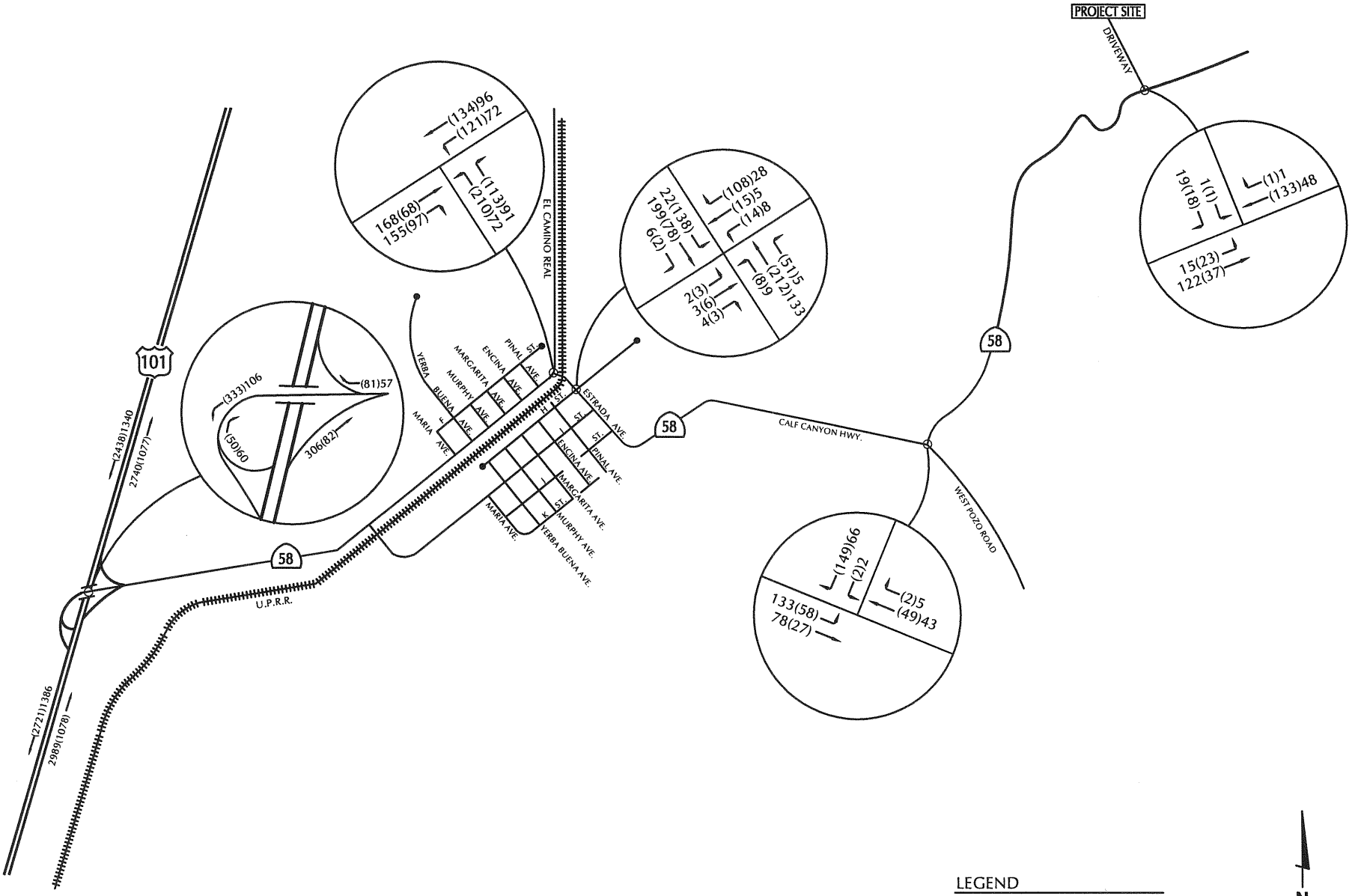
Source: Associated Transportation Engineers
April 24, 2012

Figure 4.11-2	**Existing Traffic Volumes**
URS	*Oster/Las Pilitas Quarry EIR* *San Luis Obispo County*



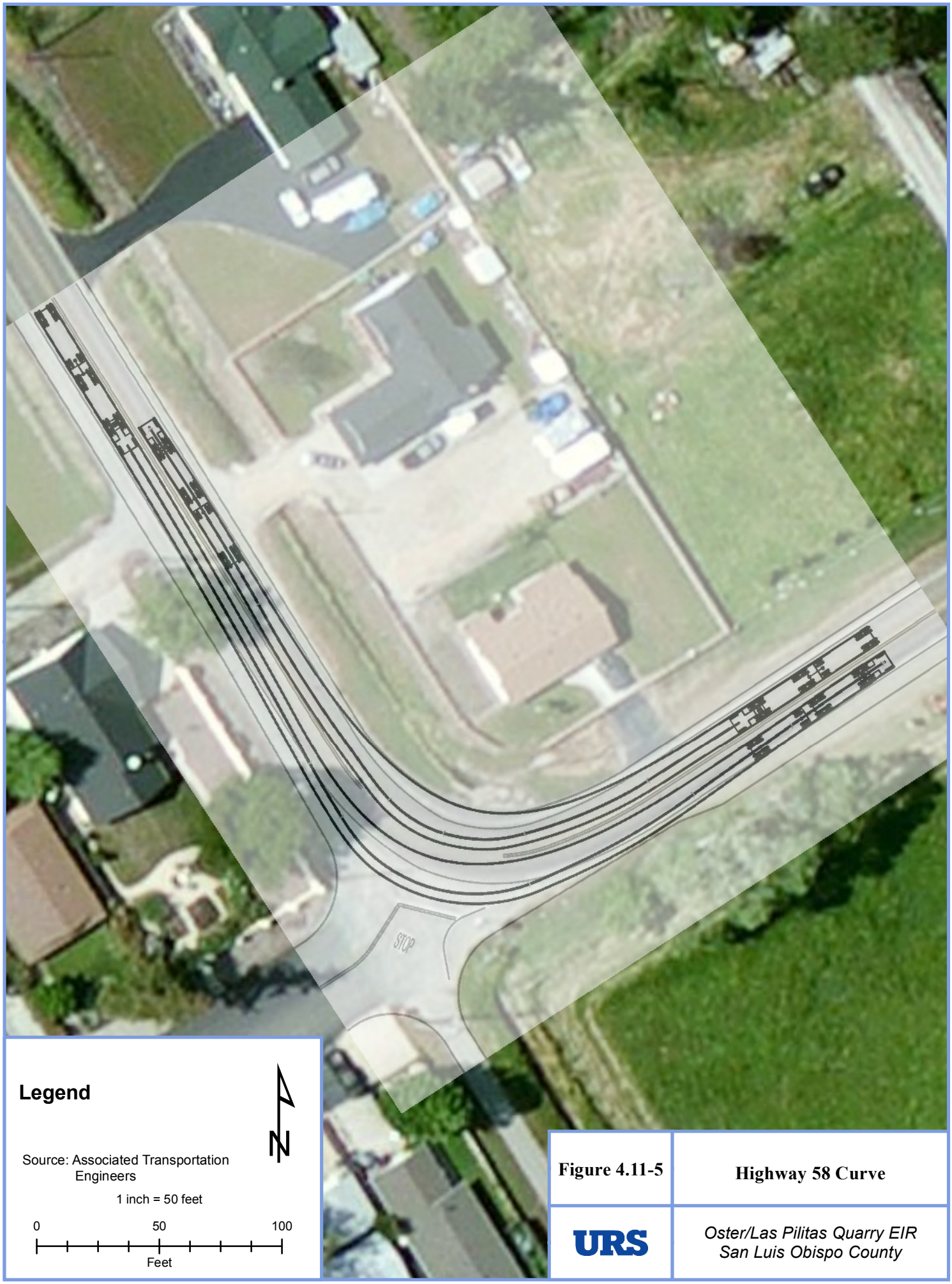
Source: Associated Transportation Engineers
April 24, 2012

Figure 4.11-3	**Project Trip Distribution and Assignement**
URS	*Oster/Las Pilitas Quarry EIR San Luis Obispo County*



Source: Associated Transportation Engineers
April 24, 2012

Figure 4.11-4	**Existing and Project Traffic Volumes**
URS	*Oster/Las Pilitas Quarry EIR* *San Luis Obispo County*



Legend

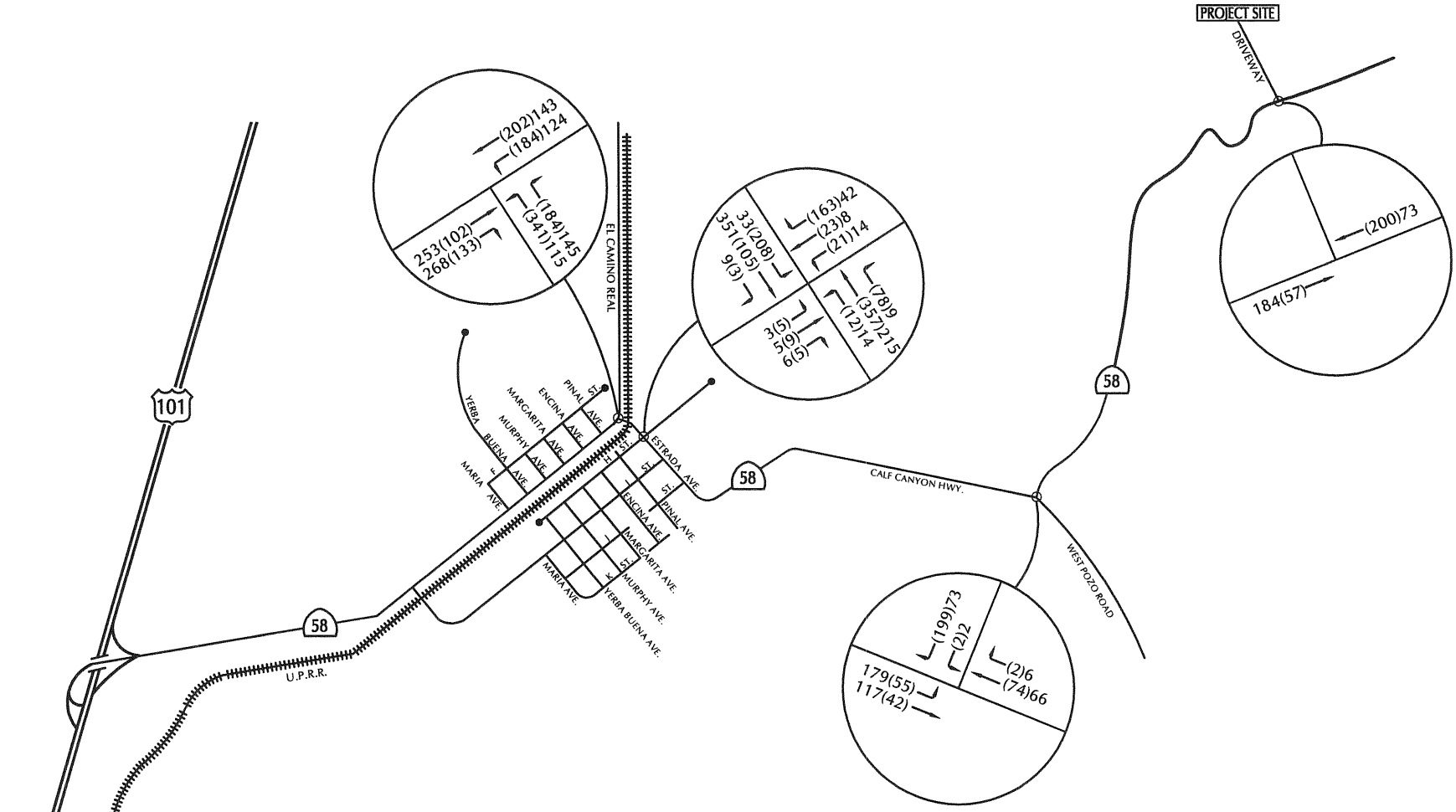
Source: Associated Transportation Engineers

1 inch = 50 feet

0 50 100

Feet

Figure 4.11-5	**Highway 58 Curve**
URS	*Oster/Las Pilitas Quarry EIR* *San Luis Obispo County*



LEGEND

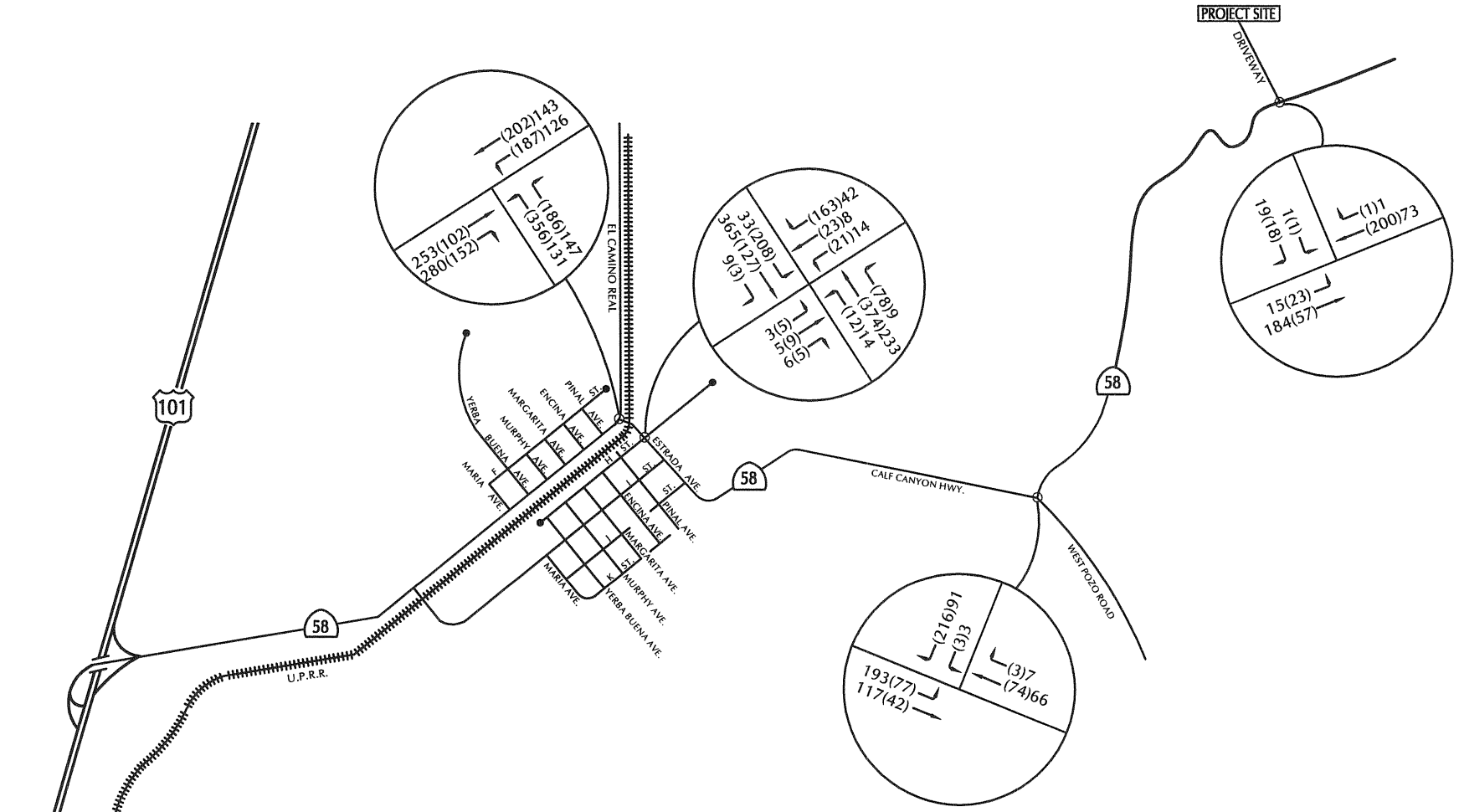
XX - (A.M.)P.M. Peak Hour Volume

N

NOT TO SCALE

Source: Associated Transportation Engineers
April 24, 2012

Figure 4.11-6	**2030 No Project Traffic Volumes**
URS	*Oster/Las Pilitas Quarry EIR San Luis Obispo County*



Source: Associated Transportation Engineers
April 24, 2012

Figure 4.11-7	**2030 and Project Traffic Volumes**
URS	*Oster/Las Pilitas Quarry EIR* *San Luis Obispo County*