

CHAPTER 5 TRANSPORTATION AND CIRCULATION

A *Traffic Impact Analysis* for the Livingston's Concrete Batch Plant was prepared by Kimley-Horn and Associates Incorporated (Kimley-Horn) under the direction of the Placer County Department of Public Works. The analysis identifies expected project impacts on the local circulation system. This Chapter incorporates the technical data, impact analysis, and mitigation measures from the *Traffic Impact Analysis*, which is provided as Appendix C to this Draft EIR.

5.1 ENVIRONMENTAL SETTING

The project site is approximately five acres in size and is located between Ophir Road and Interstate 80 (I-80) in Placer County, approximately one mile west of the Auburn city limits. The site fronts on Ophir Road and the southern property boundary is approximately 70 feet from the I-80 edge of pavement and 50 feet from the I-80 right-of-way. Access to the site would be provided by two driveways on the south side of Ophir Road. The eastern driveway would serve as the entrance to the facility, and the western driveway would serve as the exit.

Study Area Roadways and Intersections

The *Traffic Impact Analysis* focused on four roadway segments and four intersections near the project site. The roadways serving the project site are described below.

Interstate 80 is a six lane freeway located immediately south of the project site. I-80 is Northern California's major east-west freeway connecting the Sacramento region and the San Francisco Bay Area with the rest of the United States. Within the region, I-80 serves as a major commute route to job centers in south Placer County and Downtown Sacramento. It also serves interstate and interregional goods movement as well as tourist travel. Access to the project site from the freeway is provided by ramps at the Taylor Road/Ophir Road intersection and the Ophir Road interchange east of the project site (in the Auburn City limits). The I-80 segment within the project area carries approximately 85,000 vehicles per day.

Taylor Road is a two lane rural arterial roadway that runs east-west and provides a link to State Route 193 and I-80, as well as linkages between the towns of Loomis and Newcastle. Taylor Road parallels I-80 and terminates at the Ophir Road intersection. There are no signalized intersections on Taylor Road within the study area.

Ophir Road is a two lane minor arterial that also runs parallel with I-80. Ophir Road was once a segment of Highway 40/Lincoln Highway which was taken off the interstate system in California and relinquished to Placer County when I-80 was completed in the early 1960's. Ophir Road begins at the Taylor Road/Ophir Road/I-80 Off Ramp intersection and terminates at the I-80 interchange in the City of Auburn. Ophir Road primarily provides access to adjacent light industrial and heavy commercial uses and rural residential uses north of the project site, and carries approximately 2,800 vehicles per day.

Geraldson Road is a two lane local street that runs north-south and provides access to collector and arterial roadways. Geraldson Road is approximately one mile in length and extends from Sunset Lane, within the town of Ophir, to Ophir Road. There are no signalized intersections on Geraldson Road, which serves rural residential land uses.

The study area includes two unsignalized intersections and new intersections with Ophir Road at each proposed driveway. The intersections selected for analysis were based on direction given to Kimley-Horn by Placer County Department of Public Works staff. The following intersections listed below, and shown in *Figure 5-1*, were evaluated because they may be affected by the proposed project due to their proximity to the project site:

- Taylor Road/Ophir Road/I-80 Off-Ramp intersection;
- Ophir Road/Geraldson Road intersection;
- Ophir Road/Project Site Entrance; and
- Ophir Road/Project Site Exit

Level of Service Standards

Analysis of the study intersections is based on the concept of Level of Service. The Level of Service (LOS) of an intersection is a qualitative measure used to describe the operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Intersection LOS is determined using methods defined in the *Highway Capacity Manual, 2000* (HCM), and traffic analysis software.

All four of the study intersections are unsignalized (stop sign controlled). *Table 5.1* presents LOS definitions for unsignalized intersections, as defined in the HCM. These standards are based on an average total delay per vehicle for each controlled movement through the intersection.

The HCM includes procedures for analyzing all-way and two-way stop-controlled intersections. The two-way stop-controlled procedure defines LOS as a function of average control delay on the minor street approaches. The all-way stop-controlled procedure defines LOS as a function of average control delay with each intersection approach analyzed independently. The Taylor Road/Ophir Road/I-80 Off Ramp intersection is all-way stop-controlled and the Ophir Road/Geraldson Road intersection and the site driveways are two-way stop-controlled.

Table 5.1
LOS for Unsignalized Intersections

Level of Service	Control Delay per Vehicles (Seconds)	Description
A	0-10.0	Little or no delay
B	10.1-15.0	Short traffic delay
C	15.1-25.0	Average traffic delays
D	25.1-35.0	Long traffic delays
E	35.1-50.0	Very long traffic delays
F	>50.1	Extreme delays potentially affecting other traffic movements in the intersection

Source: Kimley-Horn,2006, from the *Highway Capacity Manual*

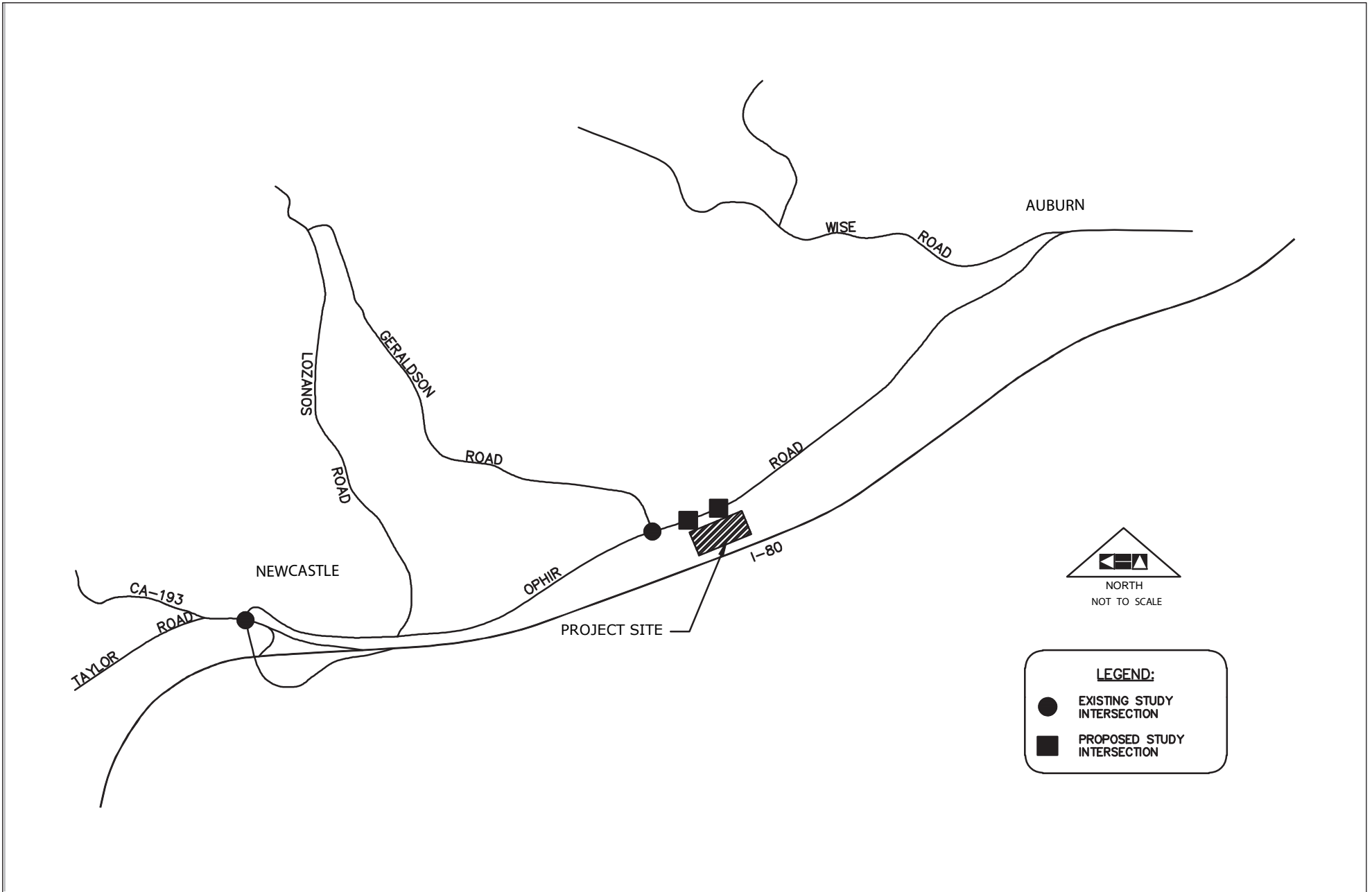


Figure 5-1

PROJECT LOCATION AND STUDY INTERSECTIONS
Livingston's Concrete Batch Plant
 Placer County, California



Source: Kimley-Horn and Associates, Inc.

Existing 2005 Levels of Service

Analysis of existing traffic conditions is based upon peak hour traffic counts conducted in August 2005. The baseline data for the analysis was compiled by performing a 24-hour traffic volume count on Ophir Road to determine the current Average Daily Traffic (ADT) for the roadway. This traffic count also determined the AM peak hour, which occurs between 7:15 a.m. and 8:15 a.m., and the PM peak hour, which occurs daily between 4:30 p.m. and 5:30 p.m. Turn movement volumes for the existing conditions, along with the corresponding lane configurations, are shown in *Figure 5-2*.

Table 5.2 presents the existing peak hour intersection operating conditions. This table indicates that both existing study area intersections currently operate at LOS A.

Table 5.2
Existing (2005) LOS

Intersection		Level of Service			
		AM Peak Hour		PM Peak Hour	
		Delay ¹	LOS	Delay	LOS
1	Taylor Road/Ophir Road/I-80 off ramp	8.5	A	9.9	A
2	Ophir Road/Geraldson Road	9.2	A	9.4	A

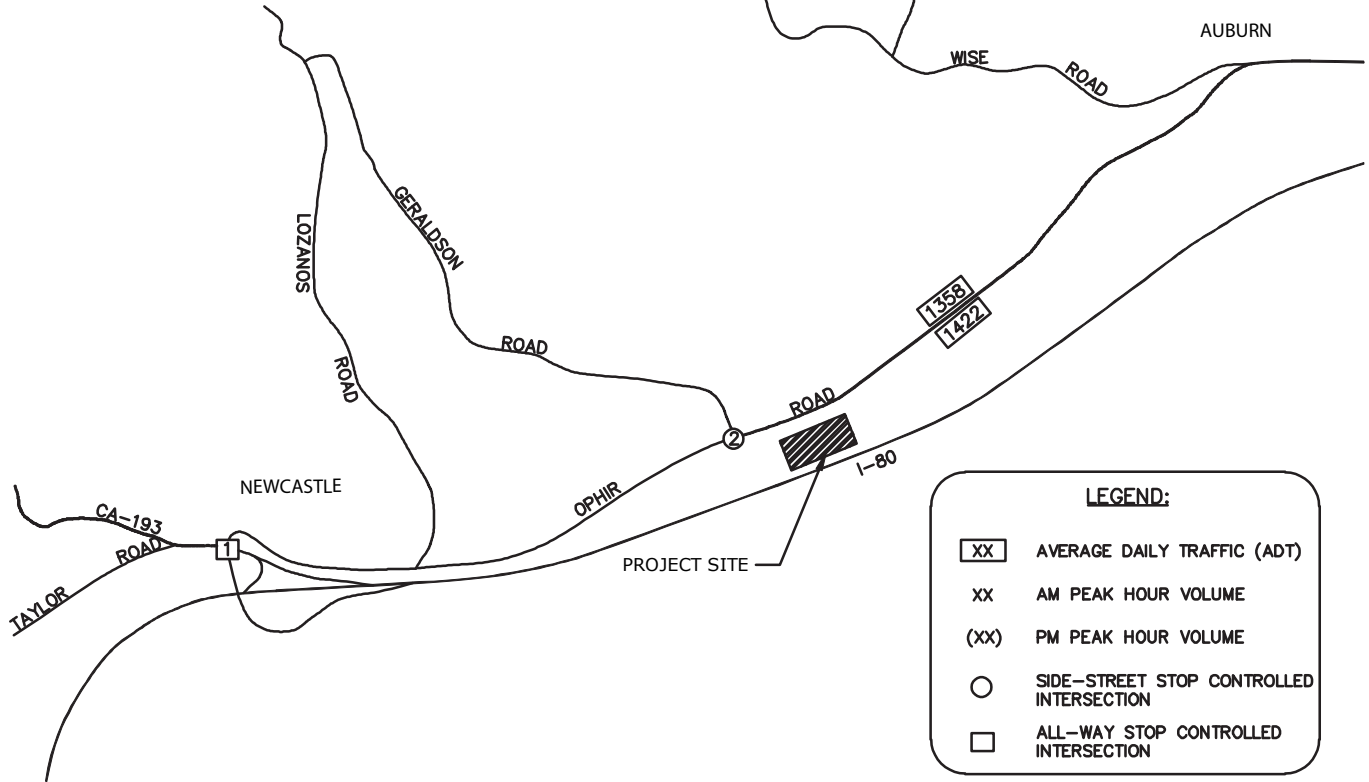
1. Delay is shown in units of seconds

Source: Kimley-Horn, 2006

Future 2025 Levels of Service

The future ADT volumes for the project area roadways were provided by Placer County. These volumes reflect future development and expected traffic growth throughout the County based on buildout of the *Placer County General Plan* and the projects in the Capital Improvement Program. The turn movement percentages from the existing traffic counts were applied to the future ADT to generate the future turn movement volumes at each of the intersection approaches. The future volumes were then adjusted to reflect no development at the project site to derive the year 2025 no project conditions. The peak hour intersection traffic volumes for the 2025 no project conditions are illustrated in *Figure 5-3*.

The study intersections were analyzed with the year 2025 no project traffic volumes. *Table 5.3* summarizes the future operating conditions without the proposed project. *Table 5.3* indicates that the Taylor Road/Ophir Road/I-80 Off Ramp intersection is expected to operate at LOS C in the AM peak hour and LOS F in the PM peak hour; and the Ophir Road/Geraldson Road intersection is expected to operate at LOS B during both peak hours.



LEGEND:

- XX AVERAGE DAILY TRAFFIC (ADT)
- XX AM PEAK HOUR VOLUME
- (XX) PM PEAK HOUR VOLUME
- SIDE-STREET STOP CONTROLLED INTERSECTION
- ALL-WAY STOP CONTROLLED INTERSECTION

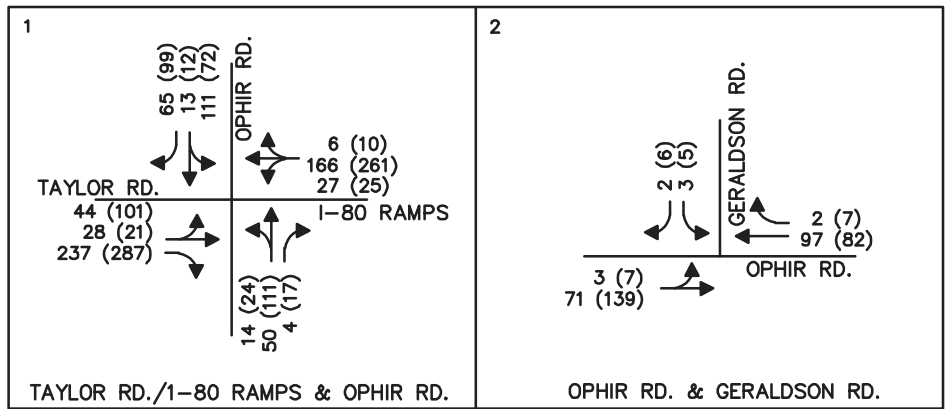


Figure 5-2

EXISTING CONDITIONS
Livingston's Concrete Batch Plant
 Placer County, California



Source: Kimley Horn & Associates, Inc.

Table 5.3
Future (2025) LOS – No Project

Intersection		Level of Service			
		AM Peak Hour		PM Peak Hour	
		Delay ¹	LOS	Delay	LOS
1	Taylor Road/Ophir Road/I-80 off ramp	16.5	C	76.9	F
2	Ophir Road/Geraldson Road	10.3	B	10.7	B

1. Delay is shown in units of seconds

Source: Kimley-Horn, 2006

Planned Improvements

According to the 2027 Placer County Regional Transportation Plan (RTP), there are no planned, approved, or funded roadway improvements in the short term (10 year horizon) or in the long range plan (20 years and beyond) within the vicinity of the project site or near the intersections analyzed in this chapter.

Existing Bicycle/Pedestrian Facilities

The Placer County Bikeways Master Plan, adopted by the Placer County Transportation Planning Agency (PCTPA) in 1988, provided a ten year policy guide for locations and types of bikeways, for the western portion of Placer County. This plan has since been supplemented by the Regional Bikeway Plan, prepared by PCTPA, and approved by the County Board of Supervisors in September 2002. The overall goal of the plan is to promote safe, convenient, and enjoyable cycling by establishing a comprehensive system of bikeways that link the communities of Placer County. Twelve objectives and policies support this overall goal, and several closely align with those of the 2027 Placer County RTP.

Non-motorized transportation in southwestern Placer County is composed of local and regional bikeways and trails that include on-street and off-street facilities that are classified into three types:

- Class I Bikeway (Bike Path) provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with crossflow minimized;
- Class II (Bike Lane) provides a striped lane for one-way bike travel on a street or highway; and
- Class III Bikeway (Bike Route) provides for shared use with pedestrians or motor vehicle traffic.

Currently there are Class II bike lanes on Ophir Road, and Ophir Road is considered a regional bikeway according to the Placer County Bikeways Master Plan. There are no pedestrian facilities, such as sidewalks, in the project area at this time.

5.2 REGULATORY SETTING

This section presents County policies and regulations, and Caltrans standards that will be used to evaluate the effects this project would have on transportation and circulation in the project area.

Local Regulations

Placer County General Plan

The *Placer County General Plan* Transportation and Circulation Element contains goals and policies governing development within Placer County. The policies establish minimum right-of-way criteria, LOS standards, parking requirements, and mechanisms for payment of “fair share” contributions to fund construction of needed improvements. The goals listed below summarize the priorities of the General Plan related to transportation and circulation, and Appendix B of this Draft EIR provides an evaluation of the project’s consistency with applicable General Plan policies.

- Goal 3.A To provide for the long-range planning and development of the county’s roadway system to ensure the safe and efficient movement of people and goods.
- Goal 3.D To provide a safe, comprehensive, and integrated system of facilities for non-motorized transportation.

Placer County Improvement Standards

Roadway improvements within Placer County must conform to a set of standard plans contained in the County’s *Land Development Manual* which details County standards for pavement width, lighting, drainage, sewer, and other roadside facilities. The proposed driveways and new facilities fronting on Ophir Road must meet or exceed these standards.

Placer County Capital Improvement Program

Placer County’s Capital Improvement Program (CIP) prescribes the phasing of roadway improvements that are needed to meet the County’s LOS standards over a 20 year period. The County has established eleven benefit districts, each of which has a separate CIP and associated traffic impact fee. The CIP for each district identifies roadway improvements and facilities needed as a result of future development and provides details on funding sources for each project, including amounts to be collected through the Traffic Impact Fee Program. Traffic impact fees are based on Dwelling Unit Equivalents and are calculated pursuant to the requirements expressed in Sections 15.28.030 and 15.28.040 of the Placer County Code. Fees are charged on all new development within a district, regardless of type or location, and the amount of each fee is indexed to construction costs and adjusted annually. The CIP and fees are periodically updated as conditions change to account for approvals of major land use projects and reflect completed roadway improvements or updates to local community plans.

State Regulations

California Department of Transportation

The California Department of Transportation (Caltrans) *Guide for the Preparation of Traffic Impact Studies* (Caltrans, 2002) provides overall statewide guidance on procedures and standards to be used in preparing traffic studies. The guide sets the statewide target LOS as LOS C, but recognizes that achieving this standard is not feasible in all locations. The guide indicates that if a facility is operating at less than the target LOS, the existing LOS should be maintained.

As part of regulating the operating conditions for each state highway, Caltrans must approve any specific development activity that may physically affect a state facility prior to the

implementation of any improvement. For example, a developer must obtain an encroachment permit from Caltrans before constructing any highway improvements, realigning any segment of a state highway, or installing new driveways or intersections on a State highway. The proposed Livingston's Concrete Batch Plant project is not expected to physically affect any state facility and thus would not require an encroachment permit.

5.3 IMPACTS

Methodology

Project Trip Generation

Trip generation for a proposed project is typically derived using data included in *Trip Generation*, published by the Institute of Transportation Engineers (ITE). However, this manual does not currently contain an appropriate comparable land use for the proposed concrete batch plant. Therefore, trip generation rates for the proposed project were derived from data collected at other concrete batch plants owned and operated by Livingston's Concrete Service Incorporated.

Both AM and PM peak hour traffic counts were conducted at other Livingston's Concrete batch plants in the greater Sacramento area. This data included the number of vehicular trips (including trucks) in and out of the site, as well as the size and capacity of each facility, as summarized in *Table 5.4*. Counts included trips for employees, vehicles delivering raw materials, and concrete delivery trucks. The data obtained in the driveway counts were used to derive the 70th percentile trips for both AM and PM peak hours. For this analysis, it was assumed the sample site data is normally distributed.

Table 5.4
Sample Site Trip Generation

Sample Site	Output Capacity (yd ³)	AM Peak Hour					PM Peak Hour				
		Total Trips	IN		Out		Total Trips	IN		Out	
			%	Trips	%	Trips		%	Trips	%	Trips
North Highlands	343	25	60	15	40	10	9	22	2	78	7
Rancho Cordova	445	17	65	11	35	6	9	33	3	67	6
Lincoln	600	26	50	13	50	13	13	38	5	62	8

Source: Kimley-Horn, 2006

Based on the data collected from these three sites, the 70th percentile trip generation for the proposed project is expected to be 26 AM peak hour trips and 12 PM peak hour trips, as indicated in *Table 5.5*. *Table 5.5* also indicates the assumed percentage of vehicles entering and leaving the project site. These percentages are weighted averages derived from the sample site data shown in *Table 5.4*; the weighted averages are based on daily output capacity (300 cubic yards) of the proposed plant relative to the sample sites.

Table 5.5
Project Related Trip Generation

Total Trips	AM Peak Hour				PM Peak Hour				
	IN		Out		Total Trips	IN		Out	
	%	Trips	%	Trips		%	Trips	%	Trips
26	57	15	43	11	12	32	4	68	8

Source: Kimley-Horn, 2006

Project Trip Distribution

The expected distribution of project traffic was developed based upon existing traffic patterns in the study area and characteristics of the proposed project. The expected distribution of project-generated AM and PM peak hour traffic volumes to the study area intersections is illustrated in Figure 5-4.

Significance Criteria

Roadway System

The roadway impact significance criteria for the project area outlined below were developed based on the applicable policies of the public agencies whose roadways may be affected by the proposed development.

Based on the LOS policies discussed in the regulatory setting section, an impact to the roadway system is considered significant if implementation of the proposed project would meet the following criteria.

Placer County Roadways and Intersections

- Cause the existing or cumulative LOS for study locations not within one-half mile of direct access to a state highway to deteriorate from LOS C (or better) to LOS D (or worse); or cause the existing or cumulative with-project LOS for study locations within one-half mile of direct access to a state highway to deteriorate from LOS D (or better) to LOS E (or worse).
- Exacerbate any existing or cumulative LOS D (or worse) conditions for study locations not within one-half mile of direct access to a state highway; or exacerbate any existing or cumulative LOS E (or worse) conditions for study locations within one-half mile of direct access to a state highway.

Caltrans Facilities

- Cause the existing or cumulative level of service for study locations to deteriorate from LOS C (or better) to LOS D (or worse).
- Exacerbate any existing or cumulative LOS D (or worse) conditions for study locations by adding traffic to a freeway/highway segment, ramp terminal intersection, or ramp junction influence area.

Bicycle and Pedestrian System

For the purposes of the EIR, an impact to the bicycle and pedestrian system is considered significant if implementation of the proposed project would:

- Disrupt existing or interfere with planned bicycle or pedestrian facilities.
- Create an inconsistency with the bikeway or pedestrian policies or standards of plans adopted by the jurisdictions within the study area.

Project Impacts

IMPACT 5.1:	Impacts Under Existing (2005) Plus Project Conditions
SIGNIFICANCE:	Less than Significant
MITIGATION:	No Mitigation Necessary
Proposed:	None
Significance After Proposed Mitigation:	Less than Significant
Recommended:	None
RESIDUAL SIGNIFICANCE:	Less than Significant

The peak hour traffic volume expected to be generated by the project was added to the existing traffic volumes. The subsequent LOS was determined at the two existing intersections (Taylor Road/Ophir Road/I-80 Off Ramp and Ophir Road/Geraldson Road) and the proposed project site driveways (east entrance and west exit). *Table 5.6* provides a summary of the existing and proposed LOS at the studied intersections. *Figure 5-5* identifies the AM and PM existing-plus-project traffic volumes at the study area intersections.

Table 5.6
Existing (2005) and Existing Plus Project LOS

Intersection	Existing (2005) Without Proposed Project				Existing (2005) Plus Proposed Project			
	AM		PM		AM		PM	
	Delay ¹	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Taylor Road/Ophir Road/I-80 off ramp	8.5	A	9.9	A	8.5	A	9.9	A
Ophir Road/Geraldson Road	9.2	A	9.4	A	9.3	A	9.4	A
Ophir Road/West Driveway	N/A	N/A	N/A	N/A	10.1	B	10.2	B
Ophir Road/East Driveway	N/A	N/A	N/A	N/A	0.5	A	0.2	A

1. Delay is calculated in seconds
Source: Kimley-Horn, 2006

The intersection analysis shows all of the study area intersections operating at LOS B or above under the existing plus project scenario. Because all intersections would operate at acceptable LOS, the proposed project would have a less than significant impact on traffic circulation during operation in the near term.

IMPACT 5.2:	Impacts Under Future (2025) Plus Project Conditions
SIGNIFICANCE:	Potentially Significant
MITIGATION:	
Proposed:	None
Significance After Proposed Mitigation:	Potentially Significant
Recommended:	Mitigation Measure 5.2a
RESIDUAL SIGNIFICANCE:	Less than Significant

The peak hour traffic volume expected to be generated by the project was added to future traffic volumes and the subsequent LOS was determined at the two existing intersections (Taylor Road/Ophir Road/I-80 Off Ramp and Ophir Road/Geraldson Road) and the proposed project site driveways (east entrance and west exit). *Table 5.7* provides a summary of the future LOS at the studied intersections with and without the proposed project. *Figure 5-6* identifies the AM and PM future plus project traffic volumes at each study area intersection.

Table 5.7
Future (2025) Plus Proposed Project Level of Service

Intersection	Future (2025) Without Proposed Project				Future (2025) Plus Proposed Project			
	AM		PM		AM		PM	
	Delay ¹	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Taylor Road/Ophir Road/I-80 off ramp	16.5	C	76.9	F	16.8	C	77.6	F
Ophir Road/Geraldson Road	10.3	B	10.7	B	10.4	B	10.8	B
Ophir Road/West Driveway	N/A	N/A	N/A	N/A	11.3	B	12.1	B
Ophir Road/East Driveway	N/A	N/A	N/A	N/A	0.3	A	0.1	A

1. Delay is calculated in seconds
Source: Kimley-Horn, 2006

The intersection analysis shows all of the study area intersections operating at LOS C or above under the future and future-plus-project conditions during the AM peak hour. The Taylor Road/Ophir Road/I-80 Off Ramp intersection is projected to operate at LOS C in the AM peak hour both with and without the project. During the AM peak hour, the project would result in an increase in delay of 0.10 seconds. This is considered a less than significant impact.

The Taylor Road/Ophir Road/I-80 Off Ramp intersection is projected to operate at LOS F in the future with and without the proposed project during the PM peak hour. The project would increase delay by 0.07 seconds at this intersection during the PM peak hour. Since the proposed project may exacerbate future traffic conditions at a study location within one-half mile of direct access to a state highway that would already be functioning at an unacceptable LOS, the project is considered to have a potentially significant impact on this intersection. *Mitigation Measure 5.2a* will reduce this impact to a less than significant level with the provision of either a traffic signal or a roundabout (see discussion below).

Traffic Signal Warrant Analysis

A planning level assessment of the need for signalization for the intersection of Taylor Road/Ophir Road/I-80 Off Ramp was performed based on the peak hour warrant methodologies in the *Manual on Uniform Traffic Control Devices (MUTCD)*, 2003 Edition. As reported in the *Traffic Impact Analysis*, the warrants are not met under year 2005 conditions with or without the project but they are met under future conditions both with and without the project.

For the peak hour traffic signal warrant, the combination of major street volume and the highest side street volume must satisfy specific volume criteria (MUTCD, 2003 edition). Given the Taylor Road/I-80 Off Ramp major street volumes, specific minor street volume thresholds for Ophir Road must be satisfied to warrant signalization at this intersection. The major street volumes for the Taylor Road/I-80 Off Ramp during the AM and PM peak hours, traffic volume thresholds, and projected traffic volumes for all scenarios are shown in *Table 5.8*. As shown in the table, the proposed project would generate four AM peak hour trips on the major street and five AM peak hour trips on the minor street approach. Additionally, the project would generate one PM peak hour trip on the major street and four PM peak hour trips on the minor street approach. *Table 5.8* also indicates that the peak hour signal warrant would be satisfied without the project, and the project would contribute incrementally to the need for a signal at this intersection. As described in *Mitigation Measure 5.2a*, the project would be responsible for paying a fair share amount towards the construction of this signal, or other improvement at this intersection.

Table 5.8
Traffic Signal Warrant Analysis for the Taylor Road/Ophir Road/I-80 Off Ramp Intersection

Scenario	Major Street Volume (vph ^{1,2})	Minor Street Approach Volume (vph ³)	Minor Street Approach Volume Threshold (vph)	Warrant Satisfied
2025 AM Peak-Hour	1060	394	349	Yes
2025 PM Peak-Hour	1472	382	208	Yes
2025 Plus Project AM Peak-Hour	1064	399	347	Yes
2025 Plus Project PM Peak-Hour	1473	386	208	Yes

1. Units expressed as Vehicles Per Hour

2. Major Street Volume is equal to the sum of both major street approaches

3. Minor street approach with the higher volume is evaluated

Source: Kimley-Horn, 2006

Roundabout Evaluation

As shown in *Table 5.8* and discussed above, the intersection of Taylor Road/Ophir Road/I-80 Off Ramp is anticipated to warrant signalization by the year 2025. The project-generated increase in the major street (Taylor Road/I-80 Off Ramp) traffic volume and the minor street (Ophir Road) traffic volume would contribute to potentially congested traffic conditions at this intersection. The installation of a roundabout was qualitatively evaluated in the *Traffic Impact Analysis* for this intersection as a potential option of mitigating anticipated congestion due to traffic volume increases. A roundabout was evaluated as an option for mitigating future conditions of the intersection because the County determined that:

- A roundabout could minimize vehicle queuing of motorists waiting to head east and west on I-80; and
- Preliminary analysis indicates that a single-lane roundabout would have adequate capacity to accommodate future traffic volumes.

The installation of a roundabout at the intersection of Taylor Road/Ophir Road/I-80 Off Ramp could be considered a future potential operational improvement to mitigate for the potentially significant impact of increasing traffic volumes at this intersection in the future. Signalization of this intersection is projected to be warranted in the future, based on the peak hour signal warrant, and it may be advantageous to consider a roundabout as a traffic control device due to the anticipated LOS F condition. The specific improvement design would be determined by Placer County through amendment to the CIP. A roundabout at this intersection would require design characteristics conducive to the vehicles anticipated to frequent the project area (i.e., trucks/tractor trailers). A roundabout would also require design characteristics (e.g., horizontal and vertical geometrics, signing, lighting) consistent with State, County, and industry standards. The project applicant would be required to contribute a fair share payment towards construction of the identified improvement through implementation of *Mitigation Measure 5.2a*.

IMPACT 5.3:	Impacts To Existing And Planned Bicycle/Pedestrian Facilities
SIGNIFICANCE:	Less than Significant
MITIGATION:	
Proposed:	None
Significance After Proposed Mitigation:	Less than Significant
Recommended:	Mitigation Measure 5.3a
RESIDUAL SIGNIFICANCE:	Less than Significant

As noted above, Ophir Road is considered a regional bikeway according to the Placer County Bikeways Master Plan and currently supports some sections of a Class II bike lane. According to the 2027 RTP, there are no new planned, approved, or funded bikeways or pedestrian facilities adjacent to the project site or near the studied intersections. There may be a short term, less than significant, disturbance to cyclists heading eastbound on Ophir Road during construction of the entrance and exit driveways for the project site. Implementation of *Mitigation Measure 5.3a* would provide a Class II Bikeway along the project site's Ophir Road frontage. This would ensure that the project would have a less than significant impact on bicycle usage within the project area.

IMPACT 5.4:	Increase In Traffic Hazards From Design Features
SIGNIFICANCE:	Potentially Significant
MITIGATION:	
Proposed:	None
Significance After Proposed Mitigation:	Potentially Significant
Recommended:	Mitigation Measure 5.4a
RESIDUAL SIGNIFICANCE:	Less than Significant

The proposed project would have two driveways that intersect Ophir Road, and use of these driveways would increase left turn movements on Ophir Road. The proposed exit driveway would be approximately 150 feet east of the Geraldson Road centerline. Concrete trucks turning left out of the project site may occasionally conflict with motorists turning left onto Ophir Road from Geraldson Road. According to the *Traffic Impact Analysis*, the current left turn volume for Geraldson Road is low and these types of left turn conflicts would be very infrequent.

There are two existing driveways on the north side of Ophir Road proximate to the project site. Concrete trucks exiting the project site and turning left across Ophir Road may occasionally conflict with motorists entering or exiting the driveways on the north side of Ophir Road. However, Kimley-Horn has indicated that as these driveways serve a single residence, traffic accessing these driveways during the peak hours would be low (one or two trips in the peak hour), thus any potential delay in traffic movement in or out of these driveways is expected to be infrequent and less than significant (Pyburn, pers. comm.).

The number of left turn movements across Ophir Road as vehicles enter the proposed Batch Plant site could be a potentially significant impact on the traffic circulation in the area if mitigation is not incorporated. In order to reduce potential impact for conflicting left turn movements to a less than significant level, *Mitigation Measure 5.4a* requires provision of a dedicated left turn pocket on Ophir Road to provide access to the proposed entrance driveway.

IMPACT 5.5:	Construction Impacts On Traffic Patterns
SIGNIFICANCE:	Potentially Significant
MITIGATION:	
Proposed:	None
Significance After Proposed Mitigation:	Potentially Significant
Recommended:	Mitigation Measure 5.5a
RESIDUAL SIGNIFICANCE:	Less than Significant

Construction of the concrete batch plant is not expected to require any day or night time closures of any of the roadways near the project site. In addition, there are no utility or infrastructure improvements that would require substantial work within the Ophir Road traveled way. The project would include widening of Ophir Road, which would have a short-term impact on traffic patterns on this roadway. The work is expected to primarily occur in the

area of the existing paved bicycle lane on the south side of Ophir Road, but would also temporarily affect the existing traveled way. To mitigate this potential impact, a County Traffic Engineer shall review the construction signage and traffic control devices proposed for use during this construction, as required by *Mitigation Measure 5.5a*. The County's engineer will require that proper construction staging and traffic control measures be incorporated into the Improvement Plans in order to ensure the traveling public is not adversely affected by the proposed construction.

5.4 MITIGATION MEASURES

Impacts Under Existing (2005) Plus Project Conditions

No mitigation measures are necessary for this impact.

Impacts Under Future (2025) Plus Project Conditions

Proposed Mitigation

No mitigation measures are proposed.

Recommended Mitigation

Mitigation Measure 5.2a: The project applicant shall pay their proportionate share of the total cost for future improvements to the Taylor Road/Ophir Road/I-80 Off Ramp intersection. The proportionate share shall be calculated using the following formula:

$$P = T/(T_b - T_e)$$

where P is the proportionate share percentage, T is the project-generated peak hour trips, T_b is the forecasted traffic volume on the State highway at buildout of the General Plan, and T_e is the existing traffic volume plus traffic generated by approved projects that have not yet been constructed. For this location, the formula is as follows:

$$P = 13/(1,595 - 765)$$

$$P = 1.6\%$$

The proportionate share shall be collected by the Department of Public Works prior to the issuance of a building permit, subject to future review and approval by Placer County of the traffic control device (conventional traffic signal or roundabout).

Impacts to Existing and Planned Bicycle/Pedestrian facilities

Proposed Mitigation

No mitigation measures are proposed.

Recommended Mitigation

Mitigation Measure 5.3a: The project Improvement Plans shall delineate a Class II bikeway along the project's frontage on Ophir Road pursuant to the *Placer County Bikeways Master Plan*. The location, width, alignment, and surfacing of the bikeway shall be subject to Department of Public Works/Design Review Committee review and approval prior to the approval of Improvement Plans.

Increase Traffic Hazards from Design Features

Proposed Mitigation

No mitigation measures are proposed.

Recommended Mitigation

Mitigation Measure 5.4a: The project shall provide for construction of a Dedicated Left-Turn Lane on Ophir Road to allow trucks to turn left into the project site entrance driveway. This lane shall include a shadow area along Ophir Road west of the driveway as required per the Highway Design Manual.

Construction Impacts on Traffic Patterns

Proposed Mitigation

No mitigation measures are proposed.

Recommended Mitigation

Mitigation Measure 5.5a: The applicant shall submit, for review and approval, a striping and signing plan with the project Improvement Plans. The plan shall include all on- and off-site traffic control devices and shall be reviewed by the County Traffic Engineer. A construction signing plan shall also be provided with the Improvement Plans for review and approval by the County Traffic Engineer.