

5.12 TRANSPORTATION AND CIRCULATION

This section addresses potential impacts of the proposed asphaltic concrete plant and LUO/LUE amendment to transportation and circulation. This analysis is based on a revised Traffic Study prepared by Associated Transportation Engineers (ATE), dated December 2, 2004 (see Appendix H), a memorandum from Dan Takacs of Higgins Associates, dated October 26, 2004, and a letter from ATE dated June 6, 2005.

5.12.1 Environmental Setting

5.12.1.1 Street Network

The circulation system adjacent to the project site is comprised of U.S. Highway 101, State Route 166 (Cuyama Highway) and Hutton Road which serve as the major arterials for the area, collector and local streets. See Figure 5.12-1. The following text provides a brief discussion of the primary components of the study-area network.

U.S. Highway 101, located directly east of the project site, is a multi-lane freeway serving the Pacific Coast between Los Angeles and San Francisco. Primary access to U.S. Highway 101 in the vicinity of the project site is provided via the State Route 166 (Cuyama Highway) interchange. The U.S. Highway 101/State Route 166 interchange is unsignalized at the northbound and southbound ramp intersections. A Project Study Report (PSR) for the widening of the Santa Maria River Bridge has been completed. Widening of the bridge is a Caltrans improvement project that has been considered for many years. The Caltrans Transportation Concept Report was approved on October 19, 2001. The bridge will be widened from 4 to 6 lanes to maintain continuity of Highway 101. The Santa Barbara County Association of Governments and the San Luis Obispo County Council of Governments executed a memorandum of understanding for the Highway 101/Santa Maria River Bride widening project.

State Route 166 (Cuyama Highway), located north of the project site, is an east-west roadway within the study area. State Route 166 extends east from U.S. Highway 101 to the Kern County. In the study area the highway is primarily a 2-lane roadway. The U.S. Highway 101/Cuyama Highway interchange was built to Caltrans standards; truck use was factored into the design of the freeway ramps.

Hutton Road, located directly east of the site, is a 2-lane east-west roadway. Hutton Road extends north to the Nipomo area, where it becomes Joshua Road. Hutton Road will provide direct access to the project site. Hutton Road, south of Cuyama Lane, is scheduled to be improved to County urban standards.

Cuyama Lane, located directly north of the site, is a 2-lane east-west roadway. Cuyama Lane extends from the U.S. Highway 101 southbound ramps terminating in a cul-de-sac.

Tefft Street is approximately 3.5 miles northwest of the asphalt plant site and intersects Highway 101 at an interchange. Because Tefft Street is not a proposed haul route, the asphalt plant will have no effect on that street. In the event local asphalt deliveries are needed for road improvements within the Tefft Street area, those effects would occur with or without the proposed asphalt plant and are effects that should properly be attributed to the road improvement project.

5.12.1.2 Roadway Operations

The following section reviews annual average daily traffic (ADT) volumes and roadway operations in the study area. The operational characteristics of the study area roadways are analyzed based on a set of standard roadway design capabilities. In rating a roadway’s operating condition, “Levels of Service” (LOS) A through F are used. LOS A and LOS B represent primarily free-flow operations, LOS C represents stable conditions, LOS D nears unstable operations with restrictions on maneuverability within traffic streams, LOS E represents unstable operations with maneuverability very limited, and LOS F represents breakdown or forced flow conditions. LOS C is considered acceptable for rural County roadways.

Existing annual ADT volumes for the street segments in the vicinity of the project site were obtained from data collected by ATE and Caltrans (2001 Traffic Volumes). Table 5.12-1 lists the existing ADT for study area roadways and summarizes their operations.

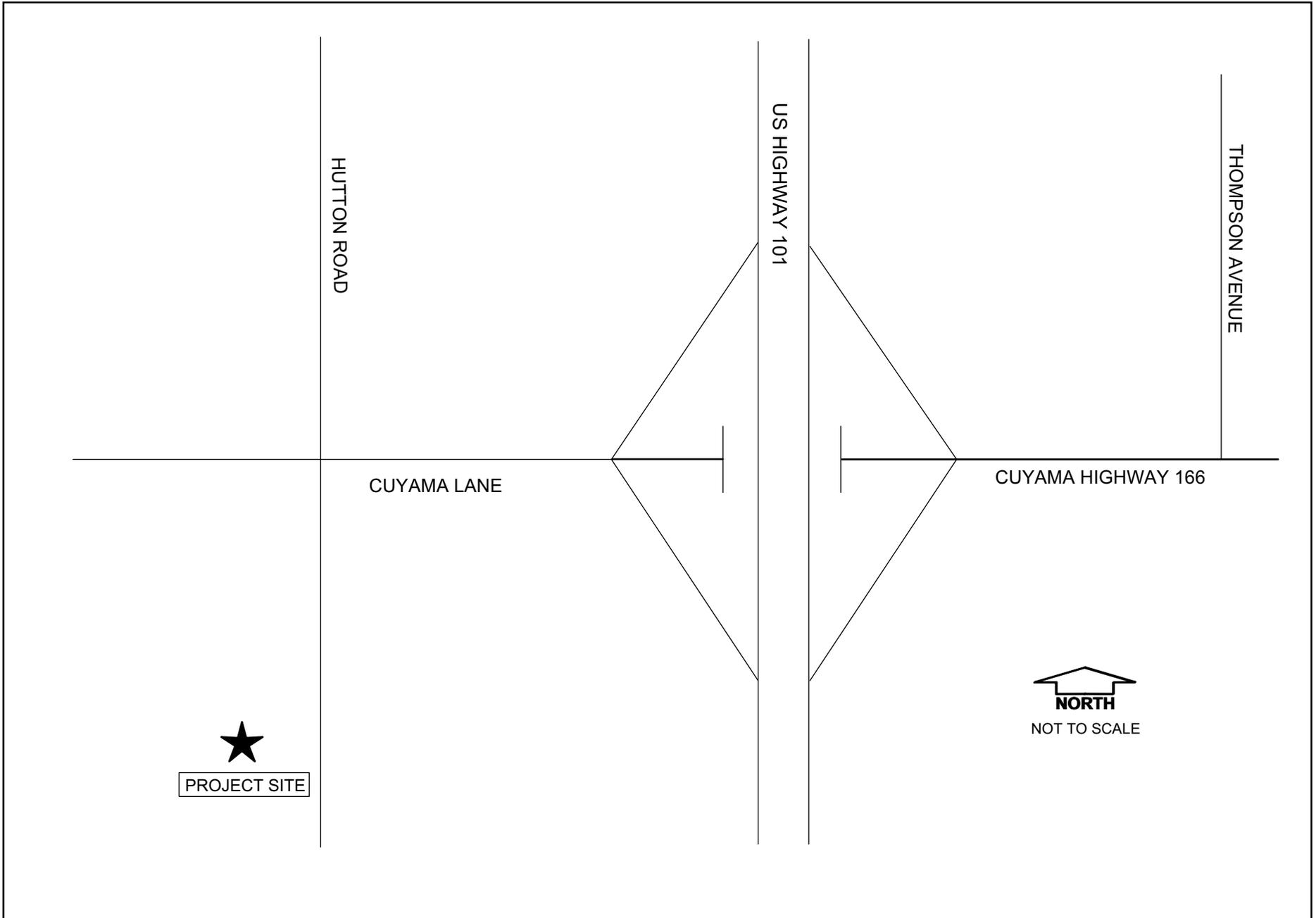
Table 5.12-1. Existing Roadway Conditions

Roadway	Roadway Type	ADT	LOS
U.S. Highway 101			
-north of Cuyama Highway	4-Lane Freeway	51,000	LOS C
-south of Cuyama Highway	4-Lane Freeway	62,000	LOS C
Hutton Road			
-north of Cuyama Lane	2-Lane Roadway	8,000	LOS A
-south of Cuyama Lane	2-Lane Roadway	1,200	LOS A
Cuyama Lane			
-east of Hutton Road	2-Lane Roadway	12,300	LOS C
-east of U.S. Highway 101	2-Lane Roadway	2,400	LOS A

The data presented in Table 5.12-11 indicate that the study area roadway segments currently operate in the LOS A-C range based on San Luis Obispo County and Caltrans roadway design capabilities. The freeway segments currently operate in the LOS A-C range based on lane capacity as defined in the Highway Capacity Model.

5.12.1.3 Intersection Operations

Existing levels of service for the study area intersection were calculated using the Highway Capacity Manual unsignalized methodology. Table 5.12-2 lists the existing intersection level of service for the three study area intersections. The calculations used the Highway Capacity Manual default values for truck percentage. ATE tested this assumption by changing the percentage to 30% and there were no substantive changes in the result.



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Table 5.12-2. Existing Intersection Operations

Intersection	Control	A.M. Peak Hour	P.M. Peak Hour
		Delay-LOS	Delay-LOS
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left-through movement: northbound approach:	STOP-sign	7.8 sec – LOS A 11.1 sec – LOS B	7.7 sec – LOS A 13.2 sec – LOS B
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left-through movement: southbound approach:	STOP-sign	8.9 sec – LOS A 16.5 sec – LOS C	8.6 sec – LOS A 18.6 sec – LOS C
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	STOP-sign	7.6 sec – LOS A 7.3 sec – LOS A 8.8 sec – LOS A 13.9 sec – LOS B	8.0 sec – LOS A 7.3 sec – LOS A 9.0 sec – LOS A 15.6 sec – LOS C

The data presented in Table 5.12-2 indicates that the unsignalized study area intersections currently operate in the LOS A-C range during the A.M. peak hour and P.M. peak hour periods.

5.12.2 Impact Analysis

5.12.2.1 Thresholds of Significance

San Luis Obispo County policy states that the acceptable level of service is LOS C for rural roadways and intersections. Mitigation measures are required for roadway and intersection facilities which operate at less than LOS C. The freeway threshold is based upon the requirements of the Congestion Management Program, which is LOS E. Traffic safety is according to Caltrans design standards. If a road or intersection were not designed to Caltrans standards, than this would result in a significant traffic safety impact.

5.12.2.2 Asphalt Plant Impacts

Asphaltic Concrete Plant Trip Generation

For the purposes of estimating the number of trips that would be generated by the asphaltic concrete plant, ATE used operations data with operations occurring in two 10 hour shifts between 6:00 A.M. and 4:00 P.M. and between 7:00 P.M. and 5:00 A.M. Monday through Saturday. Nighttime operations are proposed for a maximum of 80 days per calendar year and will be limited to government public works projects, or projects that result from a natural emergency, such as a flood, earthquake. Truck trips will occur in two shifts (between 7:00 A.M. and 3:00 P.M. and between 8:00 P.M. and 4:00 A.M.) The plant will be operated with 6 employees per shift. The operation level assumed for the asphaltic concrete plant is based upon the following criteria. During a peak operational day, there could be a maximum of up to 240 product delivery truck loads from the asphalt plant, in addition to 216 aggregate delivery truck loads and 14 asphaltic oil delivery truck loads to the asphalt plant. On an average operational day, there could be up to 53 product delivery truck loads from the asphalt plant, in addition to 45 aggregate delivery truck loads and 3 asphaltic oil delivery truck loads to the asphalt plant. The hourly operation is constrained by the plant capacity and would not change on peak operation day. During the typical 7:00 – 9:00 A.M. peak hour commute period the

following represents the maximum truck operations that potentially could occur during both the peak operational day and an average operational day:

- Product Trucks: 14 out and 14 in
- Aggregate Trucks: 12 out and 12 in
- Asphaltic Oil Trucks: 1 out and 1 in
- Employees: 6 per shift – all in place prior to the 7:00 A.M. peak hour

There are no truck trips scheduled during the 4:00 – 6:00 P.M. peak hour commute period. The plant is down during this time which allows for shift changes to be completed. The plant’s peak day and average day trip generation is shown in Table 5.12-3. The peak operation day is attained by higher production during the non-peak hours of the adjacent street system. The data shows that the ADT is the only difference between the average and the peak operation.

Table 5.12-3. Asphaltic Concrete Plant Trip Generation

Operations	ADT	A.M. Peak Hour	P.M. Peak Hour				
		Enter	Exit	Total	Enter	Exist	Total
Asphalt Plant (Peak Day)	964	27	27	54	0	6*	6*
Asphalt Plant (Average Day)	226	27	27	54	0	6*	6*

Note: *denotes employee trips

There would be minor miscellaneous (2-3) trips per week associated with the operation; however, these trips would not be on an every day basis and would generally occur during the non-peak hours. These miscellaneous trips would have little, if any, impact to the study-area roadway and intersections.

Project Trip Distribution and Assignment

Trip distribution for the asphaltic concrete plant was developed for the asphalt plant based on the peak hour operational data provided by the applicant and verified by ATE. ATE’s Traffic Study is inherently a worst-case analysis based upon Peak Hourly Production Levels. The asphaltic concrete plant will make and receive deliveries to the north and south via the U.S. Highway 101/State Route 166 interchange. Asphaltic concrete plant-generated traffic was assigned to the study area street system based upon the project description. In addition to the asphaltic concrete deliveries shown in the project description, there are aggregate and asphaltic oil deliveries. These change the overall distribution percentages slightly from those shown for asphaltic concrete delivery percentages contained in the project description.

Impact TRA-1: Operation of the proposed asphaltic concrete plant would affect roadways within the project area.

Discussion: Roadway volumes for the existing and existing + asphaltic concrete plant peak day scenarios are listed in Table 5.12-4.

Table 5.12-4. Existing + Asphaltic Concrete Plant Peak Day Roadway Operations

Roadway Segment	Roadway Type	ADT			
		Existing	Existing + Project	LOS	Impact
U.S. Highway 101					
-north of Cuyama Highway	4-Lane Freeway	51,000	51,192	LOS C	No
-south of Cuyama Highway	4-Lane Freeway	62,000	62,741	LOS C	No
Hutton Road					
-north of Cuyama Lane	2-Lane Roadway	8,000	8,007	LOS A	No
-south of Cuyama Lane	2-Lane Roadway	1,200	2,164	LOS A	No
Cuyama Lane					
-east of Hutton Road	2-Lane Roadway	12,300	13,257	LOS C	No
-east of U.S. Highway 101	2-Lane Roadway	2,400	2,424	LOS A	No

The data in Table 5.12-4 show that the addition of asphaltic concrete plant traffic to U.S. Highway 101 would not significantly change the existing LOS noted in Table 5.12-1 and therefore would not significantly impact the study area freeway and roadway segments based on San Luis Obispo County impact criteria.

From a cumulative perspective, the project will result in additional trips across the Highway 101 Santa Maria bridge, which is close to reaching the end of its expected life span. Caltrans has recognized that the bridge will need replacement in the near future. Caltrans has evaluated the asphalt plant's impacts and determined that a fair-share amount towards this improvement would be \$150,000.

Impact Category: Project specific: Insignificant; Cumulative: Significant but mitigable

Thresholds of Significance Criteria: 1

Mitigation Measure TRA-1: ~~Although no impacts were identified, as a condition of approval, the applicant will be required to pay its fair share contribution to mitigate its incremental impact to the Santa Maria Bridgeroadways. Given that the improvement to the Santa Maria bridge has been previously identified and that a funding arrangement has already been established, there is not nexus to impose a fee contribution toward improvements to the bridge.~~

Impact TRA-2: Operation of the proposed asphaltic concrete plant would impact intersections within the project area.

Discussion: Access to the asphalt plant would be provided by the U.S. Highway 101/State Route 166 (Cuyama Highway) interchange with direct access via Hutton Road. These facilities currently service large trucks similar to the type used to deliver asphalt and aggregate. The proposed asphaltic concrete plant's traffic pattern is such that inbound and outbound traffic must use the Cuyama Lane/Hutton Road intersection. Approximately 99% of all site traffic would enter and exit via the U.S. Highway 101/State Route 166/Cuyama Highway interchange. Intersection volumes for the existing + asphaltic concrete plant peak day scenario are listed in Tables 5.12-5 and 5.12-6.

**Table 5.12-5. Existing + Asphaltic Concrete Plant Peak Day A.M.
Peak Hour Intersection Operations**

Intersection	A.M. Peak Hour		Impact
	Existing	Existing + Project	
	Delay-LOS	Delay-LOS	
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left/through movement: northbound approach:	7.8 sec – LOS A 11.1 sec – LOS B	7.8 sec – LOS A 11.6 sec – LOS B	No
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left/through movement: southbound approach:	8.9 sec – LOS A 16.5 sec – LOS C	9.0 sec – LOS A 16.5 sec – LOS C	No
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	7.6 sec – LOS A 7.3 sec – LOS A 8.8 sec – LOS A 13.9 sec – LOS C	7.6 sec – LOS A 7.3 sec – LOS A 8.8 sec – LOS A 17.3 sec – LOS C	No

**Table 5.12-6. Existing + Asphaltic Concrete Plant Peak Day P.M.
Peak Hour Intersection Operations**

Intersection	P.M. Peak Hour		Impact
	Existing	Existing + Project	
	Delay-LOS	Delay-LOS	
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left/through movement: northbound approach:	7.7 sec – LOS A 13.2 sec – LOS B	7.7 sec – LOS A 13.3 sec – LOS B	No
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left/through movement: southbound approach:	8.6 sec – LOS A 18.6 sec – LOS C	8.6 sec – LOS A 18.7 sec – LOS C	No
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	8.0 sec – LOS A 7.3 sec – LOS A 9.0 sec – LOS A 15.6 sec – LOS C	8.0 sec – LOS A 7.3 sec – LOS A 9.1 sec – LOS A 15.8 sec – LOS C	No

The data in Tables 5.12-5 and 5.12-6 show that the addition of new traffic to the local street network adjacent to the asphaltic concrete plant would not significantly impact the unsignalized study area intersections, as they would continue to operate in the LOS A-C range. The U.S. Highway 101/Cuyama Highway interchange is currently used by large

trucks similar to those used by the asphalt plant. The current configuration of the interchange ramps, which were analyzed and verified by ATE, will not result in a significant traffic safety issue from the type of trucks coming from the asphalt plant. The South County Circulation Study recommends that the U.S. Highway 101/Cuyama Highway interchange ramps and Cuyama Highway/Hutton Road intersection be monitored to determine if warrants are met for the installation of traffic signals.

Impact Category: Insignificant

Thresholds of Significance Criteria: 1

Mitigation Measure TRA-2:

A. ~~Although no significant impacts were identified, as a condition of approval, the~~Prior to issuance of a building permit for the asphalt plant, the applicant, its heirs or assignees, shall enter into an Agreement for Pro-Rata Share of Improvements” with the California Department of Transportation (Caltrans), in which the applicant agrees to deposit \$150,000 towards the Santa Maria River Bridge Widening Project. Applicant, its heirs or assignees, shall provide receipt or other written documentation from Caltrans that the funds have been deposited. applicant shall be required to pay its fair share contribution toward signalization of project area intersections when warrants are met for the installation of traffic signals⁴.

B. Prior to issuance of a building permit for the asphalt plant, evidence shall be provided to the county that a bond has been posted by the applicant, its heirs or assignees, or comparable financial commitment in place that is acceptable to Caltrans, to cover the costs to provide one and one half inch thick asphalt concrete pavement overlay on the four State Route 101/166 on and off ramps. Caltrans shall provide the applicant, its heirs or assignees, with at least ninety days prior written notice to proceed with said paving work. The applicant, its heirs or assignees, shall obtain an encroachment permit from and shall coordinate the paving with Caltrans.

~~B-C.~~ As a condition of approval, the applicant shall implement a truck traffic-monitoring program that includes the following:

- The applicant shall limit the number of truck trips to and from the plan site to an average of 202 one-way trips per operating day, as calculated using a rolling monthly average. Additionally, the applicant shall limit the number of trucks trips to and from the plant site to a daily maximum of 840 one-way trips;
- The applicant shall maintain daily trip records for all one-way truck trips. Monthly, the actual number of Monday through Friday one-way truck trips shall be totaled and then divided by the number of authorized Monday through Friday workdays that month. The resulting Monday through Friday average for the month shall be added to the Monday through Friday averages calculated for the preceding 11 months. This total shall then be averaged to determine the Monday through Friday average for the previous twelve (12) months. In this manner, the

⁴~~Given that the improvement to the Santa Maria bridge has been previously identified and that a funding arrangement has already been established, there is not nexus to impose a fee contribution toward improvements to the bridge.~~

applicant shall develop a “rolling monthly average” reflective of seasonal market variations while at the same time ensuring the facility operates within the overall one-way truck trip limit of 202, Monday through Friday.

- When operating at the Peak Daily Production Level, the applicant shall limit the number of truck trips to and from the asphalt plant site to a maximum of 840 one-way trips per operating day. The applicant shall maintain daily trip records for all one-way truck trips to monitor/document compliance. This shall apply to all product trucks coming to and going from the site (full and empty trucks). Employee vehicles, service and maintenance vehicles do not count against this maximum.

5.12.2.3 LUO/LUE Amendment Impacts

Impact TRA-3: Increased industrial development associated with the LUO/LUE amendment would not increase the number of traffic during peak hour periods in the LUO/LUE amendment area.

Discussion: Existing conditions of the roadways and intersections near the project area operate at LOS ranging from A-C, which is acceptable under County criteria. Currently, 9.3 acres of the LUO/LUE amendment area is RS and the remaining 44.7 is CS. Allowable uses within the CS designation include more uses, such as service stations and fast-food restaurants, which generate significant traffic during peak hour periods. The proposed LUO/LUE amendment would allow for industrial uses, such as a chemical products or metal machinery manufacturing plant, that may have similar or less traffic during peak periods. Therefore, the LUO/LUE amendment would not have a significant impact. However, certain allowed uses may cause unsafe road conditions due to the increase of potentially hazardous materials that may be transported. Furthermore, truck trips associated with the hauling of manufacturing-related materials may degrade the physical condition of roadways.

Impact Category: Significant but Mitigable

Thresholds of Significance Criteria: 1

Mitigation Measure TRA-3:

For projects generating substantial amounts of traffic or ~~may potentially~~ resulting in unacceptable road service levels, a project-specific traffic study shall be conducted by a qualified transportation engineer at the time an industrial land use is proposed within the LUO/LUE amendment area. The study shall quantify impacts to existing roadways, and specify measures to minimize impacts, as determined by the County Public Works Department and Planning and Building Department. All measures recommended by the traffic study shall be fully implemented. Such measures may include:

- Install signals at surface roads connecting to the Highway 166 and Hutton Road Interchange;
- Install signals to the Highway 166 and Highway 101 northbound on/off ramps;
- Install signals to the Highway 166 and Highway 101 southbound on/off ramps;

- Restrict hauling of hazardous materials to non-peak periods (no hauling 7:00 A.M. to 9:00 A.M. and 4:00 P.M. to 6:00 P.M.; and,
- Provide funding to mitigate the project’s incremental impact on intersections, LOS, and physical condition of roadways.

5.12.2.4 Cumulative Impacts

The following section discusses the cumulative (Near-Term) scenario which includes the traffic generated by the proposed asphalt plant, LUO/LUE amendment, and cumulative projects listed in Chapter 8.0. ATE assumed a 5 percent growth factor for growth on the adjacent surface streets. Historically, Caltrans traffic data for U.S. Highway 101 indicates that the adjacent freeway section has experienced annual growth of less than 2 percent over a five year period. The cumulative scenario represents a worse case near-term growth scenario, not the General Plan buildout scenario.

Levels of service were calculated for the study area roadway and intersection and discussed in the following text. Roadway volumes for the cumulative + asphaltic concrete plant peak day scenario are listed in Table 5.12-7.

Table 5.12-7. Cumulative + Asphaltic Concrete Plant Day Roadway Operations

Roadway Segment	Roadway Type	ADT		
		Cumulative + Project	LOS	Impact
U.S. Highway 101				
-north of Cuyama Highway	4-Lane Freeway	51,192	LOS C	No
-south of Cuyama Highway	4-Lane Freeway	62,741	LOS C	No
Hutton Road				
-north of Cuyama Lane	2-Lane Roadway	8,407	LOS A	No
-south of Cuyama Lane	2-Lane Roadway	2,224	LOS A	No
Cuyama Lane				
-east of Hutton Road	2-Lane Roadway	13,626	LOS C	No
-east of U.S. Highway 101	2-Lane Roadway	2,424	LOS A	No

The data in Table 5.12-7 show that the addition of project traffic to the local street network would not change the existing LOS noted in Table 5.12-1 and therefore would not significantly impact the study area freeway and roadway segments based on San Luis Obispo County impact criteria, as they would continue to operate in the LOS A-C range. Intersection volumes for the cumulative + project scenario is listed in Tables 5.12-8 and 5.12-9.

The data in Tables 5.12-8 and 5.12-9 show that the addition of new traffic to the local street network adjacent to the project would not significantly impact the unsignalized study area intersections, as they would continue to operate in the LOS A-C range. As noted previously, no impacts to Tefft Street would occur from either construction or operation of the proposed asphalt plant.

**Table 5.12-8. Cumulative + Asphaltic Concrete Plant Peak
 Day A.M. Peak Hour Intersection Operations**

Intersection	A.M. Peak Hour		Impact
	Cumulative	Cumulative + Project	
	Delay-LOS	Delay-LOS	
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left/through movement: northbound approach:	7.8 sec – LOS A 11.3 sec – LOS B	7.8 sec – LOS A 11.9 sec – LOS B	No
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left/through movement: southbound approach:	9.0 sec – LOS A 17.5 sec – LOS C	9.1 sec – LOS A 17.5 sec – LOS C	No
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	7.6 sec – LOS A 7.3 sec – LOS A 8.8 sec – LOS A 14.6 sec – LOS B	7.6 sec – LOS A 7.3 sec – LOS A 8.8 sec – LOS A 18.4 sec – LOS C	No

**Table 5.12-9 Cumulative + Asphaltic Concrete Plant Peak
 Day P.M. Peak Hour Intersection Operations**

Intersection	A.M. Peak Hour		Impact
	Cumulative	Cumulative + Project	
	Delay-LOS	Delay-LOS	
U.S. Highway 101 NB Ramps/Cuyama Highway (S.R. 166) eastbound left/through movement: northbound approach:	7.7 sec – LOS A 13.9 sec – LOS B	7.7 sec – LOS A 13.9 sec – LOS B	No
U.S. Highway 101 SB Ramps/Cuyama Highway (S.R. 166) westbound left/through movement: southbound approach:	8.7 sec – LOS A 19.8 sec – LOS C	8.7 sec – LOS A 20.0 sec – LOS C	No
Hutton Road/Cuyama Lane eastbound left/through/right movement: westbound left/through/right movement: northbound approach: southbound approach:	8.1 sec – LOS A 7.4 sec – LOS A 9.0 sec – LOS A 16.5 sec – LOS C	8.1 sec – LOS A 7.4 sec – LOS A 9.1 sec – LOS A 16.8 sec – LOS C	No