

Chapter 3 California Environmental Quality Act Evaluation

3.1 Determining Significance under the California Environmental Quality Act

The project is subject to federal, as well as City of Santa Maria and state environmental review requirements because the City of Santa Maria proposes the use of federal funds and/or the project requires a federal approval action. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act and the National Environmental Policy Act. The City of Santa Maria is the project proponent and the lead agency under the California Environmental Quality Act. The Federal Highway Administration's responsibility for environmental review, consultation, and any other action required in accordance with the National Environmental Policy Act and other applicable federal laws for this project is being, or has been, carried out by Caltrans under its assumption of responsibility pursuant to 23 U.S. Code 327.

One of the primary differences between the National Environmental Policy Act and the California Environmental Quality Act is the way significance is determined. Under the National Environmental Policy Act, significance is used to determine whether an Environmental Impact Statement, or some lower level of documentation, would be required. The National Environmental Policy Act requires that an Environmental Impact Statement be prepared when the proposed federal action (project) *as a whole* has the potential to "significantly affect the quality of the human environment." The determination of significance is based on context and intensity. Some impacts determined to be significant under the California Environmental Quality Act may not be of sufficient magnitude to be determined significant under the National Environmental Policy Act. Under the National Environmental Policy Act, once a decision is made regarding the need for an Environmental Impact Statement, it is the magnitude of the impact that is evaluated and no judgment of its individual significance is deemed important for the text. The National Environmental Policy Act does not require that a determination of significant impacts be stated in the environmental documents.

The California Environmental Quality Act, on the other hand, does require the lead agency to identify each "significant effect on the environment" resulting from the

project and ways to mitigate each significant effect. If the project may have a significant effect on any environmental resource, then an Environmental Impact Report must be prepared. Each significant effect on the environment must be disclosed in the Environmental Impact Report and mitigated if feasible. In addition, the California Environmental Quality Act Guidelines list a number of mandatory findings of significance, which also require the preparation of an Environmental Impact Report. There are no types of actions under the National Environmental Policy Act that parallel the mandatory findings of significance under the California Environmental Quality Act. This chapter discusses the effects of this project and California Environmental Quality Act significance. The project alternatives are evaluated with reference to the baseline conditions to determine the environmental impacts.

This chapter, which references the content of Chapter 2, will be used as the informational document (Environmental Impact Report) mandated by the California Environmental Quality Act for City implementation of the Union Valley Parkway extension and interchange. Implementation includes acquisition of right-of-way, issuance of grading permits, and other local actions.

Known areas of controversy were identified by one local environmental interest group and one special district (Santa Maria Public Airport District) during a scoping meeting held with respect to the California Environmental Quality Act Environmental Impact Report process, and previous Initial Study process for the project. Stated areas of concern included effects on California tiger salamander, a federally listed endangered species, Circulation Element consistency, traffic safety, traffic congestion, and effects related to airport safety.

This section contains a discussion of the possible environmental effects of the proposed project for the specific issue areas that were identified through the Initial Study process as having the potential for significant impacts.

“Significant effect” is defined by the California Environmental Quality Act Guidelines, Section 15382, as “a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant.”

Please refer to the Summary section for a description of the roles of the Federal Highway Administration, Caltrans, the City of Santa Maria, and the County of Santa Barbara.

The assessment of each issue area begins with the regulatory setting. This includes the methodologies that were used and the “significance thresholds,” which are those criteria adopted by the County, other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. This is followed by each impact that is under consideration for an issue area. These are listed out separately in bold text, with the discussion of the impact and its significance following. Each bold-faced impact listing also contains a statement of the significance determination for the environmental impact as follows:

- **Significant and Unavoidable:** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per Section 15093 of the California Environmental Quality Act Guidelines.
- **Significant but Mitigable:** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made under Section 15091 of the California Environmental Quality Act Guidelines.
- **Not Significant:** An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.
- **Beneficial:** An effect that would reduce existing environmental problems or hazards.

Refer to Chapter 2 for each issue area’s affected environment discussion. Refer to Section 3.3, Mitigation Measures for Significant Impacts Under the California Environmental Quality Act for a discussion of mitigation measures for significant impacts, and the level of significance after mitigation.

3.2 Discussion of Significant Impacts

3.2.1 Less Than Significant Environmental Effects of the Proposed Project

Table 3-1 provides a list of environmental issue areas for which the build alternatives would result in less than significant environmental effects, with cross references to complete impact discussions in Chapter 2 of this Environmental Impact Report/Environmental Assessment.

Table 3-1 List of Less Than Significant Environmental Effects of the Proposed Project

California Environmental Quality Act Threshold	Location of Impact Analysis in Chapter 2
Project and cumulative impacts on historic, archaeological, or paleontological resources or disturbance of human remains, or elimination of important examples of the major periods of California history or prehistory	<i>Cultural Resources, Pages 29-31.</i>
Exposure to flood hazards	<i>Hydrology and Floodplain, Page 31</i>
Impacts on air traffic patterns or airport/airstrip -related hazards or noise	<i>Section 2.1.1.2, Consistency with State, Regional, and Local Plans</i>
Inducement of substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)	<i>Section 2.1.2, Growth</i>
Project and cumulative impacts on farmland, agricultural zoning, Williamson Act lands, and agricultural uses	<i>Section 2.1.3, Farmlands</i>
Physical division of an established community	<i>Section 2.1.4.1, Community Character and Cohesion</i>
Impacts on emergency services, police protection, or fire protection	<i>Section 2.1.5, Utilities/Emergency Services</i>
Impairment of the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan	<i>Section 2.1.5, Utilities/Emergency Services</i>
Exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	<i>Section 2.1.5, Utilities/Emergency Services</i>
Exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board.	<i>Section 2.1.5, Utilities/Emergency Services</i>
Construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	<i>Section 2.1.5, Utilities/Emergency Services</i>
Substantial depletion of groundwater supplies or substantial interference with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	<i>Section 2.1.5, Utilities/Emergency Services</i>

Table 3-1 List of Less Than Significant Environmental Effects of the Proposed Project

California Environmental Quality Act Threshold	Location of Impact Analysis in Chapter 2
Sufficiency of water supplies available to serve the project from existing entitlements and resources, or from new or expanded entitlements	Section 2.1.5, <i>Utilities/Emergency Services</i>
Adequacy of capacity to serve the project's projected wastewater treatment demand in addition to the provider's existing commitments	Section 2.1.5, <i>Utilities/Emergency Services</i>
Conflicts with adopted policies, plans, or programs supporting alternative transportation	Section 2.1.6, <i>Traffic and Transportation/ Pedestrian and Bikeway Facilities</i>
Substantial damage to scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway	Section 2.1.7, <i>Visual/Aesthetics</i>
Cumulative aesthetic changes	Section 2.1.7, <i>Visual/Aesthetics</i>
Construction runoff of sedimentation and other pollutants that would affect local drainages and subsurface aquifers	Section 2.2.1, <i>Water Quality and Storm Water Runoff</i>
Substantial alteration of the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion, siltation, or flooding on or offsite	Section 2.2.1, <i>Water Quality and Storm Water Runoff</i>
Cumulative hydrologic changes and degradation of water quality	Section 2.2.1, <i>Water Quality and Storm Water Runoff</i>
Expose people or structures to potential substantial adverse effects involving fault rupture, seismic groundshaking, erosion, landslides/slope stability, expansive soils, or subsidence	Section 2.2.2, <i>Geology/Soils/Seismic/Topography</i>
Exposure to concentrations of aeriaily deposited lead	Section 2.2.3, <i>Hazardous Waste/Materials</i>
Creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials	Section 2.2.3, <i>Hazardous Waste/Materials</i>
Emissions of hazardous emissions or handling of hazardous or acutely hazardous material, substances, or waste within one-quarter mile of an existing or proposed school	Section 2.2.3, <i>Hazardous Waste/Materials</i>
Inclusion on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5	Section 2.2.3, <i>Hazardous Waste/Materials</i>
Exposure of sensitive receptors to substantial pollutant concentrations	Section 2.2.4, <i>Air Quality</i>
Creation of objectionable odors affecting a substantial number of people	Section 2.2.4, <i>Air Quality</i>
Air contaminant emissions during construction	Section 2.2.4, <i>Air Quality</i>
Project and cumulative carbon monoxide hotspots and operational PM10 emissions	Section 2.2.4, <i>Air Quality</i>
Consistency with land use, air quality, and transportation plans	Section 2.2.4, <i>Air Quality</i> ; Section 2.1.1.2, <i>Consistency with State, Regional, and Local Plans</i>

The build alternatives would also result in less than significant impacts related to the issue areas described in the paragraphs below.

Recreation

A significant impact would result if the proposed project would do one or more of the following:

- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
- Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

Impact R-1 The proposed Union Valley Parkway extension and interchange would not include the implementation of residential land uses that would increase demand for parks and recreational facilities. No impacts to such facilities or services would result.

The proposed improvements would not directly encroach onto any parklands, including Pioneer Park. In addition, the Union Valley Parkway extension would include sidewalks, multi-use paths, and bike lanes, and would therefore improve recreational trail opportunities in the area.

Utilities

In accordance with Appendix G of the *California Environmental Quality Act Guidelines*, a project would result in a significant impact on utilities if it would do one or more of the following:

- Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Fail to comply with federal, state, and local statutes and regulations related to solid waste.

Impact U-1 The Union Valley Parkway extension and interchange would not necessitate additional wastewater or storm drainage improvements, beyond those described as part of the project. No additional impacts would result.

Locally Preferred Alignment, Curved Alignment, Foster Road Alignment, and Reduced Extension Alternatives

The environmental impacts associated with the wastewater and storm drainage improvements of the build alternatives are described as project impacts throughout this document. No additional impacts related to utility services or infrastructure would result.

Impact U-2 The Union Valley Parkway extension and interchange would generate short-term construction solid waste that would not exceed the capacity of existing landfills serving the area. Less than significant impacts would result.

Locally Preferred Alignment, Curved Alignment, Foster Road Alignment, and Reduced Extension Alternatives

Solid waste generated during construction of the project would be disposed of at the Santa Maria Regional Landfill. This landfill maintains a remaining capacity of 1,238,000 cubic yards and a permitted throughput of 740 tons per day of solid waste, which would be sufficient to accommodate project-generated solid waste. Less than significant impacts would result.

Transportation/Traffic

Appendix G of the *California Environmental Quality Act Guidelines* specifies that a significant impact would occur if a project would do one or more of the following:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (in other words, result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

“Levels of Service” A through F are used to rate roadway and intersection operations. Level of Service A indicates free flow operations while Level of Service F indicates congested operations. The City’s standard is to provide Level of Service D or better. The County’s standard is to provide Level of Service C or better and Caltrans’ desire is to provide Level of Service C-D.

Impact T-1 The proposed Union Valley Parkway extension and interchange would result in roadway and intersection operations that meet or exceed the City and County Level of Service standards under all Locally Preferred Alignment and Curved Alignment Alternative phase scenarios. This is considered a less than significant impact for these alternatives.

The overall circulation improvements for both the Locally Preferred Alignment and Curved Alignment Alternative for all phase scenarios would be considered beneficial. Operational impacts at specific roadway segments and intersections for each scenario are described in detail in Section 2.1.6, *Traffic and Transportation/Pedestrian and Bikeway Facilities*.

Air Quality

The California Ambient Air Quality Standards establish an allowable carbon monoxide concentration of 20 parts per million for the one-hour period and 9.0 parts per million for the eight-hour period. These concentration standards have been used to determine the impact of carbon monoxide emissions.

As outlined in the Air Pollution Control District Guidelines, operational impact thresholds in Santa Barbara County are as follows:

- Emit (from all sources, both stationary and mobile) less than 240 pounds per day for reactive organic compounds and nitrogen oxides and less than 80 pounds per day for Particulate Matter less than 10 microns in diameter (PM10); and
- Emit less than 25 pounds per day of nitrogen oxides or reactive organic compounds from motor vehicle trips only; and
- Not cause or contribute to a violation of any California or National Ambient Air Quality Standard (except ozone); and
- Not exceed the Air Pollution Control District’s health risk public notification thresholds adopted by the District’s Board; and
- Be consistent with the adopted federal and state air quality plans for Santa Barbara County.

State air quality standards and the South Central Coast Air Basin's attainment status for each pollutant of concern, are summarized in Table 3-2 below.

Table 3-2 State Air Quality Standards and Air Basin Attainment Status

Criteria Pollutant	State Standard	State Attainment Status
Carbon Monoxide (CO)	20 parts per million (1-hour average) 9 parts per million (8-hour average)	Attainment
Nitrogen Dioxide (NO ₂)	0.25 parts per million (1-hour annual average)	Attainment
Ozone (O ₃)	0.09 parts per million (1-hour average)	Non-Attainment
Particulate Matter (PM ₁₀)	50 µg/m ³ (annual arithmetic mean)	Non-Attainment

A discussion of the regional and project conformity with the Clean Air Act is provided in Section 2.2.4, *Air Quality*. As described in that section, regional air quality impacts have previously been analyzed and found to not be substantial. In fact, long-term impacts of the proposed Union Valley Parkway Extension/Interchange Project would be considered beneficial related to air quality. All of the build alternatives would improve regional circulation, with resulting reductions in air contaminant emissions, and would therefore result in beneficial cumulative impacts on air quality. Any contribution to cumulative air quality impacts in the air basin are expected to be minimal for three reasons: 1) construction impacts are of short-term duration; 2) there is no expected generation of travel demand or other direct sources of air pollutants; and 3) air quality is expected to improve via the improvement of traffic congestion in the vicinity. In addition, because the Union Valley Parkway Extension/Interchange Project has been included in the Santa Barbara County Clean Air Plan growth projections, regional cumulative impacts would not be considered substantial.

Mineral Resources

In accordance with Appendix G of the *California Environmental Quality Act Guidelines*, a project would result in a significant impact to mineral resources if it would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

Impact M-1 Implementation of the Union Valley Parkway extension and interchange would not significantly affect mineral resources as mineral demand from the project would not be substantial. This is considered a less than significant impact.

The build alternatives would all require the consumption of aggregate resources during the construction phase. However, none of the build alternatives would have a substantial impact on the demand for aggregate resources because there is estimated to be a sufficient amount of aggregate resources to meet local demand for the next 50 years.

Any of the build alternatives would consume petroleum by-products as fuel for the equipment used during the construction phase. However, none of the build alternatives would have a substantial impact on the demand for petroleum resources because petroleum is considered a worldwide, national, and statewide resource, which is beyond the scope of local governments to effectively manage or control.

3.2.2 Significant Environmental Effects of the Proposed Project

The build alternatives would result in significant but mitigable impacts related to the issue areas described in the paragraphs below. For each of these issue areas, cross-references to relevant analysis in Chapter 2 are provided as appropriate.

Land Use

The Locally Preferred Alignment, Curved Alignment, and Reduced Extension Alignment alternatives would result in significant but mitigable impacts related to land use compatibility, as described in Section 2.1.1.1, *Existing and Future Land Use*. The Unavoidable Significant Impacts of the Foster Road Alignment Alternative with regard to land use compatibility and right-of-way conflicts are described in Section 3.2.4.

Appendix G of the *California Environmental Quality Act Guidelines* specifies that a significant impact would occur if a project would do one or more of the following:

- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.
- Physically divide an established community.

Impacts relating to compatibility of the proposed land uses with one another and with adjacent uses are considered significant if project implementation would create considerable physical conflicts, such as visual, noise, air quality, or safety concerns.

Project impacts would be considered potentially significant if the project would conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Impact LU-1 The Union Valley Parkway extension and interchange could create both short- and long-term land use compatibility conflicts with adjacent agricultural, residential, and institutional uses. This is considered a significant but mitigable impact for the Locally Preferred Alignment, Curved Alignment Alternative, and Reduced Extension Alternative.

The Locally Preferred Alignment, Curved Alignment, and Reduced Extension alternatives would result in traffic, noise, and air quality impacts. The Locally Preferred Alignment would result in the removal of mature vegetation, including a stand of eucalyptus trees, which would result in aesthetic impacts. These impacts and the avoidance, minimization, and/or mitigation measures that would reduce land use compatibility conflicts with surrounding uses for each of these build alternatives are fully discussed in Sections 2.1.6, *Traffic and Transportation/Pedestrian and Bicycle Facilities*, 2.2.4, *Air Quality*, and 2.2.5, *Noise and Vibration*, respectively.

Transportation/Traffic

Appendix G of the *California Environmental Quality Act Guidelines* specifies that a significant impact would occur if a project would do one or more of the following:

- Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (in other words, result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections).
- Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

Impact T-1 The proposed Union Valley Parkway extension and interchange would result in roadway and intersection operations that do not meet Level of Service standards under the Foster Road Alignment Alternative and Reduced Extension Alternative. This is considered a significant but mitigable impact for these alternatives.

Operational impacts at specific roadway segments and intersections for each scenario are described in detail in Section 2.1.6, *Traffic and Transportation/Pedestrian and Bikeway Facilities*.

Foster Road Alignment Alternative

The forecast for Foxenwood Lane is 6,800 average daily traffic under the Foster Road Alignment Alternative, which exceeds the County's Acceptable Capacity (Acceptable Capacity is 6,300 average daily traffic).

The Foster Road Alignment Alternative would also require street system modifications within the Santa Maria Business Park Specific Plan area. This area has been planned around the existing section of Foster Road and the proposed realignment of Union Valley Parkway to Foster Road would necessitate modifications to the Specific Plan street system and land use plan. These changes would include realigning Airpark Drive and creating new intersections at Airpark Drive/Union Valley Parkway.

The Union Valley Parkway/State Route 135 intersection would operate at Level of Service D under the Foster Road Alignment Alternative. Additional capacity would be required at the intersection to provide the Level of Service C/D under the Foster Road Alignment Alternative.

Reduced Extension Alternative

Roadway Operations: Union Valley Parkway is forecast to carry 14,600 to 17,400 average daily traffic east of State Route 135. With the 20-year scenario, the Reduced Extension Alternative would result in substantially increased average daily traffic volumes on Foster Road west of State Route 135. Foster Road would carry 19,500 average daily traffic west of State Route 135 under the Reduced Extension Alternative, indicating the need for four lanes. A portion of the regional trips would also shift to other east-west facilities, such as Clark Avenue and Lakeview Drive.

Intersection Operations: Tables 2-10C shows that the Foster Road/State Route 135 intersection would operate at Level of Service E under the Reduced Extension Alternative. This intersection would receive much of the diverted traffic in the Santa Maria Airport-Foxenwood neighborhood area. Major intersection improvements would be required to provide an acceptable level of service at the intersection under the Reduced Extension Alternative scenario.

Visual/Aesthetics

The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to views and aesthetic conditions differently. This subjective element of aesthetics is underlined in the various guidelines that help determine the effect of changes to visual resources; few defined thresholds exist. The California Environmental Quality Act and the City of Santa Maria General Plan offer guidelines to determine impact thresholds; the California Environmental Quality Act, however, offers the most detailed guidance. Ultimately, the final decision as to whether aesthetic impacts occur and are considered significant would be determined by the lead agency.

Appendix G of the *California Environmental Quality Act Guidelines* specifies that a significant impact would occur if a project would *have a substantial, demonstrable negative aesthetic effect*. Specifically, a significant impact to visual resources does one or more of the following:

- Has a substantial adverse effect on a scenic vista.
- Substantially damages scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantially degrades the existing visual character or quality of the site and its surroundings.
- Creates a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Impact AES-1 Implementation of the Union Valley Parkway extension and interchange would alter public views of the study area through the removal of existing vegetation, and introduction of pavement, light, and glare sources, and other improvements. Soundwalls constructed within the study area would impact visual resources by creating a monolithic effect. This is considered a significant but mitigable impact.

A detailed evaluation of the significant but mitigable aesthetic effects of each of the build alternatives is provided in Section 2.1.7, *Visual/Aesthetics*.

Water Quality and Storm Water Runoff

In accordance with Appendix G of the *California Environmental Quality Act Guidelines*, a project would result in a significant impact to hydrology and water quality if it would:

- Violate any water quality standards or waste discharge requirements.

Impact HWQ-1 Implementation of the Union Valley Parkway extension and interchange could reduce the quality of surface water flowing to offsite drainage channels. This is considered a significant but mitigable impact.

A detailed evaluation of the significant but mitigable effects of each of the build alternatives related to water quality is provided in Section 2.2.1, *Water Quality and Storm Water Runoff*.

Geology/Soils/Seismic/Topography

A significant impact would result if the proposed project would do one or more of the following:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides.
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse.

Impact GS-1 There is a potential for liquefaction of soils beneath the Union Valley Parkway extension alignments west of State Route 135. This is considered a significant but mitigable impact.

A detailed evaluation of the significant but mitigable effects of the Locally Preferred Alignment, Curved Alignment, and Foster Road Alignment alternatives related to liquefaction hazards is provided in Section 2.2.2, *Geology/Soils/Seismic/Topography*.

Hazardous Waste/Materials

Impacts are considered significant if the project activities are anticipated to result in the exposure of people and environmental resources to adverse levels of contamination, or, if contaminated conditions could adversely affect future development as a result of costly assessment and remediation. In addition, impacts are considered significant if a project would do one or more of the following:

- Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.

Impact HM-1 The Initial Site Assessment for the Union Valley Parkway extension identified a sand-tar mixture and tank bottoms within the study area. Improper handling of these materials and/or discovery of unanticipated contamination during construction could expose construction workers to adverse health conditions. This is considered a significant but mitigable impact.

A detailed evaluation of the significant but mitigable effects of each of the build alternatives related to hazardous materials is provided in Section 2.2.3, *Hazardous Waste/Materials*.

Impact HM-2 Implementation of the Union Valley Parkway extension and interchange would not impede air traffic or expose people to significant impacts related to airport safety. This is considered a less than significant impact.

The proposed interchange component of the project would be located more than two miles from the airport, and would not impede air traffic. The proposed Union Valley Parkway extension portion of the project would feature a low vertical profile and would therefore not influence air traffic patterns. Although the project would result in additional human presence in the area south of the airport, existing air safety practices would ensure that exposure to airport safety hazards would not be significant. In addition, the Union Valley Parkway extension/interchange would not affect air traffic, and would be consistent with the Santa Maria Airport Land Use Plan.

Noise and Vibration (Construction)

Please note that all noise levels discussed in this section would be presumed to have the peak-hour equivalent sound level descriptor [Leq(h)] descriptor unless specifically noted otherwise.

The California Environmental Quality Act provides the broad basis for analyzing and abating highway traffic noise effects. The intent of these laws is to promote the general welfare and to foster a healthy environment.

Pursuant to the California Environmental Quality Act guidelines, potentially significant impacts would result if the project would result in one or more of the following:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels.
- A substantial permanent increase in ambient noise levels in the vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the vicinity above levels existing without the project.

Noise criteria and policies established by the City of Santa Maria regulate noise for local receptors resulting from the proposed project. For land uses adjacent to State Route 101 and where State Route 101 is the predominant noise source, Caltrans noise criteria are used. These criteria establish policies regarding the location of noise sensitive uses near noise sources and the location of noise-generating uses near noise sensitive uses. Impacts associated with Caltrans and Federal Highway Administration noise abatement criteria are described in detail in Section 2.2.5, *Noise and Vibration*.

City of Santa Maria Noise Criteria: For consistency, this evaluation uses Caltrans significance criteria for noise increases. Under the Caltrans Traffic Noise Protocol, a substantial increase in noise levels occurs when project design year noise levels increase by 12 decibels over existing year noise levels.

Impact N-1 Construction of the Union Valley Parkway extension and interchange would create temporary short-term noise levels that could affect nearby residences and other sensitive receptors. This is considered a significant but mitigable impact.

Locally Preferred Alignment, Curved Alignment, Foster Road Alignment, and Reduced Extension Alternatives

The initial noise impact resulting from construction of proposed improvements would be generated from construction activities. Noise generated by construction equipment would occur with varying intensities and durations during the different phases of construction: clear and grub, earthwork, base preparation, paving, and cleanup. Equipment expected to be used would include tractors, backhoes, pavers, and other related equipment. It should be noted that the total construction period for all phases of the project is anticipated to be seven to nine years.

As illustrated in Table 3-3, equivalent noise levels associated with the use of heavy equipment at construction sites can range from about 78 to 88 decibels at 15 meters (50 feet) from the source, depending on the types of equipment in operation at any given time and the phase of construction. The highest noise levels generally occur during excavation, which involves the use of such equipment as backhoes, bulldozers, shovels, and front-end loaders. It should be noted that pile drivers can generate noise levels up to 100 decibels Lmax (i.e., the maximum sound level at any given time) at 50 feet.

Table 3-3 Typical Noise Level Ranges at Roadway Construction Sites

Construction Phase	Equivalent Hourly Noise Level (Leq) at 15 meters (50 feet)	
	Minimum Required Equipment in the Project Area	All Pertinent Equipment in the Project Area
Ground Clearing	84	84
Excavation	88	88
Foundations	88	88
Erection	79	79
Finishing and Cleanup	84	84

Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the U.S. Environmental Protection Agency, 1971.

A construction noise model was used to estimate noise levels during construction activities. Noise estimates were made using the 1971 Environmental Protection Agency’s “Noise From Construction Equipment and Operations Modeling

Spreadsheet.” This model uses an assumed list of construction equipment and the extent to which they would be used as a basis for noise estimation. During grading operations, the equipment is dispersed in various portions of the project area in both time and space. Physically, a limited amount of equipment can operate near a given location at a particular time. Accordingly, noise levels were estimated for a reasonable worst-case scenario with regard to the timing and location of construction equipment relative to nearby sensitive receptors. The results from this model indicate that construction would result in an 87-decibel noise level, 50 feet from the proposed nearest construction activities to sensitive receptors. According to Caltrans’ Traffic Noise Supplement, normal construction noise levels are 86 decibels. Extraordinary construction methods like pavement breaking and pile driving can cause higher peak noise levels.

Construction activities could also generate groundborne vibration during pile-driving activity (piles may be used to support the new overcrossing). Impacts from construction-induced vibrations can cause annoyance within 100 feet and can damage structures within 60 feet of the source. Since the nearest residences are anticipated to be over 100 feet from the nearest pile-driving operation, impacts from pile driving should not cause damage to structures. Noise impacts from pile driving for this project could be up to approximately 100 decibels within 200 feet of the source. Heavy construction equipment would also be used for earth moving and other construction activity. This vibration and noise would be of a temporary nature and could be a nuisance and irritant to nearby residents.

Standard conditions of approval would minimize short-term construction noise effects. The City would require the contractor to comply with all local sound control and noise level standards, regulations, and ordinances that apply to any work performed pursuant to the contract. Each internal combustion engine, used for any purpose on the job or related to the job, would be required to be equipped with a muffler of a type recommended by the manufacturer. All stationary noise-generating construction equipment (such as air compressors and electric generators) would be required to be located as far as practical from nearby residences. Nevertheless, construction noise would generate temporary nuisance noise levels that exceed City and County criteria.

No-Action Alternative

Since no ground disturbance or other construction activities would occur under this alternative, no impacts related to construction noise would result.

Biological Environment

The California Environmental Quality Act, Chapter 1, Section 21001 (c) states that it is the policy of the state of California to “Prevent the elimination of fish and wildlife species due to man’s activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities.” Environmental impacts relative to biological resources may be assessed using impact significance criteria encompassing the California Environmental Quality Act statute (Section 21083) and guidelines (15065, Appendix G) and federal, state, and local plans, regulations, and ordinances. Project impacts to flora and fauna may be determined to be significant even if they do not directly affect rare, threatened, or endangered species.

Significant impacts to biological resources may occur if a project action would do one or more of the following:

- Conflict with local or regional conservation plans or state goals.
- Substantially affect rare, threatened, or endangered species.
- Interfere substantially with the movement of any resident or migratory fish or wildlife species.
- Substantially diminish habitat for fish, wildlife, or plants.
- Involve the use, production, or disposal of materials that pose a hazard to animal or plant populations in the area affected.
- Have impacts that are individually limited, but cumulatively considerable; or involve the alteration or conversion of biological resources (locally important species or locally important communities) identified as significant within the county or region.

A project would result in significant impacts if it would have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal.

When assessing or applying these threshold guidelines, plants and animals may be considered locally important if any of the following criteria are met:

- The species, subspecies, or variety is limited in distribution in the county or region, and endemic (limited to a specific area) in the region.

- The species population is at the extreme limit of its overall distribution or is isolated from the known overall range.
- The species potentially affected by project actions has habitat requirements or limitations that make it susceptible to local extirpation as a consequence of those actions, such as the introduction of barriers or restrictions to movement, changes in ambient conditions, or increases in human activity.
- Populations that exhibit unusual localized adaptations, or are high quality examples of the species overall.

Natural Communities

Impact BIO-1 Implementation of the Union Valley Parkway extension and interchange would affect special concern natural communities. This is considered a significant but mitigable impact.

A detailed evaluation of the significant but mitigable effects of each of the build alternatives on natural communities is provided in Section 2.3.1, *Natural Communities*.

The following discussion provides additional analysis regarding impacts on eucalyptus woodland and central dune scrub habitats. Eucalyptus woodland is considered a natural community of special concern within the City of Santa Maria and County of Santa Barbara because it provides nesting, roosting, and foraging habitat for migratory bird species. The Orcutt Community Plan Policy BIO-O-4 calls for protection of eucalyptus groves and windrows that provide nesting or roosting habitat for raptors, as well as specimen trees greater than 25 inches at breast height. Central dune scrub is considered rare by the Department of Fish and Game, and contains plant associations considered rare by the California Natural Diversity Data Base (DFG 2003). Coast live oak woodland is considered sensitive by the City of Santa Maria and the County of Santa Barbara. Valley needlegrass grassland is considered a plant community of special concern by the California Natural Diversity Database, and is considered a protected rare habitat by the County of Santa Barbara. Wetlands are protected by the County of Santa Barbara and the Corps of Engineers, and are discussed below in Impact BIO-2.

Locally Preferred Alignment

The Locally Preferred Alignment Alternative would permanently and temporarily affect a total of 1.67 acres of coast live oak woodland, 8.96 acres of eucalyptus

woodland, and 11.31 acres of central dune scrub habitat. There is no valley needlegrass grassland within this alignment.

Migratory bird species have been detected within the eucalyptus trees on the Locally Preferred Alignment. Impacts on migratory nesting birds from the loss of eucalyptus woodland are mitigated as specified in Measure BIO-1(a).

Curved Alignment Alternative

Coast live oak woodland, eucalyptus woodland, central dune scrub, and wetlands are special-status habitats that occur within the Curved Alignment project area. The Curved Alignment would permanently and temporarily affect a total of 0.71 acre of coast live oak woodland, 7.19 acres of eucalyptus woodland, 1.67 acres of wetland, and 13.07 acres of central dune scrub habitat.

Approximately 6.20 acres of eucalyptus woodland in the Curved Alignment study area would be directly and permanently affected and .99 acre would temporarily be affected.

Migratory bird species have been detected within the eucalyptus trees on the Curved Alignment. Impacts on migratory nesting birds from the loss of eucalyptus woodland are mitigated as specified in Measure BIO-1(a).

Central dune scrub occurs mainly as patches within the study area, however, there is a large patch within the Curved Alignment that is contiguous with a larger area of central dune scrub habitat that is located offsite to the north (Figure 24D).

Approximately 11.92 acres of central dune scrub would be directly and permanently affected and 1.15 acres would be temporarily affected by the Curved Alignment. Coast live oak woodland impacts include 0.45 acres of permanent impacts and 0.26 acres of temporary impacts within the Curved Alignment. No valley needlegrass grassland occurs within this alignment.

Foster Road Alignment Alternative

The Foster Road Alignment Alternative would permanently and temporarily affect a total of 5.51 acres of eucalyptus woodland, 10.52 acres of central dune scrub, and 0.14 acre of valley needlegrass grassland habitat. No oak woodland habitat would be affected.

Migratory bird species have been detected within the eucalyptus trees on the Foster Road Alignment. Impacts on migratory nesting birds from the loss of eucalyptus woodland are mitigated as specified in Measure BIO-1(a).

Reduced Extension Alternative

This alternative would permanently and temporarily affect a total of 3.91 acres of eucalyptus woodland and 9.87 acres of central dune scrub habitat. There is no coast live oak woodland or valley needlegrass grassland present within this alignment.

Migratory bird species have been detected within the eucalyptus trees on the Reduced Extension Alternative. Impacts on migratory nesting birds from the loss of eucalyptus woodland are mitigated as specified in Measure BIO-1(a).

Wetlands and Other Waters

Impact BIO-2 Implementation of the Union Valley Parkway extension would result in temporary and permanent losses of wetland habitat in the study area. This habitat would satisfy Corps requirements for jurisdiction as a tributary to Waters of the U.S., and would be considered wetland habitat under the Cowardin Classification System as recognized by the County of Santa Barbara. This impact is considered a significant but mitigable impact.

A detailed evaluation of the significant but mitigable effects of each of the build alternatives on wetlands and other waters is provided in Section 2.3.2, *Wetlands and Other Waters*. As described there, each of the build alternatives would affect Cowardin classified wetlands protected by the County of Santa Barbara.

Plant Species

Impact BIO-3 Although no state or federally listed threatened or endangered plants were found in any potential disturbance area, implementation of the Union Valley Parkway extension and interchange would reduce the amount of a rare plant species that occurs within the study area. This is considered a significant but mitigable impact.

A detailed evaluation of the significant but mitigable effects of each of the build alternatives on rare plant species is provided in Section 2.3.3, *Plant Species*. As described there, a population of curly-leaved monardella (*Monardella undulata*),

which is a California Native Plant Society List 4.2 plant species, would be directly affected by the Locally Preferred Alignment and Curved Alignment. The Locally Preferred Alignment would permanently affect a 0.08-acre occurrence of curly-leaved monardella. The Curved Alignment Alternative would temporarily affect 0.03 acre and permanently affect 0.13 acre containing this species.

Animal Species

Impact BIO-4 Implementation of the Union Valley Parkway extension could affect animal species that are rare and/or species of special concern that are known to use or potentially use habitats within the potential alignments. This is considered a significant but mitigable impact.

A detailed evaluation of the significant but mitigable effects of each of the build alternatives on rare animal species is provided in Section 2.3.4, *Animal Species*.

Invasive Species

Impact BIO-5 Landscaping associated with implementation of the Union Valley Parkway extension and interchange could potentially introduce invasive plant species. To eliminate invasive species, a qualified biologist would review the landscape palette before implementation. However, the potential introduction of invasive species would require mitigation to reduce impacts to a less than significant level. This is considered a significant but mitigable, impact.

A detailed evaluation of the significant but mitigable effects of each of the build alternatives on invasive species is provided in Section 2.3.6, *Invasive Species*.

3.2.3 Unavoidable Significant Environmental Effects

Unavoidable significant environmental effects are defined under the California Environmental Quality Act as “where the environmental effect of the proposed project reaches the threshold of significance but no feasible mitigation is available to reduce the impact to a less than significant level.”

Land Use Conflicts (Foster Road Alignment Alternative)

As described in Section 2 of this document, the Foster Road Alignment Alternative for the Union Valley Parkway extension would result in a significant and unavoidable

impact related to land use conflicts with existing and planned uses along the alternative alignment. The Foster Road Alignment Alternative would require a major deviation from what has been identified and preserved as the planned roadway alignment for the extension of Union Valley Parkway in this area and would result in severe impacts to several planned and constructed facilities. These facilities include the County Agriculture Building, the Food Bank, the Animal Shelter, and the County Public Works Building. The Foster Road Alignment Alternative would directly conflict with these existing and under-construction facilities. Major right-of-way impacts are associated with this alternative as a result.

The following impacts to existing facilities are associated with the Foster Road Alignment Alternative between State Route 135 and California Boulevard.

Foster Road (State Route 135 to California Boulevard) would need to be closed and existing access to adjoining parcels would need to be replaced. To maintain the operational characteristics planned for Union Valley Parkway, access would be restricted and would be limited to major intersections. This alternative would require major changes to the existing parcel access and would substantially alter the traffic circulation of the affected sites.

Foxenwood Road (Foster Road to Union Valley Parkway) would need to be closed to maintain planned operational characteristics for Union Valley Parkway. This would require that the Foxenwood Road northerly access be closed with no future access to Union Valley Parkway or Foster Road to the north.

County Agricultural Building driveways, access roads, parking lots, and landscaping would need to be modified to provide adequate clearance, set backs, site access, and circulation. The existing access road, which provides northerly access onto Foster Road, would need to be replaced with a new access road to the west to connect to California Boulevard.

The Santa Barbara County Food Bank has northerly access to Foster Road. The closure of Foster Road in this area would require replacement of the current access with a new roadway and connection to the local roadway network. This new connection location is not obvious and it may be difficult to provide replacement access.

The Santa Barbara County Food Bank site is planned with a future expansion of the facility to the south. This alternative would directly affect the future expansion to the

south and would require a major alteration of the proposed expansion buildings, site layout, parking lots, landscaping, and driveway access.

The Santa Barbara County Animal Shelter shares the same northerly access to Foster Road with the Santa Barbara County Food Bank. Replacement access may be difficult to provide. The southwest portion of the Animal Shelter is in direct conflict with the Foster Road Alignment. The Animal Shelter site and building layout, roadway setbacks, access, parking lots, and landscaping would be adversely affected by this alignment. The existing building on the site would require demolition and modification and it may be difficult to provide a similar facility on the remaining site.

The Proposed Public Works Building has northerly access to Foster Road and westerly access to California Boulevard that would need to be replaced. Access would be limited to California Boulevard. Driveways, access roads, parking lots, and landscaping would need to be modified to provide adequate clearances, set backs, site access, and circulation.

Local circulation, as well as conflicts with site access, planned use of sites facility layout, parking, clearances, and setbacks are all considered substantial impacts associated with this alternative.

Operational Noise (All Build Alternatives)

Impact N-2 Traffic traveling on the proposed Union Valley Parkway extension and interchange with the Locally Preferred and Curved Alignment alternatives would generate noise levels that would exceed City noise impact criteria at homes and/or private recreational areas in the study area. Since noise mitigation would not be feasible in certain noise-impacted locations, this is considered a significant and unavoidable impact for the Locally Preferred and Curved Alignment alternatives.

Tables 3-4 through 3-7 summarize the existing and post-project noise conditions at representative noise sensitive receptors for each build alternative. Refer to Figures 22A through 22D for the location of sensitive noise receptors with each build alternative.

Table 3-4 Summary of Traffic Noise Impacts of the Locally Preferred Alternative

Receptor	Existing Noise 2005 ¹	Predicted Noise No Build 2030 ¹	Predicted Noise Build 2030 ¹	Predicted Noise level with abatement (2030) ¹			Feasible?
				8-foot	10-foot	12-foot	
1	60	63	66	61	59	58	No
2	46	49	50	N/A	N/A	N/A	N/A
3	42	44	55	53	53	52	No
4	42	44	58	57	56	55	No
5	53	54	60	N/A	N/A	N/A	N/A
6	62	63	65	N/A	N/A	N/A	N/A
7	51	53	53	N/A	N/A	N/A	N/A
8	46	48	54	N/A	N/A	N/A	N/A
9	55	59	66	61	61	61	Yes
10	52	54	58	N/A	N/A	N/A	N/A
11	60	62	62	N/A	N/A	N/A	N/A
12	61	63	65	N/A	N/A	N/A	N/A
13	57	61	66	60	58	57	Yes
14	62	63	65	N/A	N/A	N/A	N/A
15	51	53	58	N/A	N/A	N/A	N/A
16	50	53	59	N/A	N/A	N/A	N/A
17	65	66	64	N/A	N/A	N/A	N/A
18	59	60	60	N/A	N/A	N/A	N/A
19	55	56	61	N/A	N/A	N/A	N/A
20	46	50	54	N/A	N/A	N/A	N/A

¹ Noise levels are expressed in peak-hour noise equivalent levels [Leq(h)].

N/A = Not Applicable

Source: Federal Highway Administration Traffic Noise Model® (TNM 2.5)

Table 3-5 Summary of Traffic Noise Impacts of the Curved Alignment

Receptor	Existing Noise 2005 ¹	Predicted Noise No Build 2030 ¹	Predicted Noise Build 2030 ¹	Predicted Noise level with abatement (2030) ¹			Feasible?
				8-foot	10-foot	12-foot	
1	60	63	64	N/A	N/A	N/A	N/A
2	46	49	54	N/A	N/A	N/A	NA
3	42	44	50	N/A	N/A	N/A	NA
4	42	44	54	53	53	52	No
5	53	54	60	N/A	N/A	N/A	NA
6	62	63	65	N/A	N/A	N/A	N/A
7	51	53	53	N/A	N/A	N/A	N/A
8	46	48	54	N/A	N/A	N/A	N/A
9	55	59	66	61	61	61	Yes
10	52	54	58	N/A	N/A	N/A	N/A
11	60	62	62	N/A	N/A	N/A	N/A
12	61	63	65	N/A	N/A	N/A	N/A
13	57	61	66	60	58	57	Yes
14	62	63	65	N/A	N/A	N/A	N/A
15	51	53	58	N/A	N/A	N/A	N/A
16	50	53	59	N/A	N/A	N/A	N/A
17	65	66	64	N/A	N/A	N/A	N/A
18	59	60	60	N/A	N/A	N/A	N/A
19	55	56	61	N/A	N/A	N/A	N/A
20	46	50	54	N/A	N/A	N/A	N/A

¹ Noise levels are expressed in peak-hour noise equivalent levels [Leq(h)].

N/A = Not Applicable

Source: Federal Highway Administration Traffic Noise Model® (TNM 2.5)

Table 3-6 Summary of Traffic Noise Impacts of the Foster Road Alignment Alternative

Receptor	Existing Noise 2005 ¹	Predicted Noise No Build 2030 ¹	Predicted Noise Build 2030 ¹	Predicted Noise level with abatement (2030) ¹			Feasible?
				8-foot	10-foot	12-foot	
1	60	63	63	N/A	N/A	N/A	N/A
2	46	49	49	N/A	N/A	N/A	N/A
3	42	44	45	N/A	N/A	N/A	N/A
4	42	44	46	N/A	N/A	N/A	N/A
5	53	54	55	N/A	N/A	N/A	N/A
6	62	63	63	N/A	N/A	N/A	N/A
7	51	53	57	N/A	N/A	N/A	N/A
8	46	48	58	57	56	55	No
9	55	59	66	61	61	61	Yes
10	52	54	57	N/A	N/A	N/A	N/A
11	60	62	63	N/A	N/A	N/A	N/A
12	61	63	66	64	64	64	No
13	57	61	65	N/A	N/A	N/A	N/A
14	62	63	65	N/A	N/A	N/A	N/A
15	51	53	57	N/A	N/A	N/A	N/A
16	50	53	57	N/A	N/A	N/A	N/A
17	65	66	64	N/A	N/A	N/A	N/A
18	59	60	60	N/A	N/A	N/A	N/A
19	55	56	61	N/A	N/A	N/A	N/A
20	46	50	54	N/A	N/A	N/A	N/A

¹ Noise levels are expressed in peak-hour noise equivalent levels [Leq(h)].

N/A = Not Applicable

Source: Federal Highway Administration Traffic Noise Model® (TNM 2.5)

Table 3-7 Summary of Traffic Noise Impacts of the Reduced Extension Alternative

Receptor	Existing Noise 2005 ¹	Predicted Noise No Build 2030 ¹	Predicted Noise Build 2030 ¹	Predicted Noise level with abatement (2030) ¹			Feasible?
				8-foot	10-foot	12-foot	
1	60	63	63	N/A	N/A	N/A	N/A
2	46	49	49	N/A	N/A	N/A	N/A
3	42	44	44	N/A	N/A	N/A	N/A
4	42	44	45	N/A	N/A	N/A	N/A
5	53	54	54	N/A	N/A	N/A	N/A
6	62	63	63	N/A	N/A	N/A	N/A
7	51	53	53	N/A	N/A	N/A	N/A
8	46	48	49	N/A	N/A	N/A	N/A
9	55	59	62	N/A	N/A	N/A	N/A
10	52	54	56	N/A	N/A	N/A	N/A
11	60	62	62	N/A	N/A	N/A	N/A
12	61	63	65	N/A	N/A	N/A	N/A
13	57	61	66	60	58	57	Yes
14	62	63	65	N/A	N/A	N/A	N/A
15	51	53	55	N/A	N/A	N/A	N/A
16	50	53	54	N/A	N/A	N/A	N/A
17	65	66	64	N/A	N/A	N/A	N/A
18	59	60	60	N/A	N/A	N/A	N/A
19	55	56	60	N/A	N/A	N/A	N/A
20	46	50	54	N/A	N/A	N/A	N/A

¹ Noise levels are expressed in peak-hour noise equivalent levels [Leq(h)].

N/A = Not Applicable

Source: Federal Highway Administration Traffic Noise Model® (TNM 2.5)

Homes along Blosser Road (Receptor 1)

The future (2030) peak-hour equivalent traffic noise level at homes on the west and east sides of Blosser Road would increase for each alternative as shown below:

- *Locally Preferred Alignment*— Due to its proximity to existing residences, the future peak-hour equivalent noise level would be 66 decibels, an increase of 6 decibels above the existing noise levels.
- *Curved Alignment Alternative*— The future peak-hour equivalent noise level with this alternative would be approximately 64 decibels, an increase of approximately 4 decibels above the existing noise levels.
- *Foster Road Alignment Alternative*—The future peak-hour equivalent noise level would be approximately 63 decibels, an increase of approximately 3 decibels above the existing noise levels.

- *Reduced Extension Alternative*—The future peak-hour equivalent noise level would be 63 decibels, an increase of approximately 3 decibels above the existing noise levels.

None of the build alternatives would increase the ambient noise level such that it exceeds noise thresholds. For this reason, no long-term noise abatement measures are recommended at this location.

Pioneer Park (Receptor 2)

Pioneer Park is a 15-acre active use park located immediately north of the western portion of the project area, near Blosser Road.

The peak-hour equivalent traffic noise level at Pioneer Park would increase for each alternative as shown below:

- *Locally Preferred Alignment*— The future peak-hour equivalent noise level would be approximately 50 decibels, an increase of approximately 4 decibels above the existing noise levels.
- *Curved Alignment Alternative*—The future (2030) peak-hour equivalent noise level with this alternative would be approximately 54 decibels, an increase of 8 decibels above the existing noise levels.
- *Foster Road Alignment Alternative*—The future peak-hour equivalent noise level would be approximately 49 decibels, an increase of approximately 3 decibels above the existing noise levels.
- *Reduced Extension Alternative*— The future peak-hour equivalent noise level would be approximately 49 decibels, an increase of approximately 3 decibels above the existing noise levels.

None of the build alternatives would increase the ambient noise level such that it exceeds noise thresholds under the California Environmental Quality Act. For this reason, no long-term noise abatement measures are recommended at this location.

Homes and Private Recreational Areas within Foxenwood Subdivision (Receptors 3, 4, 5, 6, and 9)

Receptor 3 represents recreational areas (tennis courts) on Clubhouse Drive about half way between California Boulevard and Blosser Road. Receptors 4 and 5 represent seven homes on Clubhouse Drive west of California Boulevard, and Receptors 6 and 9 represent 23 homes east of California Boulevard. The homes and private recreational uses located along Clubhouse Drive and Foxenwood Drive,

within the Foxenwood subdivision south of the project area, are situated within the County of Santa Barbara.

The peak-hour equivalent traffic noise level at these receptors would increase from the current levels to the future (2030) levels for each alternative as shown below:

- *Locally Preferred Alignment*— Noise levels would range from 55 to 66 decibels. Receptors 3 and 4 would have increases of 13 and 16 decibels, respectively, and would therefore exceed the threshold of a 12-decibel increase. Receptor 9 would increase from 55 decibels to 66 decibels, which would not exceed the threshold of a 12-decibel increase.
- *Curved Alignment Alternative*—Noise levels would range from 50 to 66 decibels. Receptor 4 would have an increase of 12 decibels, which would be considered a significant impact. The noise level at Receptor 9 would increase by 11 decibels, which would not be considered a significant impact.
- *Foster Road Alignment Alternative*—Noise levels would range from 45 to 66 decibels. Receptors 3 through 6 would have increases of only 1 to 4 decibels. Receptor 9 would increase by 11 decibels, which would not be considered a significant impact.
- *Reduced Extension Alternative*— Noise levels would range from 45 to 63 decibels. Receptors 3 through 6 would have increases of only 1 to 3 decibels. Receptor 9 would increase by 7 decibels, which would not be considered a significant impact.

Noise levels at homes represented by Receptor 4 would significantly increase by 12 decibels with the Curved Alignment and 16 decibels with the Locally Preferred Alternative. The Locally Preferred Alignment Alternative would also have a significant increase of 13 decibels at Receptor 3. Noise levels at Receptors 5, 6 and 9 would not significantly increase with the Locally Preferred Alignment, the Curved Alignment Alternative, or the Foster Road Alignment Alternative.

It should be noted that although noise mitigation is not required for Receptor 6, for the Locally Preferred Alignment and Curved Alignment Alternative, the City proposed to install an 8-foot-high masonry soundwall north of the rear lot lines of the residences represented by this receptor (refer to Figures 22A and 22B).

Institutional Facilities Along California Boulevard (Receptors 7 and 8)

Institutional land uses are located between Foster Road and the Foxenwood Estates subdivision, east of Pioneer Park and west of Foxenwood Lane, within the City of

Santa Maria. The peak-hour equivalent traffic noise level at these two receptors would increase for each alternative as shown below:

- *Locally Preferred Alignment*— The future peak-hour equivalent noise levels with this alternative would be 53 decibels at Receptor 7 (a 2-decibel increase) and 54 decibels at Receptor 8 (an 8-decibel increase).
- *Curved Alignment Alternative*— The future peak-hour equivalent noise levels with this alternative would be 53 decibels at Receptor 7 (a 2-decibel increase) and 54 decibels at Receptor 8 (an 8-decibel increase).
- *Foster Road Alignment Alternative*—The future peak-hour equivalent noise levels with this alternative would be 57 decibels at Receptor 7 (a 6-decibel increase) and 58 decibels at Receptor 8 (a substantial increase of 12 decibels).
- *Reduced Extension Alternative*—The future peak-hour equivalent noise levels with this alternative would be 53 decibels at Receptor 7 (a 2-decibel increase) and 49 decibels at Receptor 8 (a 3-decibel increase).

The Foster Road Alignment would cause a substantial increase of 12 decibels at Receptor 8. The exterior areas at Receptor 8 do not qualify as a sensitive receptor (an area of frequent human use), therefore consideration of noise abatement is not warranted at this location.

Homes within Foxenwood Garden Villas (Receptor 10, 15, and 16)

These homes are behind the existing six-foot-high concrete block soundwalls that are on an elevated berm along the boundary of the development. None of the build alternatives would exceed the noise threshold at these receptors.

- *Locally Preferred Alignment and Curved Alignment Alternative*—The future peak-hour equivalent noise levels with these alternatives would be 58 decibels at Receptor 10 (a 6-decibel increase), 58 decibels at Receptor 15 (a 7-decibel increase), and 59 decibels at Receptor 16 (a 9-decibel increase).
- *Foster Road Alignment Alternative*—The future peak-hour equivalent noise levels with this alternative would be 57 decibels at Receptor 10 (a 5-decibel increase), 57 decibels at Receptor 15 (a 6-decibel increase), and 57 decibels at Receptor 16 (a 7-decibel increase).
- *Reduced Extension Alternative*—The future peak-hour equivalent noise levels with this alternative would be 56 decibels at Receptor 10 (a 4-decibel increase), 55 decibels at Receptor 15 (a 4-decibel increase), and 54 decibels at Receptor 16 (a 4-decibel increase).

None of the build alternatives would increase the ambient noise level such that it exceeds noise thresholds. For this reason, no long-term noise abatement measures are recommended at this location.

Homes East of Orcutt Road and State Route 135 (Receptors 11 and 12)

Receptor 11 represents 1 residence southeast of the proposed intersection of Union Valley Parkway and Route 135. Receptor 12 represents 3 residences northeast of the proposed intersection of Union Valley Parkway and Route 135. These homes are located in the County of Santa Barbara. The peak-hour equivalent traffic noise level at these two receptors would increase for each alternative as shown below:

- *Locally Preferred Alignment, Curved Alignment Alternative, and Reduced Extension Alternative*—The future peak-hour equivalent noise levels with these alternatives increase to 62 decibels (a 2-decibel increase) at Receptor 11 compared to 65 decibels at Receptor 12 (a 4-decibel increase).
- *Foster Road Alignment Alternative*—The future peak-hour equivalent noise levels with this alternative would be 63 decibels at Receptor 11 (a 3-decibel increase) and 66 decibels at Receptor 12 (a 5-decibel increase).

None of the build alternatives would increase the ambient noise level such that it exceeds noise thresholds. For this reason, no long-term noise abatement measures are recommended at this location.

Homes to the North of the Existing Segment of Union Valley Parkway, East of Hummel Drive (Receptors 13 & 17)

Receptor 13 represents 23 residences located on the north side of the existing County segment of Union Valley Parkway, nearest to Hummel Drive. Receptor 17 represents three residences located on the north side of the existing County segment of Union Valley Parkway just west of Bradley Road. These homes are located in the County of Santa Barbara. The peak-hour equivalent traffic noise level at these receptors would change with each alternative as shown below:

- *Locally Preferred Alignment, Curved Alignment Alternative, and Reduced Extension Alternative*—The future peak-hour equivalent noise levels with these alternatives would be 66 decibels at Receptor 13 (a 9-decibel increase) and 64 decibels at Receptor 17 (a 1-decibel decrease from the current noise level).
- *Foster Road Alignment Alternative* —The future peak-hour equivalent noise levels with this alternative would be 65 decibels at Receptor 13 (an 8-decibel

increase) and 64 decibels at Receptor 17 (a 1-decibel decrease from the current noise level).

None of the build alternatives would increase the ambient noise level such that it exceeds noise thresholds under the California Environmental Quality Act. For this reason, no long-term noise abatement measures are recommended at this location.

Homes to the South of the Existing Segment of Union Valley Parkway, East of Hummel Drive (Receptors 14 & 20)

There is an existing 8- to 10-foot-high earthen berm topped by a 6-foot-high concrete soundwall along the northern boundary of these residential properties. These homes are located in the County of Santa Barbara.

Each of the build alternatives would increase the peak-hour equivalent traffic noise level to 65 decibels at Receptor 14 (a 3-decibel increase) and to 54 decibels at Receptor 20 (an 8-decibel increase). None of the build alternatives would increase the ambient noise level such that it exceeds noise thresholds. For this reason, no long-term noise abatement measures are recommended at this location.

Homes Along the Existing Segment of Union Valley Parkway, East of Bradley Road (Receptors 18 & 19)

Existing 6-foot masonry walls are on the north and south side of Union Valley Parkway in this area. These homes are located in the County of Santa Barbara.

With all of the build alternatives, the noise level at Receptor 18 would be the same as the future no-action noise level in this area, and would not be considered a significant increase. At Receptor 19 the noise level would increase by 6 decibels to 61 decibels with all of the build alternatives except the Reduced Extension Alternative. With this alternative the noise level would increase by 5 decibels, from 55 decibels to 60 decibels. None of the build alternatives would increase the ambient noise level such that it exceeds noise thresholds. For this reason, no long-term noise abatement measures are recommended at this location.

Homes Near State Route 101 Interchange Area (All Build Alternatives)

Because the proposed southbound ramps and State Route 101 would be the major noise source for existing sensitive receptors in the area of the proposed Union Valley Parkway/State Route 101 interchange, the proposed northbound ramps that would be across the freeway from sensitive receptors would not substantially contribute to noise impacts on those sensitive receptors. Noise levels for receptors located closest

to the proposed southbound ramps and State Route 101 (i.e., receptors R1 through R6; see Figure 22E) were modeled for the year 2030 using the Federal Highway Administration's Traffic Noise Model. Results of those forecasts are shown in Table 2-21. Receptor 3 would experience the greatest increase in noise levels [about 4 decibels $Leq(h)$] in 2030. However, none of the receptors would experience a substantial noise increase (12 decibels) or approach noise abatement criteria.

Note: The 2030 peak-hour noise levels were determined using predicted 2030 traffic volumes on the freeway, freeway ramps, and Union Valley Parkway. The prediction method used was the Federal Highway Administration's Traffic Noise Model.

The build alternatives would extend Union Valley Parkway east to State Route 101 and construct a freeway interchange with on- and off-ramps. The area west of State Route 101 and adjacent to Union Valley Parkway contains residential development, with the Edgewood development north of Union Valley Parkway and the Creekside development south of Union Valley Parkway. The area east of State Route 101 is primarily grass-covered, low, rolling hills (ancient sand dunes) used for agriculture and oil production. The residential development on the north side of Union Valley Parkway (Edgewood development) is already protected from street and highway traffic by an existing soundwall next to the proposed southbound off-ramp. However, the Creekside development has no soundwall next to the proposed southbound on-ramp.

Between November 1998 and June 1999, and in January 2008, ambient noise level readings were taken at six representative sensitive receptor sites. The sites were located next to the proposed southbound off- and on-ramps and next to the proposed extension of Union Valley Parkway. The noise level readings ranged from 53 to 63 decibels.

As shown in Table 2-21, the predicted noise levels in the locations that would experience the highest noise levels associated with the proposed interchange would range from 57 to 65 decibels $Leq(h)$ in 2030. The 65-decibel level was predicted at the rear of the residence on Harmony Lane, closest to the proposed southbound on-ramp. The 61-decibel level was predicted at the front of two residences facing the freeway on Bridgeport Road. The predicted increase in noise levels in 2030 at these three locations ranged from 2 to 4 decibels over the current ambient levels.

The predicted noise levels at these three locations, representing the locations that would experience the highest noise levels in 2030, do not meet the criteria for a

substantial noise increase (requiring an increase of 12 decibels). Consequently, noise impacts on sensitive receptors adjacent to the proposed Union Valley Parkway/State Route 101 interchange would not be substantial.

City and County policies require that new residential growth should not be located in high noise areas, and if so, should provide adequate mitigation to reduce noise levels to an acceptable level. It is expected that any new growth in the areas adjacent to the Union Valley Parkway corridor would be required to install soundwalls, berms, or other noise reduction mitigation.

No-Action Alternative

This alternative would not result in traffic along the proposed Union Valley Parkway corridor. If the No-Action Alternative is selected, there would be no construction project and no noise attributed to the project. Therefore, noise mitigation is not required for the No-Action Alternative.

Threatened and Endangered Animal Species, Curved Alignment, Foster Road Alignment)

Implementation of the Curved Alignment or Foster Road Alignment could affect threatened and endangered animal species, such as California red-legged frog and California tiger salamander that are known to use or potentially use habitats within the potential alignments. A detailed evaluation of the significant and unavoidable effects of each of these build alternatives on Threatened or Endangered species is provided in Section 2.3.5, *Threatened and Endangered Species*.

3.2.4 Climate Change under the California Environmental Quality Act

Regulatory Setting

While climate change has been a concern since at least 1988 as evidenced by the establishment of the United Nations and World Meteorological Organization's Intergovernmental Panel on Climate Change, the efforts devoted to greenhouse gas emissions reduction and climate change research and policy have increased dramatically in recent years. In 2002, with the passage of Assembly Bill 1493, California launched an innovative and proactive approach to dealing with greenhouse gas emissions and climate change at the state level. Assembly Bill 1493 requires the Air Resources Board to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions; these regulations would apply to automobiles and light trucks beginning with the 2009-model year. Greenhouse gases related to human activity include carbon dioxide, methane, nitrous oxide, tetrafluoromethane,

hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane).

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this executive order is to reduce California's greenhouse gas emissions to: 1) 2000 levels by 2010, 2) 1990 levels by the 2020, and 3) 80 percent below the 1990 levels by the year 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32, the Global Warming Solutions Act of 2006. Assembly Bill 32 sets the same overall greenhouse gas emissions reduction goals while further mandating that the Air Resources Board create a plan, which includes market mechanisms, and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." Executive Order S-20-06, signed on October 17, 2006, further directs state agencies to begin implementing Assembly Bill 32, including the recommendations made by the state's Climate Action Team.

With Executive Order S-01-07, Governor Schwarzenegger set forth the low carbon fuel standard for California. Under this executive order, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Climate change and greenhouse gas reduction is also a concern at the federal level; however, at this time, no legislation or regulations have been enacted specifically addressing greenhouse gas emissions reductions and climate change.

However, California, in conjunction with several environmental organizations and several other states, sued to force the U.S. Environmental Protection Agency (EPA) to regulate greenhouse gases as a pollutant under the Clean Air Act (*Massachusetts vs. Environmental Protection Agency et al.*, U.S. Supreme Court No. 05-1120. 549 U.S. [2007]. Argued November 29, 2006—Decided April 2, 2007). The court ruled that greenhouse gases do fit within the Clean Air Act's definition of a pollutant, and that the Environmental Protection Agency does have the authority to regulate greenhouse gases. Despite the Supreme Court ruling, there are no promulgated federal regulations to date limiting greenhouse gas emissions.

Affected Environment

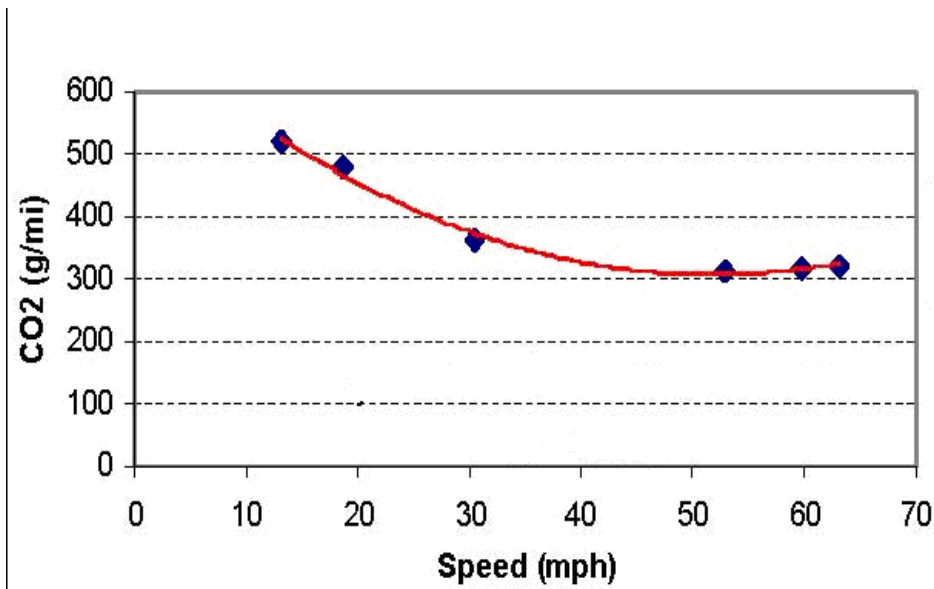
According to *Recommendations by the Association of Environmental Professionals on How to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), an individual project does not generate enough greenhouse gas emissions to significantly influence global climate change. Global climate change is a cumulative impact; a project participates in this potential impact

through its incremental contribution combined with the cumulative increase of all other sources of greenhouse gases.

Caltrans and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing greenhouse gas emissions reduction and climate change. Recognizing that 98 percent of California’s greenhouse gas emissions are from the burning of fossil fuels and 40 percent of all human-made greenhouse gas emissions are from transportation, Caltrans has created and is implementing the Climate Action Program at Caltrans (December 2006). Transportation’s contribution to greenhouse gas emissions is dependent on three factors: the types of vehicles on the road, the type of fuel the vehicles use, and the time/distance the vehicles travel.

One of the main strategies in Caltrans’ Climate Action Program to reduce greenhouse gas emissions is to make California’s transportation system more efficient. The highest levels of carbon dioxide from mobile sources, such as automobiles, occur at stop-and-go speeds (0-25 miles per hour) and speeds over 55 miles per hour; the most severe emissions occur from 0-25 miles per hour (see diagram below). To the extent that a project relieves congestion by enhancing operations and improving travel times in high congestion travel corridors, GHG emissions, particularly CO₂, will be reduced.

Fleet Carbon Dioxide (CO₂) Emissions vs. Speed (Highway)



Source: Center for Clean Air Policy—[http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20\(1-13-04\).pdf](http://www.ccap.org/Presentations/Winkelman%20TRB%202004%20(1-13-04).pdf)

Environmental Consequences

The proposed extension and interchange project is designed to reduce congestion and/or vehicle time delays by providing a major arterial for the movement of people and goods through the Santa Maria-Orcutt area. Ultimately, Union Valley Parkway is planned to be a major east/west roadway, linking residential and commercial areas in the communities of Orcutt and Santa Maria in Santa Barbara County. This would maintain the desired Level of Service on adjacent county roads, city streets, and the Santa Maria Way and Clark Avenue freeway interchange ramps along State Route 101.

The Union Valley Parkway Extension/Interchange Project was included in the 1999 Santa Barbara County Regional Transportation Plan, which is the most recent adopted Regional Transportation Plan. In addition, the Union Valley Parkway/State Route 101 interchange and landscaping components were included in Santa Barbara County Association of Governments' financially constrained 2006 Regional Transportation Improvement Program, page 8. Implementation of these plans would reduce vehicle hours traveled and improve traffic flow for the region. Due to the reduction in vehicle hours traveled and improved traffic flow, carbon dioxide emissions would be reduced despite what may be an increase in vehicle miles traveled. Refer to Section 1.4.6 for a discussion of alternatives considered but eliminated from further consideration, including transportation system management and transportation demand management. Without construction of the Union Valley Parkway extension and interchange, such approaches alone would not be expected to sufficiently facilitate efficient traffic circulation in the study area vicinity, in accordance with adopted level of service thresholds, address future safety issues, or conform to adopted plans and policies.

Caltrans and the City recognize the concern that carbon dioxide emissions raise for climate change. However, modeling and gauging the impacts associated with an increase in greenhouse gas emission levels, including carbon dioxide, at the project level is not currently possible. No federal, state, or regional regulatory agency has provided methodology or criteria for greenhouse gas emissions and climate change impact analysis. Therefore, Caltrans and the City are unable to provide a scientific- or regulatory-based conclusion regarding whether the project's contribution to climate change is cumulatively considerable.

Air emissions resulting from vehicles are directly related to the amount of miles that vehicles drive, the hours that they are on the road, and the hours that they are idling.

The following table shows the Vehicle Miles of Travel (VMT), Vehicle Hours of Travel (VHT), and Vehicle Hours of Delay (VHD) for various scenarios analyzed in the environmental document. Note that the performance measures were taken directly from the traffic model and represent model-wide traffic data. In this case, the Santa Maria Valley Traffic Model encompasses the City of Santa Maria-Orcutt area. Also note that the performance measures represent the P.M. peak hour period.

Santa Maria Valley Traffic Model Performance Measures

Scenario	VMT	VHT	VHD
Locally Preferred Alignment	494,494	12,579	2,895
Foster Road Alignment	494,672	13,628	2,931
Reduced Extension Alternative	494,795	13,632	2,936
No Project Alternative	494,829	13,723	3,007

VMT = Vehicle miles of travel

VHT = Vehicle hours of travel

VHD = Vehicle hours of delay

Source: Associated Transportation Engineers, 2008.

As shown in the table above, the Locally Preferred Alignment (Alternative 1) would result in the least amount of vehicle miles traveled, vehicle hours traveled, and vehicle hours of delay when compared to the other alternatives. The No Project Alternative (Alternative 5) would result in the greatest amount of VMT, VHT and VHD. Although not included in the above table, the Curved Alignment (Alternative 2) traffic forecasts would be the same as the Locally-Preferred Alternative since it essentially follows the same path from a regional perspective and the size of the road and traffic controls would be the same.

Section 2.2.4 *Air Quality, Environmental Consequences* states that “Operation of the project would result in increased levels of air pollutants in the micro-scale, but would not result in a substantial increase in regional emissions, as some traffic that currently uses the Santa Maria Way and Clark Avenue interchanges and roadways would be redistributed to Union Valley Parkway.”

Common GHGs include water vapor, carbon dioxide, methane, nitrous oxides, fluorinated gases, and ozone. Based upon the 2004 GHG inventory data (the latest year available) compiled by the California Energy Commission (CEC, December 2006), California produced 492 million metric tons of carbon dioxide equivalent

(CDE¹). The major source of GHG in California is transportation, contributing 41% of the state's total GHG emissions.

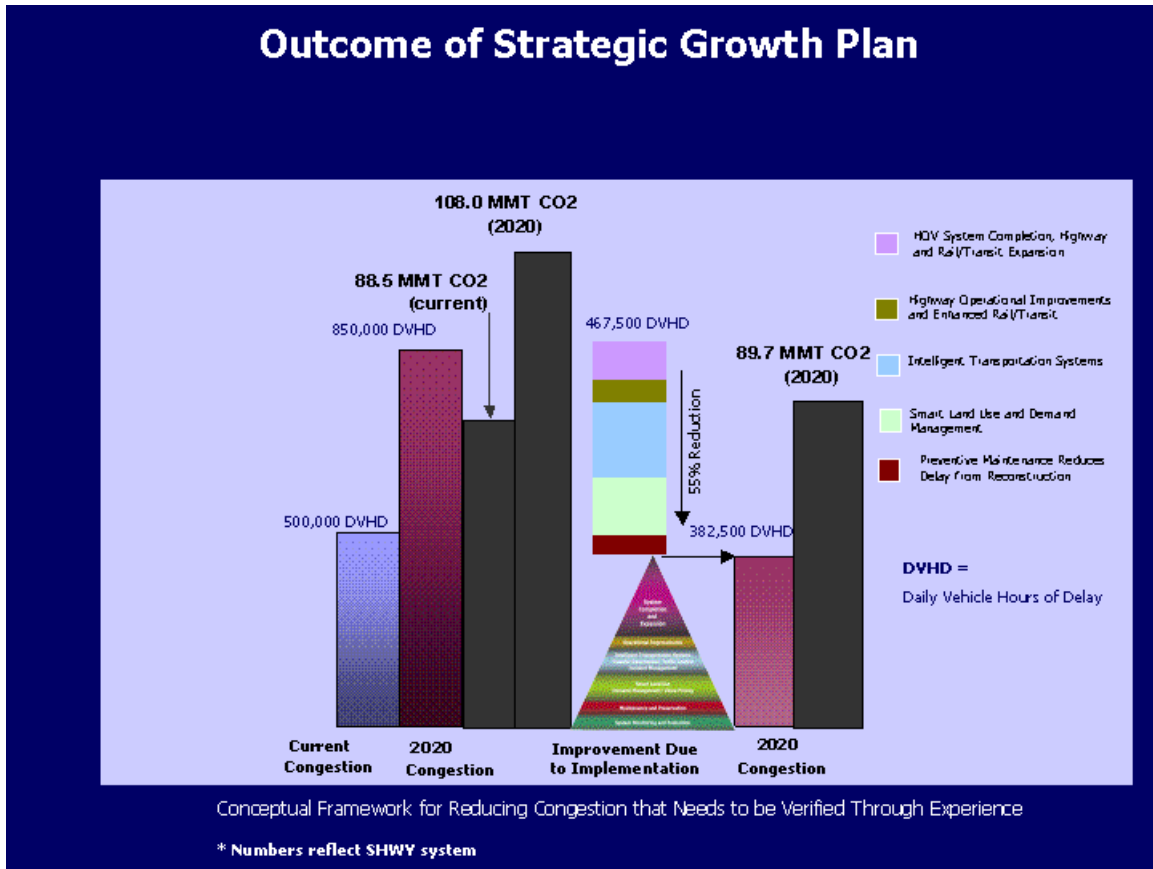
Since all of the build alternatives would result in fewer VMT, VHT and VHD than if the project were not built, the proposed Union Valley Parkway Extension and Interchange project would result in a reduction of vehicle emissions, and therefore fewer greenhouse gases, when compared to conditions if this project were not built.

This project would not in and of itself generate vehicle trips, but would serve existing local and regional traffic, thereby resulting in reduced congestion, reduced travel times, and an overall reduction in vehicle miles travelled. It is not necessary to quantify the amount of greenhouse gases that could be removed by this project because, as described above, the proposed Union Valley Parkway Interchange and Extension would actually have a beneficial impact to global climate change in that it would result in a reduction of greenhouse gases caused by traffic in the project area, when compared to the No Action Alternative.

Avoidance, Minimization, and/or Mitigation Measures

Caltrans continues to be actively involved on the Governor's Climate Action Team as the Air Resources Board works to implement Assembly Bill 1493 and to help achieve the targets set forth in Assembly Bill 32. Many of the strategies the Department is using to help meet the targets in AB 32 come from the California Strategic Growth Plan, which is updated each year. Governor Arnold Schwarzenegger's Strategic Growth Plan (SGP) calls for a \$222 billion infrastructure improvement program to fortify the state's transportation system, education, housing, and waterways, including \$107 in transportation funding during the next decade. As shown on the figure below, the SGP targets a significant decrease in traffic congestion below today's level and a corresponding reduction in GHG emissions. The SGP proposes to do this while accommodating growth in population and the economy. A suite of investment options has been created that combined together yield the promised reduction in congestion. The SGP relies on a complete systems approach of a variety of strategies: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements.

¹ Carbon dioxide equivalent (CDE or CO₂E) is a quantity that describes, for a given mixture and amount of GHGs, the amount of CO₂ (usually in metric tons; million metric tons = MMTCO₂E) that would have the same global warming potential (GWP) when measured over a specified timescale (generally, 100 years).



As part of the Climate Action Program at Caltrans (December 2006), Caltrans is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, transit-oriented communities, and high-density housing along transit corridors. Caltrans is working closely with local jurisdictions on planning activities; however, Caltrans does not have local land use planning authority. Caltrans is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars and light and heavy-duty trucks. However, it is important to note that control of fuel economy standards is held by the United States Environmental Protection Agency and the Air Resources Board. Lastly, the use of alternative fuels is also being considered; Caltrans is participating in funding for alternative fuel research at the University of California Davis.

The table provided on the following page summarizes the Department and statewide efforts that Caltrans is implementing in order to reduce GHG emissions. For more detailed information about each strategy, please see *Climate Action Program at Caltrans* (December 2006); it is available at <http://www.dot.ca.gov/docs/ClimateReport.pdf>.

To the extent that it is applicable or feasible for the project, the following measures should be included in the project to reduce the greenhouse gas emissions and potential climate change impacts from projects:

1. Use of reclaimed water—currently 30 percent of the electricity used in California is used for the treatment and delivery of water. Use of reclaimed water helps conserve this energy, which reduces greenhouse gas emissions from electricity production.
2. Landscaping—reduces surface warming and through photosynthesis decreases carbon dioxide.
3. Portland cement—use of lighter color surfaces such as Portland cement helps to increase the albedo effect (measure of how much light a surface reflects) and cool the surface; in addition, Caltrans has been a leader in the effort to add fly ash to Portland cement mixes. Adding fly ash reduces the greenhouse gas emissions associated with cement production—it also can make the pavement stronger.
4. Lighting—Use of energy efficient lighting, such as LED traffic signals
5. Idling restrictions—for trucks and equipment, in accordance with the California Air Resources Board *Air Toxics Control Measures*.

Chapter 3 • California Environmental Quality Act Evaluation

Strategy	Program	Partnership	Method/Process	Estimated CO2 Savings (MMT)	
				2010	2020
Smart Land Use	IGR	Lead: Caltrans Partner: Local Governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Lead: Caltrans Partner: Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Lead: Regional Agencies Partner: Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements and Intelligent Trans. System (ITS) Deployment	Strategic Growth Plan	Lead: Caltrans Partner: Regions	State ITS; Congestion Management Plan	.007	2.17
Mainstream Energy and GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Env. Analysis	Interdepartmental effort	Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational and Information Program	Office of Policy Analysis & Research	Partner: Interdepartmental, CalEPA, CARB, CEC	Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening and Fuel Diversification	Division of Equipment	Department of General Services	Fleet Replacement B20 B100	0.0045	0.0065 0.45 .0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team	Energy Conservation Opportunities	0.117	.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries	2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 .36	3.6
Goods Movement	Office of Goods Movement	CalEPA, CARB, BT&H, MPOs	Goods Movement Action Plan	Not Estimated	Not Estimated
Total				2.72	18.67

3.3 Mitigation Measures for Significant Impacts Under the California Environmental Quality Act

This section outlines the recommended mitigation measures and the residual effects or level of significance remaining after the implementation of the measures. In those cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect.

3.3.1 Land Use (1)

The following measure is required for the Foster Road Alignment Alternative only:

- LU-1(a)** At the time of acquisition, when relocation would become necessary, the City and Caltrans would provide relocation assistance to displaced businesses, in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and Title 49 Code of Federal Regulations, Part 24.

Impact After Mitigation

Implementation of the recommended avoidance, minimization, and mitigation measure would reduce land use conflicts associated with the Foster Road Alignment Alternative to the extent feasible. However, local circulation, site access, planned use of sites, facility layout, parking, clearances, and setback conflicts would remain and are all considered substantial impacts associated with this alternative. Therefore, impacts would remain significant and unavoidable.

3.3.2 Land Use (2)

The following measure is required for all build alternatives:

- LU-2(b)** Construction plans would be submitted to Greka Energy and/or Union Oil for review and comment for grading or excavation proposed within 25 feet of known oil or gas lines. In addition, to identify and avoid all known subsurface lines, Underground Service Alert would be consulted immediately before construction. A private utility locator service and/or individual private property owners would be consulted immediately before construction if excavation were scheduled to occur on private property.

Impact After Mitigation

Implementation of the recommended avoidance, minimization, and mitigation measure would reduce potential conflicts with oil or gas lines to a less than significant level.

3.3.3 Aesthetics (1)

The following measures apply to the visual impacts within the study area for all build alternatives. It should be noted that the Locally Preferred Alignment and Curved Alignment alternatives would improve access to aesthetically pleasing views of open space east and west of State Route 135, which would be considered a beneficial effect. Nevertheless, for each of the build alternatives, mitigation would be required to minimize the project's effects on visual resources and ensure consistency with the City of Santa Maria policies pertaining to the protection of visual resources.

AES-1 (a) To minimize visual character and compatibility effects, long expanses of walls or fences would be interrupted with offsets and provided with accents to prevent visual monotony. Wall colors would be compatible with surrounding terrain. Whenever possible, a combination of elements would be used, including walls and landscaped berms.

AES-1 (b) To minimize visual character and compatibility effects, where landforms are modified during construction, recontouring of land masses would provide a smooth and gradual transition between modified landforms and existing grades.

AES-1(c) Street lights would be hooded and directed to project area roadways to avoid light and glare impacts to residences, aviation, and nearby habitat areas. Roadway lighting would be minimized to the extent possible, and would not exceed the minimum height requirements of the local jurisdiction in which the lighting is located.

Refer to Section 2.3.1, *Natural Communities*, for a discussion of avoidance, minimization, and/or mitigation measures that require replacement of removed trees at the following ratios: 2:1 (number of trees planted:number of trees removed) for trees six to eight inches in diameter (as measured at 4 ½ feet above the ground); 2) 4:1 for trees nine to 12 inches in diameter; and 3) 6:1 for trees greater than 12 inches

in diameter. The planting of replacement trees in accordance with this measure will reduce long-term impacts related to visual character associated with tree removal.

Impact after Mitigation

With the implementation of the above measures, visual effects of the project would be mitigated to the extent feasible and would be consistent with the City of Santa Maria policies pertaining to the protection of visual resources.

3.3.4 Cultural Resources (1)

The following mitigation measures are required to address potential cultural resource impacts that could occur as a result of implementation of any of the build alternatives.

- CR-1(a)** If artifacts were discovered during excavation, all earth-moving activity within and around the immediate discovery area would be diverted until a qualified archaeologist could assess the nature and significance of the find.

- CR-1(b)** If human remains were discovered, State Health and Safety Code Section 7050.5 states that disturbances and activities would cease. The County Coroner would be notified of the find immediately so that he/she may ascertain the origin. Pursuant to Public Resources Code Section 5097.98, if the remains were thought to be Native American, then the coroner would notify the Native American Heritage Commission who would then notify the Most Likely Descendent. At this time, the person who discovered the remains would contact the Caltrans District 5 Central Coast Environmental Management Branch so that they may work with the Most Likely Descendent on the respectful treatment and disposition of the remains. Further provisions of Public Resources Code 5097.98 are to be followed as applicable.

Impact After Mitigation

Implementation of the build alternatives would have a less than significant impact on cultural resources.

3.3.5 Hydrology and Water Quality (2)

The following measure is required for all build alternatives to reduce pollutant concentrations in roadway runoff and ensure long-term functionality of the runoff filtration devices.

HWQ-2(a) Final project design would include a storm water control and filtering system along the length of the roadway to capture and treat all first flush runoff from the roadway prior to discharge to channels outside the project area.

HWQ-2(b) A maintenance program for the storm water control and filtering system would be developed in accordance with the California Department of Transportation Best Management Practices handbook to eliminate the potential for odor problems and provision of mosquito habitat, and to prevent clogging. Best Management Practices may include a combination of the following: biofiltration strips and swales; infiltration devices; detention devices; traction sand traps; dry weather flow diversion; gross solids removal devices; media filters; multi-chamber treatment train; and wet basins.

HWQ-2(c) The City and Caltrans would limit the use of pesticides, herbicides, and inorganic fertilizers applied to roadway landscaping or weed abatement to those quantities necessary to treat specific problems.

Impact After Mitigation

Treatment of the first flush storm water runoff along with the required maintenance plan would reduce water quality impacts to offsite drainage features to a less than significant level.

3.3.6 Geology and Soils (1)

The following mitigation measure is required to mitigate effects associated with the Locally Preferred Alignment, Curved Alignment, and Foster Road Alignment Alternatives.

GS-1(a) Geotechnical studies would be performed to evaluate site-specific conditions and liquefaction potential along the project area. The City would design and implement measures needed to comply with the

current Caltrans Standard Specifications to reduce settlement associated with liquefaction. Suitable measures to avoid liquefaction impacts would include one or more of the following as recommended in the geotechnical study: removal or treatment of liquefiable soils to reduce the potential for liquefaction, drainage to lower the groundwater table to below the level of liquefiable soils, compacting or consolidating onsite soils, or other alterations to the ground characteristics.

Impact After Mitigation

With implementation of the above mitigation measure, impacts associated with liquefaction would be reduced to a less than significant level.

3.3.7 Hazards and Hazardous Materials (3)

The following measures are required for all of the build alternatives. While the Initial Site Assessment did not identify the possible presence of abandoned oil wells in the project area, the following measures are suggested as a precaution to avoid the unanticipated discovery of contamination related to historic oil and gas operations or other potential contamination sources in the project area.

HM-3(a) If during construction/grading activities the contractor discovers an unknown waste or debris believed to involve hazardous waste and/or materials, the contractor would immediately stop work in the vicinity of the suspected contaminant, remove workers and the public from the area, and contact the City of Santa Maria Construction Engineer. If hazardous materials (including contaminated soil or groundwater) are uncovered during construction activities, all materials found would be removed, handled, and disposed of in accordance with state and federal regulations. All hazardous materials involvement would be coordinated with the appropriate federal, state, and local regulatory agencies.

HM-3(b) Before the initiation of construction activities in the identified area of the sand-tar mixture, several soil samples in the area of the identified sand-tar mixture would be taken from beneath the material by a qualified professional to discern if hydrocarbons have affected the soil beneath the tank bottoms and identify the extent of contamination. The

contract would include a bid quantity of material to be removed. The initial quantity would be bid on a per-cubic-yard basis with a specified method of measurement and method of payment. The quantity of contamination would be identified with final construction plans. Final payment would be based on actual quantities encountered and removed. If concentrations of hydrocarbons above health hazard threshold levels were not detected in the underlying soil, the tank bottoms would be removed from the project area and disposed of in accordance with state and federal regulations. If hazardous concentrations of hydrocarbons above health hazard threshold levels were detected in the underlying soil, the tank bottoms would be removed and disposed of in accordance with state and federal regulations, and the area would be cleaned up in accordance with applicable local, state, and federal requirements. This requirement, including the need for soils testing and remediation if necessary before initiation of construction activities, would be noted in the construction contract for the potentially affected portion of the project.

In addition, mitigation identified in Section 3.3.2 *Land Use (2)* would also apply.

Impact After Mitigation

With implementation of the above mitigation measure, impacts associated with hazardous materials would be reduced to a less than significant level.

3.3.8 Noise (1)

The following measures are required for the build alternatives to reduce construction noise impacts along the Union Valley Parkway corridor and interchange area.

- N-1(a)** A construction noise reduction would be prepared that includes the following requirements:
1. Establish a procedure for noise complaints.
 2. Equip all equipment used in construction with the manufacturer's recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators.
 3. Use electrical power if electrical service is available within a reasonable distance to run air compressors and similar small power tools.

4. Limit roadway extension construction activity to daytime hours of 7 a.m. to 5 p.m., Monday through Friday, and 8 a.m. to 5 p.m. on Saturdays, to minimize sleep disturbance and interference of speech, and reduce general annoyance. No roadway extension construction would occur on Sundays or federal holidays (i.e. Thanksgiving, Labor Day). Roadway extension construction equipment maintenance would be limited to the same hours. It should be noted that interchange construction would occur during evening and nighttime hours.
5. Provide notification to home occupants adjacent to the project area at least one week before initiation of construction activities that could substantially affect outdoor or indoor living areas. This notification would include the anticipated hours and duration of construction and a description of noise reduction measures, including construction equipment noise abatement measures and use of electrical power, where applicable.
6. All stationary noise-generating construction equipment (such as air compressors and electric generators) would be required to be located as far as practical from nearby residences.

Impact After Mitigation

Implementation of the recommended avoidance, minimization, and mitigation measures would reduce construction noise to less than significant levels per the City and California Environmental Quality Act criteria.

3.3.9 Noise (2)

The following measures are required for the build alternatives to reduce construction vibration impacts along the Union Valley Parkway corridor and interchange area.

- N-2(a)** Notify residents within 300 feet of areas where pile driving, pavement breaking, and vibratory rolling would take place at least two weeks in advance of the proposed activity. Residents may wish to secure fragile items that could be broken by shaking.
- N-2(b)** Conduct photo surveys of structures within 100 feet of pile driving in advance of potentially damaging construction work (i.e., when

expected vibrations are greater than 0.4 inches per second within 60 feet of a pile driving location.)

- N-2(c) Use vibratory pile driving or Cast-in-Drill-Hole methods when soil and other conditions are favorable for employment of these methods.
- N-2(d) Pre-drill pile holes when feasible.
- N-2(e) Use rubber tires instead of tracked vehicles near vibration-sensitive areas.
- N-2(f) Assure that night joints and bridge conforms are as smooth as possible, especially where there is heavy truck traffic near residences.
- N-2(g) Perform activities most likely to propagate objectionable noise or vibrations (nearest the residences) during the day, or at least before most residents retire for the night.

Impact After Mitigation

For the Locally Preferred Alternative and Curved Alignment Alternative, noise abatement is not proposed in certain locations, such as residential and private recreational receptors in the Foxenwood Subdivision, west of California Boulevard, because the implementation of noise barriers would not be feasible in these locations because noise barriers would not produce a perceptible sound level reduction, even at barrier heights that would be costly and may result in additional aesthetic impacts. With the Locally Preferred Alternative and Curved Alignment Alternative, 16-foot-high noise barriers at Receptors 3 and 4 are estimated to cost over \$600,000 (refer to Table 2-22), but would only produce an approximately 2- to 3-decibel sound level reduction, which may not be perceptible to the human ear. Accordingly, such noise barriers are considered infeasible. Since noise levels may continue to exceed threshold levels in these locations, impacts would remain *significant and unavoidable*.

3.3.10 Biological Resources (1)—Natural Communities/Woodlands

To minimize project impacts to woodland habitats, including those considered to be special-status, occurring on the build alternatives, the following measures are required:

BIO-1(a) Before the approval of any grading plan for the project, a City-approved biologist or arborist would prepare a tree protection, replacement and monitoring program that ensures compliance with the City's Municipal Code 12-44 as it pertains to tree replacement ratios, as follows: 1) 2:1 (number of trees planted:number of trees removed) for trees six to eight inches in diameter (as measured at 4 ½ feet above the ground); 2) 4:1 for trees nine to 12 inches in diameter; and 3) 6:1 for trees greater than 12 inches in diameter. In addition, the plan would include compensatory mitigation for eucalyptus and coast live oak woodland habitats at a 2:1 ratio (habitat area created:habitat area lost). Requirements for the tree protection plan would include, but not be limited to, the protection of trees with construction setbacks from trees; construction fencing around trees; and grading limits around the base of trees as required. The tree replacement plan would include identification of restoration areas, strategies, an implementation schedule, irrigation design plan, long-term monitoring methods, success criteria, methods to assess whether success criteria have been met, and contingency plans for meeting success criteria. The program would be monitored for five years, and monitoring reports that evaluate tree survivability, health, and vigor would be submitted to the City annually. All trees planted as mitigation would have an 80 percent survival rate after five years. A conservation easement would be placed upon the mitigation area to protect it in perpetuity.

Impact After Mitigation

Implementation of the above mitigation measure would reduce cumulative impacts to woodland habitats, including those considered to be special-status, occurring on the Locally Preferred Alignment and other alternatives to a less than significant level. Temporary impacts of the loss of these habitats would remain due to the time lag between habitat disturbance/removal and the establishment of the mitigation areas.

3.3.11 Biological Resources (2)—Wetlands

The following mitigation measure is required for wetlands on all build alternatives.

BIO-2(a) The project proponent would compensate for the habitat loss or disturbance of identified Cowardin classified wetlands and Corps jurisdictional areas at a ratio of 2:1 for wetland areas permanently and

temporarily affected. The mitigation would consist of wetland creation and enhancement. For complete details of the wetland mitigation plan, see *Wetland Mitigation Plan; Union Valley Parkway Extension Project* in Attachment D of the Natural Environment Study. In addition, the project proponent would demonstrate compliance with Section 404 of the Clean Water Act from the U.S. Army Corps of Engineers and Section 401 of the Clean Water Act from the Regional Water Quality Control Board for any grading or fill activity within wetlands or other Waters of the U.S.

Impact After Mitigation

Impacts to wetlands would be less than significant after mitigation for all of the build alternatives.

3.3.12 Biological Resources (3)—Natural Communities/Central Dune Scrub and Valley Needlegrass Grassland

The following mitigation measure is required for central dune scrub on all build alternatives and valley needlegrass grassland habitat on the Foster Road Alignment Alternative.

BIO-3(a) The project proponent would compensate for the loss of central dune scrub and valley needlegrass grassland habitat through the creation or enhancement of these habitats at a location outside the project area at a mitigation ratio of 2:1.

Impact After Mitigation

Impacts to central dune scrub and valley needlegrass grassland habitat would be less than significant after mitigation for all of the build alternatives.

3.3.13 Biological Resources (4)—Plant Species

To avoid impacts to one rare plant species, curly-leaved monardella, identified on the Locally Preferred Alignment and Curved Alignment Alternative, the following avoidance, minimization, and mitigation measures are required:

BIO-4(a) Avoidance of curly-leaved monardella is the primary measure to protect them. If avoidance were not feasible, then a mitigation and monitoring program, including a salvage and relocation program,

would be prepared and implemented. The plan would include the measures necessary for the establishment of self-sustaining populations in suitable open space areas designated by the City to ensure the long-term survivability of the species in the vicinity. Salvage and relocation activities would include the following: seed and/or topsoil collection; germination of seed by a qualified horticulturist in a nursery setting; transplanting seedlings, and hand broadcasting seed into the appropriate open space habitats. Annual monitoring would take place for at least five years to ensure no net loss of acres of habitat for this species. The acreage ratio of lost special-status plant species habitat to habitat replaced would be no less than 1:1.

Impact After Mitigation

Implementation of the above avoidance, minimization, and mitigation measures would reduce impacts to plant species that are rare and/or species of special concern to a less than significant level under the California Environmental Quality Act.

3.3.14 Biological Resources (5)—Animal Species

To avoid and minimize impacts to animals that are rare and/or species of special concern and their habitat that occur on the build alternatives, the following avoidance, minimization, and mitigation measures are required:

- BIO-5(a)** To avoid impacts to nesting special-status bird species, and other birds protected under the Migratory Bird Treaty Act and/or California Department of Fish and Game code, all initial ground-disturbing activities and tree removal would be limited to the period between September 1 and February 1. If initial project-specific site disturbance, grading, and tree removal cannot be conducted during this time period, pre-construction surveys for active nests within the limits of the project would be conducted by a qualified biologist approved by the City two weeks before any construction activities. If no active nests are located, ground-disturbing/construction activities can proceed. If active nests are located, then all construction work must be conducted outside a non-disturbance buffer zone at a distance established by the City in consultation with the California Department of Fish and Game and depending upon the species. No direct disturbance to nests would

occur until the adults and young are no longer reliant on the nest site as determined by the City-approved qualified biologist.

BIO-5(b) To avoid impacts to turkey vulture roosts (if present), preconstruction surveys for active roosts within the limits of the project would be conducted by a qualified biologist approved by the City before initiation of construction activities. If roost sites were located, they would be avoided wherever possible and no more than two pieces of construction equipment would be used simultaneously within 100 feet of active roost sites.

The trees and habitat structure lost due to development would be adequately mitigated through replacement of the oaks and eucalyptus (please see mitigation measures under BIO-1 above). Before maturation of the replacement trees, adequate alternative roosting sites are available throughout the project vicinity.

BIO-5(c) Because the distribution of the western spadefoot within the project area is not well understood, it is not known if any of the alternatives would avoid areas occupied by the species. Minimization measures for the western spadefoot are the same as those specified for the California tiger salamander, and would be implemented concurrently:

1. At least one month before the start of western spadefoot surveys/trapping, the name(s) and qualifications(s) of the biologist(s) who would conduct surveys would be submitted to the City for approval.
2. For the period October 15 through June 15 of the year before the start of construction, all work areas within 2,200 feet of California tiger salamander breeding ponds would be fenced with drift fence and pitfall traps (Figure 30). The western spadefoot occupies many of the same aquatic breeding sites as the California tiger salamander, and the local distribution of the California tiger salamander is better understood. This would allow for the exclusion of the western spadefoot and other animals from the work area (including southern Pacific pond turtles, California tiger salamanders, and California red-legged frogs) and the relocation of any animals that may emerge from burrows inside the work area.

Installation of the fence and traps would follow materials, design, and implementation specifications detailed in the California tiger salamander protocol (U.S Fish and Wildlife Service 2003a), with the exception that there would be no gaps between sections of fence. A qualified biologist must oversee the installation of the fence and be present during all trapping. For the two weeks following installation, a biologist would survey the area inside the fence daily and relocate any animal species encountered to areas outside the fence. Pitfall traps would be opened during all rain events or humid overnight conditions as specified in the protocol throughout the period from October 15 through June 15. All frogs and toads would be released at the nearest suitable aquatic habitat.

3. Captured western spadefoots would immediately be placed into containers containing moist soil and plant material from the location of capture, and released in designated relocation areas no more than three hours after capture.
4. During all initial ground-disturbing activities, a qualified biologist would be present in the study area to recover any western spadefoot that may be excavated from an underground refuge. If the animals were in good health, they would be relocated immediately to the designated release area. If they were injured or killed, the animals would be deposited at a suitable vertebrate museum, such as the Santa Barbara Museum of Natural History or the University of California Santa Barbara Museum of Systematics and Ecology.
5. Before any construction activities begin on the project, a qualified biologist would conduct a training session for all construction personnel. At a minimum, the training would include a description of the western spadefoot and its habitat, the importance of the western spadefoot and its habitat, the general measures that are being implemented to conserve the western spadefoot as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session. The City and appropriate resource agency personnel would be notified of the date and time the training is scheduled so they may attend.

6. A qualified biologist would be present at the work site until such time as all removal of western spadefoot, instruction of workers, and initial ground disturbance have been completed. After this time, the City would designate a person to monitor compliance with all mitigation measures. The qualified biologist would ensure that this individual receives the training outlined above.
7. The number of access routes, number and size of staging areas, and the total area of the activity would be limited to the minimum necessary to achieve the project goal. Routes and boundaries would be clearly marked, and would be outside wetland areas. Fueling and maintenance of vehicles and other equipment and staging areas would occur at least 100 feet from any riparian or wetland habitat. The City would ensure that contamination of habitat does not occur during such operations. Before work begins, the City would prepare and comply with an emergency response plan to allow a prompt and effective response to any accidental spills. All workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
8. California Natural Diversity Database forms would be completed and sent to the California Department of Fish and Game for all western spadefoots observed during the project.

BIO-5(d) The following measures to minimize impacts on the two-striped garter snake would be implemented:

1. Before any construction activities begin on the project, a qualified biologist would conduct a training session for all construction personnel. At a minimum, the training would include a description of the two-striped garter snake and its habitat, the importance of the two-striped garter snake and its habitat, the general measures that are being implemented to conserve the two-striped garter snake as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session. The City and appropriate resource agency personnel would be notified of the date and time the training is scheduled so they may attend.

2. During all initial ground-disturbing activities, a qualified biologist would be present in the study area to recover any two-striped garter snakes that may be excavated from an underground refuge. If the animals were in good health, they would be relocated immediately to a designated release area. If they were injured or killed, the animals would be deposited at a suitable vertebrate museum, such as the Santa Barbara Museum of Natural History or the University of California Santa Barbara Museum of Systematics and Ecology.
3. California Natural Diversity Database forms would be completed and sent to the California Department of Fish and Game for all two-striped garter snakes observed during the project.

BIO-5(e)

Avoidance and minimization efforts for California legless lizard require the City to retain a qualified biologist to conduct pre-construction surveys and monitor construction activities as follows:

1. Raking surveys would be conducted on a weekly basis from February 1 through May 31 before the start of construction. These surveys would entail raking of leaf litter and sand under shrubs within suitable habitat in the area to be disturbed, to a minimum depth of eight inches.
2. In addition to raking, “coverboards” would be used to capture California legless lizards. Coverboards should consist of untreated plywood at least 4 feet long by 4 feet wide. Coverboards would be placed flat on the ground at least six months before construction or from February 1 through May 31 and checked once a week. Captured lizards would be placed immediately into containers containing sand and kept at a constant cool temperature. Lizards would be released in designated relocation areas no more than one hour after capture.
3. During all initial grading activities, a qualified biologist would be present in the study area to recover any California legless lizards that may be excavated/unearthed with native material. If the animals were in good health, they would be immediately relocated to the designated relocation area. If they were injured, the animals would be turned over to a specialist approved by the California Department of Fish and Game until they were in a condition to be

released into the designated release area or deposited at an approved vertebrate museum.

4. California Natural Diversity Database forms would be completed and sent to the California Department of Fish and Game for all California legless lizards observed during the project.

BIO-5(f)

Avoidance and minimization efforts would require the City to retain a qualified biologist who would monitor construction activities in habitat suitable for the southern Pacific pond turtle to ensure that impacts to the species are avoided or minimized, as follows:

1. An exclusion fence constructed out of three-foot-tall silt fence would be installed around the perimeter of the work site and keyed into the ground to exclude southwestern pond turtles from the construction activities. This fence would be installed during the month of April, before the start of construction, for areas within 1,500 feet of the Foxenwood Basin and the sediment basin near the intersection of Union Valley Parkway and Hummel Drive. The timing of installation should allow for hatchlings to have emigrated to aquatic sites, and should prevent adult females from entering the area to establish new nests. The area within the exclusion fence should then be surveyed for southern Pacific pond turtles on a daily basis for the first two weeks, and weekly thereafter until the start of construction. If any southern Pacific pond turtles were found, they would be moved out of the exclusion area by a qualified biologist and relocated to the nearest aquatic site with suitable habitat.
2. A biologist would survey all areas of the work site within 1,640 feet of the Foxenwood Basin two weeks before the start of site grading or other ground-disturbing activities. The survey should include raking of leaf litter and sand under shrubs within suitable habitat in the area to be disturbed to a minimum depth of five inches. The approved biologist would be allowed sufficient time to relocate southern Pacific pond turtle before work activities begin.
3. Before any construction activities begin, a biologist would conduct a training session for all construction personnel. At a minimum, the training should include a description of the southern Pacific

pond turtle, its habitat, and status; the general measures that are being implemented to conserve the species as they relate to the project; and, the boundaries within which the project may be accomplished. A worker education handout containing this information would be distributed to participants, and a sign-in sheet completed. The City and appropriate resource agency personnel would be notified of the date and time the training is scheduled so they may attend.

4. During all initial grading activities, a qualified biologist would walk alongside the excavating equipment to recover any southern Pacific pond turtles that may be uncovered. If the animals were in good health, they would be immediately relocated to the designated release area. If they were injured, the animals would be turned over to a specialist approved by the California Department of Fish and Game until they were in a condition to be released into the designated release area. Dead southern Pacific pond turtles would be deposited at a vertebrate museum such as the Santa Barbara Natural History Museum or the University of California Santa Barbara Museum of Systematics and Ecology.
5. California Natural Diversity Database forms would be completed and sent to the California Department of Fish and Game for all southern Pacific pond turtles observed during the project.

BIO-5(g) Avoidance and minimization efforts for coast horned lizard require the City to retain a qualified biologist to monitor construction activities in habitat suitable for the coast horned lizard to ensure that impacts to coast horned lizard are avoided or minimized:

1. Before the initiation of construction, a survey would be conducted for the coast horned lizard. If construction activities are to take place within the activity period of the coast horned lizard (April to October), pre-construction visual surveys would be conducted weekly beginning two months before initial ground-disturbing activities. All lizards found within the project footprint would be captured and released into designated relocation areas approved by the City and a qualified biologist.

2. “Coverboards” would be used to capture coast horned lizards. Coverboards should consist of untreated plywood at least 4 feet long by 4 feet wide. Coverboards would be placed flat on the ground at least six months before construction or from February 1 through May 31 and checked once a week. Captured lizards would be placed immediately into containers containing sand and kept at a constant cool temperature. Lizards would be released in designated relocation areas no more than one hour after capture.
3. During all initial grading activities, a qualified biologist would be present in the study area to recover any coast horned lizard that may be excavated/unearthed with native material. If the animals were in good health, they would be immediately relocated to the designated relocation area. If they were injured, the animals would be turned over to a specialist approved by the California Department of Fish and Game until they were in a condition to be released into the designated release area or deposited at an approved vertebrate museum.
4. California Natural Diversity Database forms would be completed and sent to the California Department of Fish and Game for all coast horned lizards observed during the project.

BIO-5(h) To avoid the potential mortality of American badgers, no grading would occur within 50 feet of an active American badger den between March 1 and June 30 as determined by a qualified biologist approved by the City. Construction activities between July 1 and March 1 would comply with the following measures to avoid mortality of adult and/or young badgers:

1. A qualified biologist approved by the City would conduct a survey for active American badger dens within the entire project area between 2 weeks and 4 weeks before the start of ground clearing or grading activity. The survey would cover the entire study area, but would focus on the areas where suitable American badger habitat occurs. A fiber optic scope or other non-invasive means would be used to assess the presence of badgers within dens that are too long to see to the end. Inactive dens would be collapsed by

hand with a shovel to prevent badgers from re-using them during construction.

2. Before grading, badgers would be discouraged from using currently active dens by partially blocking the entrance of the den with sticks, debris, and soil for 3 to 5 days. Access to the den would be incrementally blocked to a greater degree over this period. This would cause the badger to abandon the den site and move elsewhere. After badgers have stopped using active dens within the project study area, the dens would be hand-excavated with a shovel and collapsed to prevent re-use. A qualified biologist would be present during the initial ground-disturbing activity. If badger dens are found, all work would cease until the biologist can safely close the badger den. Once the badger dens have been closed, work in the project area may resume.

Impact After Mitigation

Implementation of the above avoidance, minimization, and mitigation measures would reduce impacts to wildlife species that are rare and/or a species of special concern and their habitat occurring on the build alternatives to a less than significant level under the California Environmental Quality Act.

3.3.15 Biological Resources (6)—Threatened and Endangered Species

To avoid and minimize impacts to federally listed animal species and their habitats that occur on the build alternatives, with the exception of the Reduced Extension Alternative for which State Route 135 would act as a substantial barrier to movement of these species from the west, avoidance, mitigation and minimization measures BIO-6(a) and BIO-6(b) are recommended. Minimization measure BIO-6(c) is recommended for impacts to federally listed vernal pool fairy shrimp for the Foster Road Alignment Alternative.

BIO-6(a) The following avoidance, mitigation and minimization measures are required to reduce impacts to the California tiger salamander:

1. At least one month before the onset of activities, the City, in consultation with Caltrans, would submit the name(s) and credentials of biologists who would conduct any California tiger salamander activities to the U.S. Fish and Wildlife Service for

approval. No project activities would begin until proponents have received written approval from the U.S. Fish and Wildlife Service that the biologist(s) is qualified to conduct the work. Only biologists approved by the U.S. Fish and Wildlife Service would participate in activities associated with the capture, handling, and monitoring of California tiger salamander.

2. The City would contact the U.S. Fish and Wildlife Service to determine an appropriate site in which to relocate California tiger salamander if found in the work area.
3. From October 15 through June 15 of the year before the start of construction, all work areas within 2,200 feet of California tiger salamander breeding ponds (Figure 30) would be fenced with drift fence and pitfall traps. This would allow for the exclusion of California tiger salamander and other animals from the work area (including southern Pacific pond turtles, California red-legged frogs and western spadefoots) and the relocation of any animals that may emerge from burrows inside the work area. Installation of the fence and traps would follow materials, design, and implementation specifications detailed in the California tiger salamander protocol, with the exception that there would be no gaps between sections of fence. An approved qualified biologist must oversee the installation of the fence and be present during all trapping. For the two weeks following installation, a biologist would survey the area inside the fence daily and relocate any animal species encountered to areas outside the fence. Pitfall traps would be opened during all rain events or humid overnight conditions as specified in the protocol throughout the period from October 15 through June 15. All California tiger salamanders would be relocated to a suitable release site that has been determined in consultation with the U.S. Fish and Wildlife Service.
4. A biologist approved by the U.S. Fish and Wildlife Service would survey the work site two weeks before the commencement of work activities. A fiber optic scope or similar device would be used to determine if California tiger salamanders are present in small mammal burrows. The biologist would be allowed sufficient time to hand excavate small mammal burrows and move California tiger

salamander from the work site to the approved relocation site before work activities begin.

5. Captured California tiger salamanders would immediately be placed into containers containing moist soil and plant material from the location of capture, and released in designated relocation areas no more than three hours after capture.
6. During all initial ground-disturbing activities, a biologist approved by the U.S. Fish and Wildlife Service would be present in the study area to recover any California tiger salamander that may be excavated from an underground refuge. If the animals were in good health, they would be relocated immediately to the designated release area. If they were injured, a biologist approved by the U.S. Fish and Wildlife Service would retain the animals until they were in a condition to be released into the designated release area.
7. Before any construction activities begin on the project, a biologist approved by the U.S. Fish and Wildlife Service would conduct a training session for all construction personnel. At a minimum, the training would include a description of the California tiger salamander and its habitat, the importance of the California tiger salamander and its habitat, the general measures that are being implemented to conserve the California tiger salamander as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session. The City and appropriate resource agency personnel would be notified of the date and time the training is scheduled so they may attend.
8. A biologist approved by the U.S. Fish and Wildlife Service would be present at the work site until such time as all removal of California tiger salamanders, instruction of workers, and initial ground disturbance have been completed. After this time, the City would designate a person to monitor compliance with all mitigation measures. The approved biologist would ensure that this individual receives the training outlined above. The monitor and the approved biologist would have the authority to halt any action that might result in effects to the California tiger salamander that exceed the levels authorized by the U.S. Fish and Wildlife Service.

If work were stopped, the City would be notified immediately to determine the appropriate course of action.

9. During construction, all trash that may attract predators would be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris would be removed from the work areas.
10. The number of access routes, number and size of staging areas, and the total area of the activity would be limited to the minimum necessary to achieve the project goal. Routes and boundaries would be clearly marked, and would be outside wetland areas. Fueling and maintenance of vehicles and other equipment and staging areas would occur at least 100 feet from any riparian or wetland habitat. The City would ensure that contamination of habitat does not occur during such operations. Before the onset of work, the City would prepare and comply with an emergency response plan to allow a prompt and effective response to any accidental spills. All workers would be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
11. A curb or similar permanent exclusion structure would be erected along the southern edge of the path proposed to the south of the alignment and on the north side of the sidewalk proposed to the north of the alignment. This structure would be added for the area from Blosser Road to the Foxenwood Basin on the south and from Blosser Road to State Route 135 on the north. It should be designed to prevent California tiger salamanders from moving into the developed areas. Soft-bottomed culverts or similar passageways would be constructed to permit animals to pass under the alignment in the area from Blosser Road to the Foxenwood Basin. Passageways would be installed at 200-foot intervals. A permanent exclusion structure would be erected to prevent California tiger salamanders from moving east of California Boulevard on the south side of the alignment. The exclusion structures must extend below ground at least three feet, and extend above ground at least two feet. The considerable underground depth is needed to prevent small mammals from creating passageways under the exclusion structure that could be used by

California tiger salamanders. An exclusion structure of this height would also benefit California red-legged frogs by excluding this species from developed areas.

12. California Natural Diversity Database forms would be completed and sent to the California Department of Fish and Game for all California tiger salamanders observed during the project.
13. Compensatory mitigation to off-set losses of California tiger salamander upland and dispersal habitat would be designated at a 2.5:1 ratio (habitat preserved:habitat permanently lost). The City would identify suitable habitat in the Santa Maria area within the dispersal distance from at least one known breeding pond that would be restored (if applicable) and preserved in perpetuity through a conservation easement. Restoration efforts would use native grass and forb seed mixes developed by a qualified biologist. Restoration activities would be detailed in a plan prepared by a qualified biologist. The plan would focus on adaptive management principles, and would identify enhancement areas, strategies, an implementation schedule, long-term monitoring methods, success criteria, methods to assess whether success criteria have been met, and contingency plans for meeting success criteria. The program would be monitored for five years, and monitoring reports that evaluate the success of the program would be submitted to the City annually.

BIO-6(b) The following avoidance, mitigation and minimization measures are required to reduce impacts to the California red-legged frog:

1. At least one month before the onset of activities, the City, in consultation with Caltrans, would submit for approval to the U.S. Fish and Wildlife Service the name(s) and credentials of biologists who would conduct activities specified in the following measures. No project activities would begin until proponents have received written approval from the U.S. Fish and Wildlife Service that the biologist(s) is qualified to conduct the work. The City would also contact the U.S. Fish and Wildlife Service to determine an appropriate site in which to relocate California red-legged frog if found in the work area.

2. The work area west of State Route 135 would be surrounded by a temporary exclusion fence (such as silt fence) buried into the ground and extended at least 3 feet above the ground to exclude California red-legged frogs from the work area. The fence would be installed in June of the year before the start of construction. During construction conducted between July 2 and April 30, the fence would be inspected daily to ensure that it is functioning properly to exclude California red-legged frogs from the work area.
3. To minimize the potential for direct impacts to dispersing individuals, initial ground-disturbing activities should be completed during the period from May 1 through July 1. The initiation of any subsequent ground-disturbing activity or construction from July 2 through April 30, the period when California red-legged frog are potentially dispersing or using upland areas, would be preceded by two night surveys of the work area. The survey area would include all areas inside the exclusion fence, in the event that California red-legged frogs find a way through the fence. In addition, this survey may benefit California tiger salamanders or other animals that similarly could find a way through the fence. Surveys would be conducted on two separate nights within 48 hours before the start of work activities. If California red-legged frogs were present, they would be moved out of the work area by a biologist approved by the U.S. Fish and Wildlife Service following the methods described below. The approved biologist would maintain detailed records of any individuals that are relocated (such as size, coloration, any distinguishing features, and photographs) to assist in determining whether relocated individuals return to the work site.
4. Captured California red-legged frog would be placed immediately into plastic zip lock bags dampened with untreated water and released in designated relocation areas no more than one hour after capture.
5. During all initial ground-disturbing activities, a biologist approved by the U.S. Fish and Wildlife Service would be present in the study area to recover any California red-legged frog that may be found at that time. If the animals were in good health, they would

- be immediately relocated to the designated release area. If they were injured, a biologist approved by the U.S Fish and Wildlife Service would retain the animals until they were in a condition to be released into the designated release area. Any dead California red-legged frogs must be reported immediately to the U.S. Fish and Wildlife Service and deposited in an approved museum, such as the Santa Barbara Museum of Natural History or the University of California Santa Barbara Museum of Systematics and Ecology.
6. Before any construction activities begin on the project, a biologist approved by the U.S. Fish and Wildlife Service would conduct a training session for all construction personnel. At a minimum, the training would include a description of the California red-legged frog and its habitat, the importance of the California red-legged frog and its habitat, the specific measures that are being implemented to conserve the California red-legged frog as they relate to the project, and the boundaries within which the project may be accomplished.
 7. A biologist approved by the U.S. Fish and Wildlife Service would be present at the work site until such time as all removal of California red-legged frogs, instruction of workers, and initial ground disturbance have been completed. After this time, the City would designate a person to monitor compliance with all mitigation measures. The approved biologist would ensure that this individual receives the training outlined above and is qualified in the identification of California red-legged frog. The monitor and the approved biologist would have the authority to halt any action that might result in impacts that exceed the levels anticipated by U.S. Fish and Wildlife Service during review of the proposed action. If work were stopped, the City would be notified immediately to determine the appropriate course of action.
 8. During construction, all trash that may attract predators would be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris would be removed from the work areas.
 9. The number of access routes, number and size of staging areas, and the total area of the activity would be limited to the minimum

necessary to achieve the project goal. Routes and boundaries would be clearly marked, and would be outside wetland areas.

10. All refueling, maintenance, and staging of equipment and vehicles would occur at least 60 feet from riparian or aquatic habitats, and not in a location where a spill would drain directly toward an aquatic habitat. The biologist approved by the U.S. Fish and Wildlife Service or a designated monitor would check the staging area periodically to ensure that contamination of aquatic habitats does not occur. Before work begins, a spill response plan must be designated, and all workers must be briefed on the provisions of this plan.
11. Temporarily impacted areas would be recontoured to their original configurations and revegetated with native plant species suitable for the area. Locally collected plant material would be used to the extent practicable. Invasive exotic plant species would be controlled.
12. Best management practices would be implemented during and after project implementation to control sedimentation.
13. Water would not be impounded in a manner that may attract California red-legged frogs.
14. A curb or similar permanent exclusion structure would be erected along the southern edge of the path proposed to the south of the alignment and on the north side of the sidewalk proposed to the north of the alignment. This structure would be added from the area contained within Blosser Road to the Foxenwood Basin on the south and from Blosser Road to State Route 135 on the north. It should be designed to prevent California red-legged frogs from moving into the developed areas. Soft-bottomed culverts or similar passageways would be constructed to permit animals to pass under the alignment in the area from Blosser Road to the Foxenwood Basin. Passageways would be installed at 200-foot intervals. A permanent exclusion structure would be erected to prevent California red-legged frogs from moving east of California Boulevard on the south side of the alignment. The exclusion structures must extend below ground at least three feet (this depth is required for the California tiger salamander), and extend above ground at least two feet.

15. California Natural Diversity Database forms would be completed and sent to the California Department of Fish and Game for all California red-legged frogs observed during the project.
16. Compensatory mitigation to off-set losses of California red-legged frog upland and dispersal habitat would be designated at a 2.5:1 ratio (habitat preserved:habitat permanently lost). The City would identify suitable habitat in the Santa Maria area within the dispersal distance from at least one known breeding pond that would be restored (if applicable) and preserved in perpetuity through a conservation easement. Restoration efforts would use native grass and forb seed mixes developed by a qualified biologist. Restoration activities would be detailed in a plan prepared by a qualified biologist. The plan would focus on adaptive management principles, and would identify enhancement areas, strategies, an implementation schedule, long-term monitoring methods, success criteria, methods to assess whether success criteria have been met, and contingency plans for meeting success criteria.

BIO-6(c) The following avoidance and minimization measures are required to reduce impacts to vernal pool fairy shrimp:

1. Grading and road alignments would be designed to ensure that drainage from the work area and the final project does not enter known vernal pool fairy shrimp habitats. A bioswale would be constructed along the north side of the alignment that would be planted with native wetland and upland grass species, and would act to improve water quality of surface water runoff.
2. Best Management Practices for sedimentation and erosion control would be implemented throughout all project areas to protect potential vernal pool fairy shrimp habitats.
3. All vehicles operated within the project area must be inspected daily and maintained to avoid leaks of fuel, hydraulic fluids, oil, or coolant.
4. For the Foster Road Alternative, water quality monitoring would occur before, during, and after project activities to ensure that storm water runoff that leaves the project area does not contain

pollutants or sediment as a result of construction activities. Water quality monitoring would be continued for at least one year following the completion of construction to ensure the bioswale is effectively removing pollutants.

Impact After Mitigation

Implementation of the above avoidance and minimization measures would reduce impacts to federally listed wildlife species and their habitat occurring on the build alternatives to the extent feasible. A Biological Opinion for the Locally-Preferred Alignment was issued on December 17, 2008 which states that it is the U.S. Fish and Wildlife Service's biological opinion that the Locally-Preferred Alignment is not likely to jeopardize the continued existence of the California tiger salamander or California red-legged frog, or adversely modify critical habitat for the California tiger salamander. With this Biological Opinion and implementation of required mitigation measures, the impacts on the Locally-Preferred Alignment on threatened and endangered species would be less than significant. However, since the issuance of take authorization of California red-legged frogs, California tiger salamander, and/or vernal pool fairy shrimp from regulatory agencies cannot be assured for the other build alternatives, and the recommended mitigation therefore may be infeasible, impacts are significant and unavoidable for the Curved Alignment Alternative and Foster Road Alignment Alternative.

3.3.16 Biological Resources (7)—Invasive Species

To avoid impacts by invasive species on the build alternatives, the following avoidance, minimization, and mitigation measures are required:

- BIO-7(a)** Exotic and invasive weeds would be removed during clearing and grubbing and disposed of in an appropriate manner for the species. In areas where exotic and invasive weeds are the dominant plants, the topsoil from those areas would not be reused onsite in areas with sensitive plant communities or special-status plants. The project Biologist and the Resident Engineer would identify those areas in the field before construction. Erosion control included in the project would not use species on the California list of noxious weeds. Landscape plans would be reviewed by a qualified biologist to ensure the use of native plants or non-native plants that do not occur on the California Exotic Pest Plant Council and the California Invasive Plant

Council Lists 1, 2, and 4. Plants considered invasive by the California Exotic Pest Plant Council and the California Invasive Plant Council would not be used onsite. After revegetation in areas with native vegetation, sites would be monitored for weeds during the contract period set up for the plant establishment period.

Impact After Mitigation

Implementation of the above avoidance, minimization, and mitigation measures would reduce impacts to a less than significant level under the California Environmental Quality Act.

3.3.17 Construction (1) - Air Quality

- CON-1** The following measure is intended to minimize the amount of PM₁₀ produced during construction of the project.
- During construction, use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the site. At a minimum, this should include wetting down such areas in the late morning and after work is completed for the day. Increased watering frequency should be required whenever the wind speed exceeds 15 miles per hour. Reclaimed water should be used whenever possible. However, reclaimed water should not be used in or around crops for human consumption.
 - Minimize amount of disturbed area and reduce on site vehicle speeds to 15 miles per hour or less.
 - Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.
 - If importation, exportation, and stockpiling of fill material is involved, soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the project area shall be tarped from the point of origin.
 - After clearing, grading, earth moving, or excavation is completed, treat the disturbed area by watering, or revegetating, or spreading soil binders until the area is paved or otherwise developed so that dust generation will not occur.

- The contractor or builder shall designate a person or persons to monitor the dust control program and to order increased watering, as necessary, to prevent transport of dust offsite. Their duties shall include holiday and weekend periods when work may not be in progress. The name and telephone number of such persons shall be provided to the Air Pollution Control District before issuance of grading permits.

3.3.18 Construction (2) - Air Quality

The following measure is intended to minimize the amount of diesel particulate matter and NO_x produced during construction of the project.

CON-2 The following control strategies provided by the APCD shall be implemented.

- All portable diesel-powered construction equipment shall be registered with the states portable equipment registration program OR shall obtain an APCD permit.
- Diesel powered equipment should be replaced.
- As of June 15, 2002, fleet owners are subject to sections 2449, 2449.1, 2449.2, and 2449.3 in Title 13, Article 4.8, Chapter 9, of the California Code of Regulations (CCR) to reduce diesel particulate matter (PM) and criteria pollutant emissions from in-use off-road diesel-fueled vehicles, See <http://www.arb.ca.gov/regact/2007/ordiesl07/frooal.pdf>.
- Diesel construction equipment meeting the California Air Resources Board (CARB) Tier 1 emission standards for off-road heavy-duty diesel engines shall be used. Equipment meeting CARB Tier 2 or higher emission standards shall be used.
- Other diesel construction equipment, which does not meet CARB standards, shall be equipped with two to four degree engine timing retard or pre-combustion chamber engines. Diesel catalytic converters, diesel oxidation catalysts and diesel particulate filters as certified and/or verified by EPA or California shall be installed
- Catalytic converters shall be installed on gasoline-powered equipment.

- All construction equipment shall be maintained in tune per the manufacturer's specifications.
- The engine size of construction equipment shall be the minimum practical size.
- The amount of construction equipment operating simultaneously shall be minimized through efficient management practices so that the smallest practical number is operating at any one time,
- Idling of heavy-duty diesel trucks during loading and unloading shall be limited to five minutes; auxiliary power units should be used wherever possible. State law requires that drivers of diesel-fueled commercial vehicles weighing more than 10,000 pounds:
 - shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location
 - shall not idle a diesel-fueled auxiliary power system (APS) for more than 5 minutes to power a heater, air conditioner, or any ancillary equipment on the vehicle equipped with a sleeper berth when that vehicle is operated within 100 feet of a restricted area (homes and schools).
 - Construction worker trips shall be minimized by requiring carpooling and by providing for lunch on site.