

Appendix A California Environmental Quality Act (CEQA) Evaluation

A.1 Determining Significance Under CEQA

The proposed project is a joint project by the California Department of Transportation (Department) and the Federal Highway Administration (FHWA) and is subject to state and federal environmental review requirements. Project documentation, therefore, has been prepared in compliance with both the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA). FHWA's responsibility for environmental review, consultation, and any other action required in accordance with NEPA and other applicable Federal laws for this project is being, or has been, carried out by the Department under its assumption of responsibility pursuant to 23 U.S.C. 327. The Department is the lead agency under CEQA and NEPA.

One of the primary differences between NEPA and CEQA is the way significance is determined. Under NEPA, significance is used to determine whether an Environmental Impact Statement (EIS) or some lower level of documentation will be required. NEPA requires that an EIS 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. In the case of this project, a decision was made that the proposed project, as a whole, would not have the potential to significantly affect the quality of the human environment and therefore, an EIS was not required. Instead of an EIS, an Environmental Assessment (EA) has been prepared to satisfy NEPA requirements.

Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, it is the magnitude of the impact that is evaluated, and no judgment of its individual significance is deemed important for the text. NEPA does not require that a determination of significant impacts be stated in the environmental documents.

CEQA, on the other hand, does require the Department 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 EIR must be prepared. Each and every significant effect on the environment must be disclosed in the EIR and mitigated if feasible. In addition, the CEQA Guidelines list a number of mandatory findings of significance, which also require the preparation of an EIR. There are no types of actions under NEPA that parallel the findings of mandatory significance of CEQA. This appendix discusses the effects of this project and CEQA significance.

A.1.1 CEQA Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2006 CEQA Guidelines. For this EA, implementation of the proposed project may have a significant impact of the environment if it would result in any of the following:

Aesthetics:

- A substantial adverse effect on a scenic vista.
- Substantial damage to scenic resources including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.
- Substantial degradation to the existing visual character or quality of the site and its surroundings.
- Create a new source of light or glare which would adversely affect day or nighttime views in the area.

Agricultural and Forest Resources:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.
- Conflict with existing zoning for agricultural use or a Williamson Act contract.
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).
- Result in the loss of forest land or conversion of forest land to non-forest use.
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use.

Air Quality:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

Biological Resources:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game (CDFG) or United States Fish and Wildlife Service (USFWS).
- Have a substantial adverse effect of any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFG or USFWS.
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impeded the use of native wildlife nursery sites.
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- Conflict with the provision of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Cultural Resources and Paleontological Resources:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5.

- Cause a substantial adverse change in the significance of a unique archaeological resource pursuant to §15064.5.
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
- Disturb any human remains, including those interred outside of formal cemeteries.

Geology and Soils:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault.
 - Strong seismic ground shaking.
 - Seismic-related ground failure, including liquefaction.
 - Landslides.
- Substantial soil erosion or the loss of topsoil.
- 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 on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.
- Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Greenhouse Gas Emissions:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Hazards/Hazardous Waste and Materials:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it 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, would the project result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose 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.

Hydrology and Water Quality

- Violate any water quality standards or waste discharge requirements.
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

- Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff.
- Otherwise substantially degrade water quality.
- Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows.
- Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
- Inundation by seiche, tsunami, or mudflow.

Land Use and Planning:

- Physically divide an established community.
- 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.
- Conflict with any applicable habitat conservation plan or natural community conservation plan.

Mineral Resources:

- 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.
- 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.

Noise:

- 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 groundborne vibration or groundborne noise levels.

- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.
- 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, would the project expose people residing or working in the project area to excessive noise levels.
- For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels.

Population and Housing:

- Induce 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).
- 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.

Public Services:

- Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for:
 - Fire protection;
 - Police protection;
 - Schools;
 - Parks; or
 - Other public facilities.

Recreation:

- 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.

- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Transportation/Traffic:

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

Utilities and Service Systems:

- Exceed wastewater treatment requirements of the Regional Water Quality Control Board.
- Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.
- 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.
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements.
- Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs.
- Not comply with federal, state, and local statutes and regulations related to solid waste.

CEQA Mandatory Findings of Significance:

- Does the project 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, reduce the number or restrict the range of a rare or endangered plant or animal to eliminate important examples of the major periods of California history or prehistory?
- Does the project have impacts that are individually limited, but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?
- Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

A.2 Discussion of Significance of impacts

A.2.1 Aesthetics

A.2.1.1 Less than Significant Effects of the Proposed Project

Impact VA-1: Implementation of minimization measures V-1 through V-4 would ensure that all temporary and permanent effects to scenic vistas are considered *less than significant*.

Impact VA-2: There are no scenic highways located within the project limits. Therefore, *no effects* to scenic resources within a scenic highway are anticipated.

Impact VA-3: Implementation of minimization measures V-1 through V-4 would ensure that all temporary and permanent effects to existing visual character or quality of the site are considered *less than significant*.

Impact VA-4: Implementation of minimization measure V-4 would ensure that temporary light and glare effects during construction activities would be *less than significant*. Implementation of minimization measure V-2 would ensure that

permanent effects from light and glare as a result of the new soundwalls and/or retaining walls would be *less than significant*.

See Section 2.6, Visual and Aesthetics, for more information.

A.2.1.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to aesthetics associated with the construction or operation of the proposed project.

A.2.1.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to aesthetics associated with the construction or operation of the proposed project.

A.2.1.4 Mitigation Measures

Mitigation is not required.

A.2.2 Agriculture and Forest Resources

A.2.2.1 Less than Significant Effects of the Proposed Project

Impact AG-1: There is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance located within the project limits. Therefore, *no effects* to farmland are anticipated.

Impact AG-2: There is no existing land use within the project limits that is currently zoned for agricultural use or under a Williamson Contract. Therefore, *no effects* to existing agricultural land use are anticipated.

Impact AG-3: There is no forest land or timberland located within the project limits. Therefore, *no effects* are anticipated.

Impact AG-4: There is currently no land zoned for forest land use within the project limits. Therefore, no loss or conversion of existing forest land would occur. *No effects* are anticipated.

Impact AG-5: There is no land within or immediately adjacent to the project limits that are zoned for agricultural purposes. Therefore, the project would not result in conversion of Farmland to non-agricultural use or forest land to non-forest use. *No effects* are anticipated.

A.2.2.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to agricultural resources associated with the construction or operation of the proposed project.

A.2.2.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to agricultural resources associated with the construction or operation of the proposed project.

A.2.2.4 Mitigation Measures

Mitigation is not required.

A.2.3 Air Quality**A.2.3.1 Less than Significant Effects of the Proposed Project**

Impact AIR-1: The proposed project is in conformance with all applicable air quality plans. Therefore, *no effects* are anticipated.

Impact AIR-2: The proposed project is located in Orange County (part of the South Coast Air Basin) that is currently in non-attainment zone for ozone, particulate matter less than 10 microns in diameter (PM₁₀), and particulate matter less than 2.5 microns (PM_{2.5}). There is a potential for increased particulate matter from construction activities. However, standard dust control measures for handling material would adequately ensure effects are *less than significant*.

The proposed project will alleviate several peak hour mainline and freeway ramp deficiencies and would reduce congestion. These improvements are not expected to generate additional traffic and regional traffic trips would remain similar. Therefore, no long-term regional emissions would result from implementation of the proposed project. The proposed project will improve traffic movement in the project vicinity, thereby lowering the total pollutants emitted by motor vehicles. Therefore, effects to air quality are considered *less than significant*.

Impact AIR-3: Increases in criteria pollutants would be temporary and very short in duration. Please refer to AIR-3 for discussion on temporary construction effects. Therefore, effects are considered *less than significant*.

Impact AIR-4: The proposed project is expected to improve air quality because it would reduce congestion, resulting in lower emission levels, thereby, decreasing exposure of sensitive receptors to pollutant concentrations. Therefore, effects to

sensitive receptors from substantial pollutant concentrations are considered *less than significant*.

Impact AIR-5: The proposed project would neither directly nor indirectly create objectionable odors. Therefore, no permanent effects are anticipated. Exhaust emissions and potential odors may result from construction equipment used on the construction site, as well as from vehicles used to transport materials to and from the site. However, these effects are considered short-term. Therefore, effects are considered *less than significant*.

See Section 2.13, Air Quality, for more information.

A.2.3.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to air quality associated with the construction or operation of the proposed project.

A.2.3.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to air quality associated with the construction or operation of the proposed project.

A.2.3.4 Mitigation Measures

Mitigation is not required.

A.2.4 Biological Resources

A.2.4.1 Less than Significant Effects of the Proposed Project

Impact BIO-1: There are no wetlands located within the project limits. Therefore, *no effects* to wetlands are anticipated.

Impact BIO-2: The project would neither directly nor indirectly interfere with the movement of native species. Therefore, *no effects* to the movement of native species are anticipated.

Impact BIO-3: The project is not located within an area that has an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore *no effects* are anticipated.

See Sections 2.15 through 2.20, for more information.

A.2.4.2 Significant Environmental Effects of the Proposed Project

Impact BIO-4: No impacts to special status plant species are anticipated. However, the proposed project is anticipated to potentially result in indirect permanent effects to special-status animal species through the removal of potential habitat. The removal of potential habitat would be considered a direct permanent effect. Effects to CSS and riparian/riverine habitat would be through disturbance and/or removal of existing vegetation. With the implementation of minimization and avoidance measures BIO-1 and BIO-2 and BIO-5 through BIO-16, and Mitigation Measures BIO-3 and BIO-4, effects to habitat, sensitive, threatened and endangered species would be considered *less than significant with mitigation incorporated*.

Impact BIO-5: As stated in BIO-4, the proposed project will affect CSS and riparian/riverine habitat. Implementation of mitigation measure BIO-3 and minimization measures BIO-1 through BIO-16 will minimize/mitigate effects to riparian habitat or other sensitive natural communities to a level that is less than significant. Therefore, the impact is considered *less than significant with mitigation incorporated*.

Impact BIO-6: California Sage Scrub (CSS) in the Biological Study Area (BSA) is not protected by any federal, State, or local regulations, with the exception of coastal California gnatcatcher (CAGN) designated critical habitat and/or occupied areas. For areas that are not protected, no compensatory mitigation is required. Mitigation Measure BIO-3 would ensure project compliance with local policies and/or ordinances for CSS occupied by CAGN. Therefore, effects are considered *less than significant with mitigation incorporated*.

See Sections 2.15 through 2.20 for more information.

A.2.4.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to biological resources associated with the construction or operation of the proposed project.

A.2.4.4 Mitigation Measures

Mitigation measures for Biological Resources under CEQA would be the same as those discussed in Sections 2.15 through 2.20.

A.2.5 Cultural Resources and Paleontological Resources

A.2.5.1 Less than Significant Effects of the Proposed Project

Impact CR-1: One Spanish Eclectic-style residence in the APE (located in the City of Dana Point) appears to qualify as historical resources pursuant to CEQA. However this resource is located outside of the project Area of Direct Impact (ADI) and will not be altered as a result of the proposed project. Therefore, *no effects* are anticipated.

Impact CR-2: The ADI is extensively disturbed by development, and the likelihood of encountering intact archaeological resources during the construction of the proposed project is low. In the event that archaeological resources are found during construction activities, implementation of measures CR-1 and CR-2 will minimize effects to a *less than significant* level.

Impact CR-4: While no human remains have been identified within the project area, the potential exists when ground-disturbing activities occur. Implementation of measure CR-2 will minimize any potential disturbance to human remains. Therefore, effects are considered *less than significant*.

See Sections 2.7, Cultural Resources, and 2.11, Paleontology, for more information.

A.2.5.2 Significant Environmental Effects of the Proposed Project

Impact CR-3: Sediments in the study area have the potential to contain significant, unrenewable paleontological resources, and it is likely that paleontological localities will be encountered during project excavation. However, implementation of measure PAL-1 would mitigate effects to paleontological resources that may be present within the study area, where excavation may occur to *less than significant with mitigation incorporated*.

A.2.5.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to cultural resources associated with the construction or operation of the proposed project.

A.2.5.4 Mitigation Measures

Mitigation measures for Paleontological Resources under CEQA would be the same as those discussed in Section 2.11, Paleontology.

A.2.6 Geology and Soils

A.2.6.1 Less than Significant Effects of the Proposed Project

Impact GEO-1: The closest mapped active fault is located 3.1 mi from the study area. No Earthquake Fault-Rupture Hazard Zones delineated by the State of California are reported to be present in the area. Therefore, the threat of surface fault rupture during an earthquake is considered very low and effects are considered *less than significant*.

See Section 2.10, Geology/Soils/Seismicity/Topography, for more information.

Impact GEO-2: The faults that are considered active and located in close proximity to the study area include the Newport Inglewood-Rose Canyon fault and the San Joaquin Hills Blind Thrust fault. The Newport Inglewood-Rose Canyon fault is capable of generating a magnitude 6.0 to 7.5 earthquake and the San Joaquin Blind Thrust fault is capable of generating a magnitude 6.6 earthquake. The Department considers the possibility of such seismic activity and includes standard design features to minimize and avoid potential adverse effects from seismic events. Implementation of Department standard seismic design features will ensure that no adverse effects from seismic hazards would occur under the proposed project. Therefore, effects are considered *less than significant*.

See Section 2.10, Geology/Soils/Seismicity/Topography, for more information.

Impact GEO-3: According to a Seismic Hazard Zones map prepared by the California Geological Survey for the Dana Point and San Clemente Quadrangles (California Geological Survey, 2001a and 2002b), portions of the project alignment located in the alluvium-filled drainages of Segunda Deshecha Canada, Prima Deshecha Canada, and San Juan Creek are located in designated liquefaction hazard zones. Settlements of pavements and retaining walls associated with this project should be expected following a substantial seismic event.

Potential effects due to liquefaction can be reduced through proper project planning, design, and construction. During the final design phase, a site specific Final Geotechnical Design Report (GDR) will be prepared. The Final GDR will provide detailed analyses for the various design features, including but not limited to retaining walls and a noise barrier. The GDR will also provide soil sampling test results and geotechnical analysis regarding liquefaction, lateral spreading susceptibility, and final slope stability analyses.

Implementation of measures recommended by the Final GDR, SFRs, and MRs, as outlined in minimization measure GEO-1, will ensure that no adverse effects from liquefaction would occur under the proposed project. Therefore, effects are considered *less than significant*.

See Section 2.10, Geology/Soils/Seismicity/Topography, for more information.

Impact GEO-4: Several slopes within the project alignment are located within earthquake-induced landslide hazard zones. A site-specific Final GDR, Structure Foundation Reports (SFRs), and Materials Reports (MRs) will include subsurface exploration and laboratory testing during the design phase of the proposed project to further evaluate the potential earthquake-induced landslide hazard and to characterize the geotechnical conditions at these locations for use in further detailed analyses and slope design. Implementation of measures recommended by the Final GDR, SFRs, and MRs, as discussed in minimization measure GEO-1, will ensure that no adverse effects from landslides or slope instability would occur under the proposed project. Therefore, effects are considered *less than significant*.

See Section 2.10, Geology/Soils/Seismicity/Topography, for more information.

Impact GEO-4a: A temporary increase in erosion may occur during construction. However, as discussed in Section 2.9, Water Quality and Storm Water Runoff, with implementation of erosion control BMPs as discussed in minimization measure WQ-1, effects from erosion would be considered *less than significant*.

See Section 2.8, Hydrology and Floodplain, for more information.

Impact GEO-4b: Please see response to GEO-3 and GEO-4. With the implementation of minimization measure GEO-1, effects would be considered *less than significant*.

See Section 2.10, Geology/Soils/Seismicity/Topography, for more information.

Impact GEO-4c: The project does not include development of structures that would require compliance with the Uniform Building Code. Therefore, *no effects* are anticipated.

See Section 2.10, Geology/Soils/Seismicity/Topography, for more information.

Impact GEO-4d: The project does not include development of structures that would require septic tanks or waste water disposal. Therefore, *no effects* are anticipated.

See Section 2.10, Geology/Soils/Seismicity/Topography, for more information.

A.2.6.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to geology and soils associated with the construction or operation of the project.

A.2.6.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to geology and soils associated with the construction or operation of the project.

A.2.6.4 Mitigation Measures

No mitigation is required.

A.2.7 Greenhouse Gas Emissions

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While the Department has included this good faith effort in order to provide the public and decision-makers as much information as possible about the proposed project, it is the Department's determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. The Department does remain firmly committed to implementing measures to help reduce the potential effects of the proposed project. These measures are outlined in the body of the environmental document.

A.2.8 Hazards/Hazardous Waste and Materials

A.2.8.1 Less than Significant Effects of the Proposed Project

Impact HWM-1: Operation and maintenance of the facilities proposed as part of Build Alternative [4 with Design Option A](#) would continue existing transport of hazardous materials/waste associated with vehicles currently utilizing I-5 within the project limits. No new permanent hazardous waste materials/waste effects (direct or indirect) beyond existing conditions related to hazardous materials are anticipated.

Implementation of measures HAZ-1 through HAZ-7 would minimize and avoid any potential hazardous materials releases that may affect the public or the environment. Therefore, effects to the public or the environment through the routine transport, use,

or disposal of hazardous materials during construction of the proposed project would be considered *less than significant*.

Impact HWM-2: Please see response to HWM-1. Effects to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment would be considered *less than significant*.

Impact HWM-3: A total of six schools are located within ¼-mile of the proposed project. Two of the six schools are privately operated. These private schools are identified as Capo Beach Calvary School and St. Michaels Academy. The remaining four schools are publicly operated by Capistrano Unified School District and are identified as Journey Elementary Charter School, San Clemente High School, Shorecliffs Middle School and Palisades Elementary School. Please refer to response HWM-1. Effects to an existing or proposed school located within ¼-mile of the project limits from hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste, would be *less than significant*.

Impact HWM-4: Although the Exxon Mobile Station (potentially affected under Option B) was identified as a site with known releases, with the implementation of minimization measure HAZ-7, no significant hazard would occur. Therefore, effects are considered *less than significant*.

Impact HWM-5: The proposed project is not located within an airport land use plan, or within two miles of a public airport or public use airport. Therefore, no safety hazards for people residing or working in the project area would occur and *no effects* are anticipated.

Impact HWM-6: The proposed project is not located within the vicinity of a private airstrip. Therefore, no safety hazards for people residing or working in the project area would occur and *no effects* are anticipated.

Impact HWM-7: The proposed project would benefit any existing adopted emergency response plan or emergency evacuation plan because the proposed project will help ease congestion along the I-5 mainline and reduce travel time. Therefore, the completion of the proposed project would result in an overall net benefit.

However, temporary ramp closures at Avenida Pico during the construction of proposed project may interfere with existing adopted emergency response plans or

emergency evacuation plans. As discussed in Section 1.3, Project Description, a Transportation Management Plan (TMP) would include minimization and avoidance measures consisting of alternate routes and detours for emergency vehicles during construction activities. Therefore, effects from temporary closures and construction would be considered *less than significant*.

Impact HWM-8: The proposed project is not located within or adjacent to existing wildlands that could expose people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, *no effects* are anticipated.

Please see Section 2.12, Hazardous Waste/Materials, for more information.

A.2.8.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to geology and soils associated with the construction or operation of the project.

A.2.8.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to geology and soils associated with the construction or operation of the project.

A.2.8.4 Mitigation Measures

No mitigation is required.

A.2.9 Hydrology and Water Quality

A.2.9.1 Less than Significant Effects of the Proposed Project

Impact HYD-1: Conformance to the National Discharge Elimination System (NPDES) Storm Water Permit and Best Management Practices (BMPs) discussed under WQ-1 through WQ-5 would ensure that the proposed project would not violate water quality standards or waste discharge requirements. Therefore, effects to water quality standards or waste discharge requirements would be *less than significant*.

See Section 2.9, Water Quality and Storm Water Runoff, for more information.

Impact HYD-2: The proposed project is not a growth inducing project and would not require additional need for groundwater supply. Therefore, the proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Therefore, *no effects* are anticipated.

See Section 2.9, Water Quality and Storm Water Runoff, for more information.

Impact HYD-3: The increase in impervious area caused by the proposed project is relatively small (less than one percent) compared to the urbanized area within the entire San Juan Creek and San Clemente Coastal Streams watersheds. Incorporation measure WQ-5 would minimize impacts to erosion or siltation.

Alterations to existing streams will occur within the project limits under the proposed project. However, any alteration of existing streams will require a Streambed Alteration Agreement from CDFG and a Section 404 Permit (Nationwide Permit 14) from ACOE, as outlined in measure BIO-4. With the implementation of WQ-5 and BIO-4, effects to existing drainage would be considered *less than significant*.

See Sections 2.9, Water Quality and Storm Water Runoff, and 2.16, Wetlands and Other Waters, for more information.

Impact HYD-4: Because the proposed project consists of lane additions, it would result in a permanent increase of impervious surfaces and a permanent increase in run-off and pollutant loading. However, the increase in impervious area caused by the proposed project is relatively small (less than one percent) compared to the urbanized area within the entire San Juan Creek and San Clemente Coastal Streams watersheds. In addition, the creeks downstream of the proposed project are engineered master planned facilities and the minor increase in runoff volume is not expected to result in channel erosion or hydromodification to San Juan Creek or San Clemente Coastal Streams watersheds. Implementation of measures WQ-1 through WQ-5 would minimize effects to drainage patterns, stream or river modifications, and an increase in the rate or amount of surface run-off to a level that is *less than significant*.

See Section 2.9, Water Quality and Storm Water Runoff, for more information.

Impact HYD-5: Please refer to HYD-4, above. With the implementation of minimization measures WQ-1 through WQ-5, effects to capacity of existing or planned storage systems would *be less than significant*.

See Section 2.9, Water Quality and Storm Water Runoff, for more information.

Impact HYD-6: If construction BMPs are properly designed, implemented, and maintained, as presented in measures WQ-1 and WQ-2, no adverse water quality effects would occur during construction of the proposed project. Although not anticipated, groundwater dewatering may be necessary to construct the bridge structure footings and culvert extensions. Dewatered groundwater may contain high

levels of Total Dissolved Solids (TDS), salinity, high nitrates, or other contaminants, which could be introduced into surface waters during construction. However, groundwater and any other non-storm water dewatering activities are subject to the requirements of the De Minimus Permit (Order Number R9-2008-0002, NPDES Number CAG919002) or subsequent permit. Compliance with this permit, as described in measure WQ-3 would avoid adverse effects to water quality from dewatering activities. Therefore, with the implementation of measures WQ-1 through WQ-3, the proposed project would not substantially degrade water quality and effects are considered *less than significant*.

See Section 2.9, Water Quality and Storm Water Runoff, for more information.

Impact HYD-7: According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Nos. 06059C0509J and 06059C0528J (December 3, 2009), the project area along I-5 under Build Alternative 4 with Design Option A is not located within a 100-year floodplain. However, the proposed project is a transportation improvement project and does not include construction of new residential housing. Therefore, *no effects* are anticipated.

See Section 2.8, Hydrology and Floodplain, for more information.

Impact HYD-8: As stated in HYD-7, FEMA FIRM Map Nos. 06059C0509J and 06059C0528J (December 3, 2009) indicate that the project area along I-5 under Build Alternative 4 with Design Option A is not located within a 100-year floodplain. However, with the implementation of measures FP-1 through FP-3, effects would be minimized to a level that is *less than significant*.

See Section 2.8, Hydrology and Floodplain, for more information.

Impact HYD-9: There are no levees or dam structures adjacent to the proposed project in the cities of San Clemente and/or Dana Point. According to the Safety Element of the San Juan Capistrano General Plan, areas located within the northern project limits, that traverse San Juan Creek, are located within an inundation area of the Trampas Canyon Dam (located approximately two miles east of the City of San Juan Capistrano limits). However, the City of San Juan Capistrano is required by Section 8589.5 of the California Government Code to have in place emergency procedures for the evacuation and control of populated areas within the limits of inundation below dams. Therefore, with the implementation of standard emergency

evacuation procedures, effects from the failure of the Trampas Canyon Dam are considered *less than significant*.

See Section 2.8, Hydrology and Floodplain, for more information.

Impact HYD-10: No major lakes or open water areas exist in the Cities of Dana Point, San Juan Capistrano, and San Clemente, the potential for a seiche is remote. No effects from seiches are anticipated.

According to the Figure 13-1 in the Natural Hazards Element of the City of San Clemente General Plan, the proposed project is not located within a Potential Tsunami Hazard area. In addition, according to the City of Dana Point Public Safety Element, great magnitude waves have not historically been recorded near the City of Dana Point because the coastline is somewhat protected from the north by the coastal configuration and offshore islands. In a rare event, a tsunami could occur from south of the proposed project. However, based on the location of the proposed project (approximately 0.3 mi east of the Pacific Ocean at an approximate elevation of 98 ft above mean sea level [amsl]) there is a low potential for a tsunami to occur.

Based on the location of the proposed project and the limited rainfall that occurs within this region of Southern California, it is unlikely that instances of mudflow would occur.

However, in the unlikely event that a tsunami or mudflow would occur, the proposed project would be in compliance with all standard evacuation plans of the each respective city jurisdiction. Therefore, effects are considered *less than significant*.

See Section 2.8, Hydrology and Floodplain, for more information.

A.2.9.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to hydrology and water quality associated with the construction or operation of the project.

A.2.9.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to hydrology and water quality associated with the construction or operation of the project.

A.2.9.4 Mitigation Measures

No mitigation is required.

A.2.10 Land Use and Planning

A.2.10.1 Less than Significant Effects of the Proposed Project

Impact LAN-1: For Design Option A, under Build Alternative 4, three partial acquisitions would be required.

The businesses to be displaced are located within a commercial area that does not demonstrate indicators of high community cohesion. Therefore, the acquisitions would not divide or fragment an existing, cohesive neighborhood. Therefore, the proposed project would not physically divide an established community and *no effects* are anticipated.

Impact LAN-2: Build Alternative 4 with Design Option A is consistent with applicable General Plan goals and policies to improve transportation corridors, provide adequate infrastructure, and maintain efficient traffic operations on city streets. Build Alternative 4 with Design Option A is also consistent with the regional planning efforts. The proposed project is programmed in the Southern California Association of Governments (SCAG) adopted 2011 Federal Transportation Improvement Program (FTIP) to reduce traffic congestion and improve operations. Therefore, the land use changes associated with Build Alternative 4 with Design Option A are consistent with the approved land use and transportation plans and *no effects* are anticipated.

Impact LAN-3: The proposed project is not located in an area that is covered by a habitat conservation plan or natural community conservation plan. Therefore, *no effects* are anticipated.

See Sections 2.1, Land Use, and 2.3, Community Impacts, for more information.

A.2.10.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to land use and planning associated with the construction or operation of the project.

A.2.10.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to land use and planning associated with the construction or operation of the project.

A.2.10.4 Mitigation Measures

No mitigation is required.

A.2.11 Mineral Resources

A.2.11.1 Less than Significant Effects of the Proposed Project

Impact MIN-1: The proposed project is not located in an area with known mineral resources. Therefore, *no effects* are anticipated.

Impact MIN-2: The proposed project is not located in an area that a local general plan has designated as a locally-important mineral resource recovery site. Therefore, *no effects* are anticipated.

A.2.11.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to mineral resources associated with the construction or operation of the project.

A.2.11.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to mineral resources associated with the construction or operation of the project.

A.2.11.4 Mitigation Measures

No mitigation is required.

A.2.12 Noise

A.2.12.1 Less than Significant Effects of the Proposed Project

Impact N-1: Short term, construction-related noise effects would occur as a result of the proposed project. However, construction for the proposed project would be in compliance with local jurisdiction noise restrictions as well as Department Standard Specifications Section 14-8.02 and Department Standard Provisions S5-310, as outlined in minimization measures N-1 and N-2. Therefore, temporary effects are *less than significant*.

Many of the residences along the project corridor are currently and would continue to be exposed to traffic noise approaching or exceeding Caltrans noise abatement criteria (NAC) and noise standards in the General Plan of the cities of Dana Point, San Clemente, and San Juan Capistrano. However, as the project would not result in any substantial noise level increases in the project area, no significant noise effect would occur under CEQA. Noise abatement measures, including sound barriers, have been evaluated to reduce the noise effects. With implementation of the noise abatement measures, these noise levels would be further reduced. Therefore, long-term effects are considered *less than significant*.

Impact N-2: During construction, residences have the potential to be exposed to excessive vibration. However, no structures are expected to be exposed to vibration levels reaching a peak particle velocity (PPV) of 0.25 inches per second [in/sec]. The project-related vibration levels would not result in damage to structures located nearby. Vibration levels from pile drivers and jackhammers would be potentially perceptible by adjacent residents and result in temporary annoyance. However, compliance with local jurisdiction noise restrictions and the Department Standard Specifications as outlined in Minimization Measures N-1 and N-2 in Section 2.14, Noise and Vibration, would minimize vibration effects. Therefore, groundborne vibration and noise effects are considered *less than significant*.

In addition, groundborne vibration from on-road vehicles that will use the completed project would not result in any measurable changes in vibration level compared to the existing conditions. Therefore, *no significant vibration effects* would occur as a result of the proposed project.

Impact N-3: A permanent increase in ambient noise level of less than three dBA would occur as a result of the proposed project. However, this increase is not perceptible to the human ear in an outdoor environment. In addition, with the incorporation of minimization measures N-3 and N-4, ambient noise increases as a result of the proposed project would be further minimized. Therefore, the increase in ambient noise levels is not considered substantial and effects are considered *less than significant*.

Impact N-4: Please refer to response to N-1, above. Project compliance with minimization measures N-1 and N-2 would minimize the effects from increases in ambient noise due to construction activities. Therefore, effects are considered *less than significant*.

Impact N-5: The proposed project is not located within an airport land use plan or within two miles of a public or public use airport. Therefore, *no effects* are anticipated.

Impact N-6: The proposed project is not located within the vicinity of a private airstrip. Therefore, *no effects* are anticipated.

See Section 2.14, Noise and Vibration, for more information.

A.2.12.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to noise and vibration associated with the construction or operation of the project.

A.2.12.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to noise and vibration associated with the construction or operation of the project.

A.2.12.4 Mitigation Measures

No mitigation is required.

A.2.13 Population and Housing

A.2.13.1 Less than Significant Effects of the Proposed Project

Impact POP-1: The proposed project would not be expected to influence the amount, location, and/or distribution of growth in the project cities and the County since no new exit or entrance ramps are proposed and the study area is built out. Due to the fact that very few open areas are available in the close vicinity of the study area, the proposed project will not create new housing or opportunities for capital investment by the public or private sectors.

Although the proposed project would result in changes in land use at the I-5/Avenida Pico interchange under [Design](#) Option A, it would not result in direct or indirect changes in economic vitality and population density. Therefore, the proposed project is not considered growth-inducing and *no effects* are anticipated.

Impact POP-2: The proposed project does not require any acquisition of residential properties. Therefore, replacement housing is not required and *no effects* are anticipated.

Impact POP-3: The project would not displace existing residential housing. Therefore, no residents would be displaced and no replacement housing would be required. Therefore, *no effects* are anticipated.

See Sections 2.1, Land Use; 2.2, Growth; and 2.3, Community Impacts, for more information.

A.2.13.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to population and housing associated with the construction or operation of the project.

A.2.13.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to population and housing associated with the construction or operation of the project.

A.2.13.4 Mitigation Measures

No mitigation is required.

A.2.14 Public Services

A.2.14.1 Less than Significant Effects of the Proposed Project

Impact PS-1:

Fire Protection

The proposed project would help ease congestion along the I-5 mainline and reduce travel time, allowing emergency vehicles to decrease their response times. Therefore, the completion of the proposed project would result in an overall net benefit.

However, during construction, some impairment to the delivery of services, including fire response times, may occur due to construction activities and detours. These temporary impacts would be substantially minimized through implementation of a TMP. Therefore, temporary impacts to accessibility of fire protection services are considered *less than significant*.

Police Protection

The proposed project would help ease congestion along the I-5 mainline and reduce travel time, allowing emergency vehicles to decrease their response times. Therefore, the completion of the proposed project would result in an overall net benefit.

However, during construction, some impairment to the delivery of services, including police response times, may occur due to construction activities and detours. These temporary impacts would be substantially minimized through implementation of a TMP. Therefore, temporary impacts to accessibility of police protection services are considered *less than significant*.

Schools

Students traveling to and from San Clemente High School would experience temporary traffic delays due to construction activities and detours. However, the TMP will address school access and circulation needs in order to remain fully operational during construction. Therefore impacts are considered *less than significant*.

Parks

There are no parks located within the project limits. In addition, the proposed project is not growth inducing and would not require additional park facilities. Therefore, *no effects* are anticipated.

Other Public Facilities

As stated above, no other public facilities are located within the project limits and the project is not growth inducing. Therefore, *no effects* are anticipated to other public facilities.

See Section 2.4, Utilities and Emergency Services, for more information.

A.2.14.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to public services associated with the construction or operation of the project.

A.2.14.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to public services associated with the construction or operation of the project.

A.2.14.4 Mitigation Measures

No mitigation is required.

A.2.15 Recreation

A.2.15.1 Less than Significant Effects of the Proposed Project

Impact REC-1: There are no regional parks or recreational facilities located within the project limits. In addition, the proposed project is not growth inducing and would not require additional park facilities. Therefore, *no effects* are anticipated.

Impact REC-2: The project is not growth inducing and would not require the construction or expansion of recreational facilities. Therefore, *no effects* are anticipated.

See Sections 2.2, Growth, and 2.3, Community Impacts, for more information.

A.2.15.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to recreation associated with the construction or operation of the project.

A.2.15.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to recreation associated with the construction or operation of the project.

A.2.15.4 Mitigation Measures

No mitigation is required.

A.2.16 Transportation/Traffic

A.2.16.1 Less than Significant Effects of the Proposed Project

Impact TC-1: The proposed project would accommodate previously anticipated growth in the study area, therefore, it would result in *no effect* to an increase in traffic.

Impact TC-2: The proposed project would improve the level of service at interchanges within the project limits. Therefore, the project would have a *less than significant effect* to level of service.

Impact TC-3: The proposed project is a transportation improvement project and would not alter existing air traffic patterns. *No effects* are anticipated.

Impact TC-4: The proposed project would not increase any hazards due to design features or incomplete uses. The appropriate highway safety design guidelines would be used throughout the design process. Therefore *no effects* are anticipated.

Impact TC-5: The project is an operational improvement project and would result in a permanent improvement in emergency access. Temporary delays in emergency response times would occur during the construction of the proposed project. However, these delays would be substantially minimized with the implementation of the TMP. Therefore, temporary effects to emergency access would be *less than significant*.

Impact TC-6: The proposed project would not result in the displacement of parking spaces within the project limits. Therefore, the project would result in *no effect* to parking.

See Section 2.5, Traffic and Transportation/Pedestrian and Bicycle Facilities, for more information.

A.2.16.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to traffic and transportation associated with the construction or operation of the project.

A.2.16.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to traffic and transportation associated with the construction or operation of the project.

A.2.16.4 Mitigation Measures

No mitigation is required.

A.2.17 Utilities and Service Systems

A.2.17.1 Less than Significant Effects of the Proposed Project

Impact USS-1: The proposed project would not generate any wastewater. Therefore there would be *no effect* regarding wastewater treatment.

Please see Section 2.9, Water Quality and Storm Water Runoff, for more information.

Impact USS-2: The proposed project does not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Therefore, there would be *no effect* regarding new water or wastewater treatment facilities.

See Chapter 1 for drainage facilities that are part of the proposed project and for more information.

Impact USS-3: The proposed project will not substantially change the drainage pattern and drainage improvements will not result in an increase in storm water capacity. Therefore, the proposed project would have a *less than significant* effect on storm water capacity.

See Chapter 1 for more detail on these improvements and Section 2.9, Water Quality and Storm Water Runoff, for more information regarding drainage.

Impact –USS-4: The proposed project is not growth inducing. Therefore, the proposed project would not cause an additional need in water supply entitlements or resources, or the need for new or expanded entitlements. Therefore, *no effects* are anticipated.

See Section 2.2, Growth, for more information.

Impact USS-5: The proposed project is a transportation improvement project and is not considered growth inducing. Therefore, no additional demand for wastewater treatment services would be required as part of the proposed project and *no effects* are anticipated.

See Section 2.2, Growth, for more information.

Impact USS-6: The proposed project will implement roadway improvements and does not include the development of land uses that would generate solid waste. Therefore, *no effects* to landfills with insufficient permitted capacities would result, and no mitigation is required. The minimal amounts of construction waste generated during construction of the proposed project would likely be disposed of at Prima Deshecha Landfill, the nearest Orange County Waste and Recycling (OCWR) permitted landfill. The Prima Deshecha Landfill receives a daily average of approximately 2,000 tons per day (tpd) of solid waste, and can accept up to 4,000 tpd of solid waste.¹ As of August 1, 2005, the Landfill had a remaining airspace capacity estimated at 87 million cubic yards (mcy).² Site closure is estimated to occur in the year 2067.³ Therefore, the Prima Deshecha Landfill will be able to accept solid waste generated from the construction of the proposed project and due to the minimal amount of waste effects are considered *less than significant*.

Impact USS-7: Federal, State, and local statutes and regulations related to solid waste are not applicable to this project. Therefore, there are *no effects*.

A.2.17.2 Significant Environmental Effects of the Proposed Project

There are no significant environmental effects related to utilities and service systems associated with the construction or operation of the project.

A.2.17.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to utilities and service systems associated with the construction or operation of the project.

¹ CalRecycle, www.calrecycle.ca.gov/swfacilities/Directory/30-AB-0019/Inspection/313883 (July 16, 2009).

² CalRecycle, www.calrecycle.ca.gov/swfacilities/Directory/30-AB-0019/Detail.

³ Ibid.

A.2.17.4 Mitigation Measures

No mitigation is required.

A.2.18 CEQA Mandatory Findings of Significance

A.2.18.1 Less than Significant Effects of the Proposed Project

Impact CEQA-1: Cumulative impacts as a result of the proposed project are considered *less than significant*.

See Section 2.21, Cumulative Impacts, for proposed minimization measures.

Impact CEQA-2: The proposed project would *no adverse effects* on human beings.

A.2.18.2 Significant Environmental Effects of the Proposed Project

Impact CEQA-3: The proposed project would not significantly degrade the quality of the environment or cause significant reductions in any native or sensitive habitats or species or populations in the project area with the exception of potential permanent effects to special-status animal species through the removal of potential habitat. This potential habitat is identified as California Sage Scrub (CSS) and riparian/riverine habitat. However, with the implementation of minimization and avoidance measures **BIO-1** and **BIO-2**, and **BIO-5** through **BIO-16**, and Mitigation Measure **BIO-3**, effects to habitat, sensitive, threatened and endangered species would be considered *less than significant with mitigation incorporated*.

A.2.18.3 Unavoidable Significant Environmental Effects

There are no unavoidable significant environmental effects related to the CEQA Mandatory Findings of Significance associated with the construction or operation of the project.

A.2.18.4 Mitigation Measures

Mitigation measures under CEQA would be the same as those discussed in Sections 2.11, Paleontology; 2.15, Natural Communities; and Section 2.16, Wetlands and Other Waters.

A.2.19 Climate Change

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 (IPCC), the efforts devoted to greenhouse gas (GHG) emissions reduction and climate change research and policy have increased dramatically in recent years. These efforts are primarily concerned

with the emissions of GHG related to human activity that include carbon dioxide (CO₂), methane, nitrous oxide, tetrafluoromethane, hexafluoroethane, sulfur hexafluoride, HFC-23 (fluoroform), HFC-134a (s, s, s, 2 –tetrafluoroethane), and HFC-152a (difluoroethane).

In 2002, with the passage of Assembly Bill 1493 (AB 1493), California launched an innovative and pro-active approach to dealing with greenhouse gas emissions and climate change at the state level. Assembly Bill 1493 requires the California Air Resources Board (CARB) to develop and implement regulations to reduce automobile and light truck greenhouse gas emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year; however, in order to enact the standards California needed a waiver from the U.S. Environmental Protection Agency (EPA). The waiver was denied by Environmental Protection Agency in December 2007 and efforts to overturn the decision had been unsuccessful. See *California v. Environmental Protection Agency*, 9th Cir. Jul. 25, 2008, No. 08-70011. On January 26, 2009, it was announced that EPA would reconsider their decision regarding the denial of California's waiver. On May 18, 2009, President Obama announced the enactment of a 35.5 mpg fuel economy standard for automobiles and light duty trucks which will take effect in 2012. On June 30, 2009 EPA granted California the waiver. California is expected to enforce its standards for 2009 to 2011 and then look to the federal government to implement equivalent standards for 2012 to 2016. The granting of the waiver will also allow California to implement even stronger standards in the future. The state is expected to start developing new standards for the post-2016 model years later this year.

On June 1, 2005, Governor Arnold Schwarzenegger signed Executive Order S-3-05. The goal of this Executive Order is to reduce California's GHG 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 (AB 32), the Global Warming Solutions Act of 2006. AB 32 sets the same overall GHG emissions reduction goals while further mandating that CARB 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 further directs state agencies to begin implementing AB 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.

According to *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), an individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may participate in a potential impact through its incremental contribution combined with the contributions of all other sources of GHG. In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable." See CEQA Guidelines sections 15064(i)(1) and 15130. To make this determination the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects in order to make this determination is a difficult if not impossible task.

The Department and its parent agency, the Business, Transportation, and Housing Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, the Department has created and is implementing the Climate Action Program at Caltrans (December 2006).

One of the main strategies in the Department's Climate Change Action Program to reduce GHG 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 mph. Relieving congestion by enhancing operations and improving travel times in high congestion travel corridors will lead to an overall reduction in GHS emissions.

The Department recognizes the concern that carbon dioxide emissions raise for climate change. However, modeling and gauging the impacts associated with an increase in GHG emissions 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 GHG emission and climate change impact analysis. Therefore, the Department is unable to provide a scientific or regulatory based

conclusion regarding whether the project's contribution to climate change is cumulatively considerable.

The Department continues to be actively involved on the Governor's Climate Action Team as ARB works to implement AB 1493 and AB 32. As part of the Climate Action Program at Caltrans (December 2006), the Department is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high density housing along transit corridors. The Department is working closely with local jurisdictions on planning activities; however, the Department does not have local land use planning authority. The Department is also supporting efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks. However it is important to note that the control of the fuel economy standards is held by the United State Environmental Protection Agency and ARB. Lastly, the use of alternative fuels is also being considered; the Department is participating in funding for alternative fuel research at the University of California Davis.

A.3 Mitigation Measures for Significant Impacts under CEQA

To reduce potential impacts resulting from the implementation of the proposed project, a range of avoidance, minimization, and/or mitigation measures have been proposed. For all environmental issue areas, mitigation measures under CEQA would be the same as those measures discussed in the Chapter 2 sections referenced above.

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