Chapter 3 California Environmental Quality Act (CEQA) Evaluation

3.1 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 actions required by applicable Federal environmental laws for this project are being, or have been, carried out by Caltrans pursuant to 23 United States Code Section 327 (23 USC 327) and the Memorandum of Understanding dated December 23, 2016 and executed by FHWA and Caltrans. 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 EIS, or a 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. Some impacts determined to be significant under CEQA may not be of sufficient magnitude to be determined significant under NEPA. Under NEPA, once a decision is made regarding the need for an EIS, 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 chapter discusses the effects of this project and CEQA significance.

3.2 CEQA Environmental Checklist

This checklist identifies physical, biological, social, and economic factors that might be affected by the Build Alternative. In many cases, background studies performed in connection with the projects will indicate that there are no impacts to a particular resource. A NO IMPACT answer in the last column reflects this determination. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

Project features, which can include both design elements of the project, and standardized measures that are applied to all or most Caltrans projects such as Best Management Practices (BMPs) and measures included in the Standard Plans and Specifications or as Standard Special Provisions, are considered to be an integral part of the project and have been considered prior to any significance determinations documented below; see Chapters 1 and 2 for a detailed discussion of these features. The annotations to this checklist are summaries of information contained in Chapter 2 in order to provide the reader with the rationale for significance determinations; for a more detailed discussion of the nature and extent of impacts, please see Chapter 2. This checklist incorporates by reference the information contained in Chapters 1 and 2.

This CEQA evaluation refers to the detailed discussions provided in Chapters 1 and 2 and provides impact analyses and conclusions for the Build Alternative as described in Section 1.5 of Chapter 1. Component 2 (Safety Project) was previously cleared environmentally by Caltrans as part of the State Route 133 Safety Project IS/MND /CE, approved in September 2017. Components 3 (Shoulder Widening, Class II Bike Lane, and Drainage Improvements) and 4 (Underground Overhead Utilities) were previously evaluated by the County of Orange as part of the Laguna Canyon Road (SR-73 to El Toro Road) Improvement Project, approved in February 2006. Caltrans has approved an Addendum to the IS/MND/CE and the County has approved an Addendum to the IS/MND addressing any changes to the project design since approval of these environmental documents. Since the Build Alternative, includes all four components, this evaluation also describes the combined environmental impacts of all four components for disclosure purposes.

3.2.1 Aesthetics

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☒	☐
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

CEQA Significance Determinations for Aesthetics

The potential for the Build Alternative to result in adverse impacts related to aesthetics was assessed in the *Visual Impact Assessment* (July 2017), the *Visual Impact Assessment Addendum* (April 2018), the *Visual Impact Assessment for the Safety Project* (April 2018), and the *Visual Impact Assessment Addendum for the Safety Project* (April 2018). In addition, impact analysis for aesthetics is also provided in Section 2.5, Visual/Aesthetics, of the IS/EA.

a) <u>Less Than Significant Impact</u>

The roadway viewshed from SR-133 at the bottom of Laguna Canyon encompasses roadway views to the tops of the hills on both sides of the canyon. Various textural elements including natural topography, native vegetation, rock outcroppings and open spaces of the canyon would remain visible and construction of the Build Alternative would include restoration of land temporarily used including revegetation with appropriate native habitat (see Project Features PF-LU-1 and PR-4, in Section 2.1, Land Use, and Measure BIO-2 in Section 2.13, Natural Communities).

The Build Alternative would slightly alter the natural and manmade landscape, but would not impede views of Laguna Canyon resulting in an impact on scenic vistas along the surrounding ridgelines and hillsides. In addition, the proposed undergrounding of utilities would result in an aesthetic benefit by removing an urban use from Laguna Canyon. Permanent highway

planting and replacement planting would be implemented as Project Feature PF-VIS-1. The Build Alternative would have a less than significant impact on scenic vistas. No mitigation is required. Furthermore, implementation of Measure VIS-1 would require the proposed MGS to be treated with organic stain in order to remove the new, shiny, galvanized metal appearance, which may result in glare.

b) No Impact

As discussed in Section 2.5, Visual/Aesthetics, the Build Alternative would include the construction of a concrete check dam at the SR-133 on-ramp loop area, and other drainage improvements along the southbound side of SR-133 and under Laguna Canyon Road. According to the Caltrans Scenic Highway Mapping Program, SR-133 is not an eligible or listed State Scenic Highway. Therefore, no impact would occur.

c) Less Than Significant Impact

While SR-133 is not an eligible or listed state scenic highway, the portion of SR-133 within the project limits is designated as a rural scenic highway by the City of Laguna Beach General Plan and is designated as a view corridor by the County of Orange, due to the rural and undeveloped character of Laguna Canyon. Viewer sensitivity in the project area is considered moderate-high.

The visual character of the Build Alternative would be compatible with the existing visual character of SR-133 as the roadways and drainage improvements would be located directly adjacent to the existing roadway and urban elements of Laguna Canyon. Views from SR-133 would not be substantially altered as a result of the proposed drainage improvements due to the existing site topography, vegetation, and the elevation and location of the proposed improvements. The removal of one Utility Company Access Point (UCAP) at Station 121+00 (southbound direction just south of El Toro Road) would further lessen impacts to oak trees and visual quality. The existing mature oak tree located on this slope would be preserved in place if feasible. There would be no change to the visual character of the canyon beyond the proposed improvements. These pattern elements would remain similar year-around with little seasonal change to the mostly evergreen vegetation. In addition, to avoid impacts to the visual character of the site from removal of the existing boundary fencing of Laguna Coast Wilderness Park, Project

Feature PR-4 states that Caltrans shall install new boundary fencing to match existing cable strand fencing.

Caltrans is also considering a hybrid option that would include a combination of a low retaining wall/minimal slope grading (in lieu of the 1.5:1 slope as discussed above) to minimize impacts near the intersection of El Toro Road. This would further reduce impacts to oak trees and the visual character of the canyon. However, engineering studies pertaining to the feasibility of this option are still pending. With Minimization Measure VIS-2, "Caltrans will continue to coordinate with OC Parks during the design phase to finalize details", visual impacts would be minimized.

As a result, changes to the visual character of the project area as a result of the Build Alternative would be low. As stated above, the undergrounding of utilities would remove an urban use from Laguna Canyon and would enhance the rural visual character of the area.

Impacts from the Build Alternative to scenic resources within a scenic highway corridor and to the visual character of the site would be less than significant. No mitigation is required.

d) Less Than Significant Impact

The Build Alternative would not include new lighting elements. The proposed improvements would be made of concrete, and no materials that would constitute a source of glare would be placed within the project area. Implementation of Measure VIS-1 would avoid and/or minimize potential impacts from glare by requiring the proposed MGS to be treated with organic stain in order to remove the new, shiny, galvanized metal appearance. Therefore, the Build Alternative would not include any new sources of light, and impacts related to glare would be less than significant.

3.2.2 Agriculture and Forest Resources

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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 non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c) 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))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

CEQA Significance Determinations for Agriculture and Forest Resources

a) No Impact

The Orange County Important Farmland 2017 map of the Farmland Mapping and Monitoring Program for the California Department of Conservation (CDC) designates the project site as "Other Land" and does not identify Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the project area. Therefore, the Build Alternative would have no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. No mitigation is required.

b) No Impact

According to the Orange County Agricultural Preserves 2004 Williamson Act Parcels Map by the CDC, there are no parcels under a Williamson Act contract within the project limits. In addition, there is no existing zoning for agricultural use in the project area. The project site and surrounding land are designated as Open Space. Therefore, the Build Alternative would have no impact on existing agricultural zoning or land under a Williamson Act contract. No mitigation is required.

c,d) No Impact

According to the City's zoning map, there is no land zoned as forest land or timberland within the project limits. Therefore, the Build Alternative would have no impact related to existing zoning for forest land or timberland or result in the conversion of forest land to a non-forest use. No mitigation is required.

e) No Impact

As stated above, there is no farmland or forest land within the project area or surrounding vicinity. Therefore, no impact would occur to farmland or forest land. No mitigation is required.

3.2.3 Air Quality

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

CEQA Significance Determinations for Air Quality

The potential for the Build Alternative to adversely impact air quality was assessed in Section 2.11, Air Quality, in the IS/EA. The following discussion is based on that analysis.

a–d) <u>Less Than Significant Impact</u>

The project site is located in the South Coast Air Basin and is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD) and the California Air Resources Board (CARB). The SCAQMD is the primary agency responsible for writing the Air Quality Management Plan (AQMP) in cooperation with SCAG, local governments, and the private sector. The AQMP provides the blueprint for meeting state and federal ambient air quality standards. The Build Alternative, including Component 1, is not a capacity-increasing transportation project. It will have no impact on traffic volumes and would generate a less than significant amount of pollutants during construction due to the very short duration of project construction. The Build Alternative is included in SCAG's 2016-2040 RTP and the 2017 FTIP both of which were found to be conforming (see section 2.11, Air Quality). Therefore, the Build Alternative will not conflict with the AQMP, violate any air quality standard, result in a net increase of any criteria

pollutant, or expose sensitive receptors to substantial pollutant concentrations. Impacts for the Build Alternative would be less than significant. No mitigation is required.

e) Less Than Significant Impact

Temporary construction activities including clearing, cut-and-fill activities, grading, and paving could generate fugitive dust from soil disturbance and other emissions from the operation of construction equipment. The Build Alternative, including Component 1, would comply with construction standards adopted by the South Coast Air Quality Management District (SCAQMD) including Rule 403, as well as Project Feature PF-AQ-1 for minimizing air pollutants during construction. See Section 2.11, Air Quality, in this IS/EA for information about the standardized project feature (Project Feature PF-AQ-1) that would avoid and/or minimize air quality impacts resulting from construction activities. Objectionable odors are not currently present within the project area and construction activities, including the use of diesel equipment, would be temporary in nature and are not anticipated to emit significant odors. Similarly, impacts from the Build Alternative will be less than significant with the project features listed in Section 2.11. No mitigation is required.

3.2.4 Biological Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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 Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) 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?	☐	☒	☐	☐
d) 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 impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☒	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☒	☐

CEQA Significance Determinations for Biological Resources

The potential for the Build Alternative to result in adverse impacts related to biological resources was assessed in the *Biological Assessment, Natural Environmental Study, and Jurisdictional Delineation* prepared for the SR-133 Widening and Drainage Improvement Project (EA 0Q3600) (May 2018) and the *Biological Assessment, Amended Natural Environment Study,* and *Jurisdictional Delineation Report* prepared for the SR-133 Safety Improvement Project at El Toro Road (EA 0N0600) (May 2018). An analysis of impacts is also provided in Sections 2.13, Natural Communities, 2.14, Wetlands, 2.15, Plant Species, 2.16, Animal Species, 2.17, Threatened and Endangered Species, and 2.18, Invasive Species, of the IS/EA.

a) <u>Less Than Significant with Mitigation Incorporated</u>

As discussed in Sections 2.15 and 2.16, three non-listed special-status plant species were observed within the BSA (paniculate tarplant, southwestern spiny rush, and southern California black walnut) and ten non-listed special-status animal species were observed within the BSA (American peregrine falcon, white-tailed kite, Crotch bumble bee, Cooper's hawk, northern harrier, yellow-breasted chat, yellow warbler, western mastiff bat, yuma myotis, and

San Diego desert woodrat). In addition, five non-listed special-status plant species and 14 non-listed special-status animal species have a moderate potential to occur within the BSA due to the presence of suitable habitats and known records of these species in the general project vicinity.

Southern California black walnut was the only non-listed special-status plant species observed within the direct disturbance limits of the Build Alternative during focused botanical surveys. Construction of the Build Alternative would result in direct temporary effects to individual southern California black walnut trees, including tree damage associated with the trimming of trees for construction access or temporary construction work within the root zone of individual trees. Direct permanent effects to southern California black walnut trees would also occur due to the removal of individual trees within the Build Alternative direct impact limits (e.g., where new roadway and drainage infrastructure would be added or where existing roadway and drainage infrastructure is modified). No other non-listed special-status plant species would be directly impacted as none was observed within the direct impact limits of the Build Alternative. Construction of the Build Alternative has the potential to result in indirect temporary effects to non-listed special-status species, if present in the BSA during construction, through increased dust, erosion, temporary changes in hydrology from dewatering, or the introduction of invasive species in areas adjacent to the project footprint. Implementation of Measures BIO-1 through BIO-6 provided in Section 2.13 avoids and/or minimizes temporary impacts to special-status species and suitable habitat for special-status species by (1) designating Environmentally Sensitive Areas (ESAs) that are to be preserved during construction, (2) restoring areas temporarily affected by construction activities, (3) utilizing best management practices (BMPs) to prevent construction runoff and dust from entering sensitive habitat areas and minimizing fire risks, (4) preventing the spread of invasive species, (5) monitoring construction activities to ensure that practicable measures are being employed to avoid and minimize incidental disturbance to sensitive resources, and (6) training all construction personnel regarding the applicable avoidance and minimization measures. In addition, several measures included in the United States Fish and Wildlife Service (USFWS) Section 7 Consultation letter dated August 30, 2017 (FWS-OR-17B0314-18I1613), as described in Section 2.17.4, would have the added benefit of avoiding or minimizing impacts to sensitive natural communities (note that there is some overlap between these measures). To further minimize

and avoid impacts to southern California black walnut trees and other non-listed special-status plant species, ESA fencing will be installed around retained trees and any other identified special-status plant populations as specified in Measure BIO-11 (provided in Section 2.13). Loss of southern California black walnut trees would be addressed by the proposed compensatory mitigation for permanent effects to riparian habitats (refer to Measure BIO-11 described in Section 2.13, Natural Communities). With the implementation of the measures listed above, including compensatory mitigation for permanent impacts to southern black walnut trees, impacts to non-listed special-status plant species would be less than significant with mitigation incorporated.

Direct impacts to non-listed special-status animal species include injury or mortality from collisions with construction equipment, although most special-status species with potential to occur within the direct impact limits are expected to avoid these areas during construction. Indirect temporary impacts to non-listed special-status species such as noise, lighting, vibration, and attraction of predators from food waste or trash would be avoided and/or minimized with the implementation of Measures BIO-13 through BIO-15 provided in Section 2.16. Measures BIO-13 through BIO-15 provide for the avoidance of the avian nesting season or pre-construction nesting bird surveys if construction activities are conducted during this period, active nest protection, pre-construction clearance surveys, and proper trash disposal to avoid attracting potential predators of special-status species to the work area. In addition, implementation of Measures BIO-1 through BIO-6 (provided in Section 2.13 and described above) would avoid and/or minimize temporary impacts to non-listed special-status animal species. In addition, several measures included in the USFWS Section 7 Consultation letter dated August 30, 2017 (FWS-OR-17B0314-18I1613), as described in Section 2.17.4, would have the added benefit of avoiding or minimizing impacts to non-listed special-status species (note that there is some overlap between these measures). With the implementation of the measures described above, construction of the Build Alternative would have a less than significant impact on special-status animal species.

Direct impacts to protected bat species or suitable bat maternity roosting habitats are not anticipated. Temporary indirect disturbance to bat species may include noise, vibration, dust, night lighting, and human encroachment

associated with construction activities near suitable tree and crevice roosting habitat, as well as suitable foraging habitat present in the BSA. Implementation of Measures BIO-16 and BIO-17 would provide for nighttime lighting controls and airspace access to identified suitable roosting habitats. Implementation of Measures BIO-18, BIO-19, and BIO-20 would provide verification regarding the level of bat foraging and roosting activity prior to construction, require palm frond trimming, if necessary, to be conducted outside the bat maternity season (i.e., April 15-August 31) to avoid potential harm to flightless young, and provided for CDFW-approved methods to be used if bat maternity sites are identified during pre-construction surveys. With the implementation of the measures listed above, construction of the Build Alternative would have a less than significant impact on protected bat species that have the potential to occur within the BSA.

As discussed in Section 2.17, four federally- and/or State-listed as endangered or threatened plant and animal species were identified in the literature and records searches and have at least a low potential of occurring in the BSA (thread-leaved brodiaea, Laguna Beach dudleya, least Bell's vireo, and coastal California gnatcatcher). No other listed animal species identified in the literature review are expected to occur within the BSA and these species are not discussed further.

No listed special-status plant species were observed in the Botanical BSA (defined as the Build Alternative direct impact limits plus a 100 ft buffer) during appropriately timed surveys in 2016 and 2017, and none are expected to occur within the direct disturbance limits of the Build Alternative. Thread-leaved brodiaea and Laguna Beach dudleya, while not observed within the Botanical BSA during focused surveys, have a low potential of occurring within the Botanical BSA due to the presence of potentially suitable habitats and occurrence records in the vicinity of the Botanical BSA. Construction of the Build Alternative is not expected to result in direct impacts to listed special-status plant species because these species were not observed in the direct impact areas. Construction of the Build Alternative has potential to result in indirect impacts to potentially suitable habitat for thread-leaved brodiaea and Laguna Beach dudleya through increased dust and erosion/runoff during construction, or the introduction of invasive species. Such indirect impacts to potentially suitable habitat would be avoided and/or minimized with the implementation of Measures BIO-1 through BIO-6

(provided in Section 2.13 and described above). Additional ESA fencing will be installed around any special-status plant populations as specified in Measure BIO-12, provided in Section 2.15. With the implementation of the measures described above, construction of the Build Alternative would have a less than significant impact on listed special-status plant species.

No listed special-status animal species were observed within the BSA during focused surveys conducted in 2017. The coastal California gnatcatcher is the only listed special-status animal species with occurrence records within the BSA; individuals were observed within the BSA, outside of the direct impact limits of the Build Alternative, during surveys conducted in 2016. Suitable habitat for the least Bell's vireo is present in the BSA and the species has occurrence records in the vicinity of the BSA; therefore, least Bell's vireo is given a moderate probability of occurrence within the BSA. Direct impacts to coastal California gnatcatcher and least Bell's vireo are not expected to occur as a result of implementation of the Build Alternative because both species have not been observed in areas that would be directly impacted and suitable breeding habitats within the Build Alternative direct impact limits are very limited. Indirect temporary impacts to both species, if present in the BSA during construction, would include increased noise, vibration, dust, and lighting that would result from the construction of the roadway and drainage improvements and undergrounding of utilities. Because the coastal California gnatcatcher and least Bell's vireo have potential to occur within the BSA and there is a more than 2-year time lapse between 2017 protocol surveys and the start of construction, a "May Affect, Not Likely to Adversely Affect" determination for each species has been made. With implementation of Measures BIO-1 through BIO-6 provided in Section 2.13 and Measures BIO-13 and BIO-14 provided in Section 2.16, potential indirect impacts to listed special-status species would be less than significant. On August 30, 2018, the USFWS issued a Section 7 Consultation letter that concurs that the project is not likely to adversely affect any federally listed species. The letter contains several Conservation Measures, some of which overlap with commitments made in Measures BIO-1 through BIO-16, which have been incorporated into this environmental document and will be implemented in addition to the measures referenced above to avoid and/or minimize impacts to threatened and endangered wildlife species (refer to Measures BIO-21 through BIO-40 in Section 2.13.4).

While no direct impacts are anticipated for listed special-status species, if least Bell's vireo or coastal California gnatcatcher are found during pre-construction surveys or project monitoring, Section 7 consultation will be re-initiated and a CDFW Section 2081 permit may also be required; compensatory mitigation may be developed in consultation with USFWS and CDFW at that time.

b) Less Than Significant with Mitigation Incorporated

Natural communities of special concern within the BSA include: California sagebrush-California buckwheat scrub, coyote brush scrub, maritime chaparral-sagebrush ecotone, coast live oak woodland, southern sycamore riparian woodland, southern black willow forest, mulefat scrub, freshwater seep, and rock outcrops. California sagebrush-California buckwheat scrub, coyote brush scrub, and maritime chaparral-sagebrush ecotone are considered to be coastal sage scrub (CSS) vegetation communities. Freshwater seep, mulefat scrub, southern black willow forest, and southern sycamore riparian woodland are considered riparian habitats.

The Build Alternative would result in direct temporary impacts to approximately 0.22 acre of CSS vegetation communities, 0.02 ac of rock outcrops, 0.06 acre of coast live oak woodland, and 0.87 acre of riparian habitats associated with construction staging and access areas and/or areas of temporary ground disturbance required for undergrounding overhead utilities, slope contouring, roadway/shoulder widening, and constructing the proposed drainage improvement features (e.g., culvert modifications, concrete check dam, and articulated block channel). Temporary construction activities have the potential to result in indirect temporary impacts to sensitive natural communities through increased dust, erosion, temporary changes in hydrology from dewatering, or the introduction of invasive species in areas adjacent to the project footprint.

The Build Alternative would result in the following permanent impacts to sensitive vegetation communities: approximately 0.38 acre of CSS vegetation communities, 0.06 acre of coast live oak woodland, and 2.59 acres of riparian habitat. The Build Alternative would also result in direct impacts to individual coast live oak trees from tree trimming/removal and construction work within the root zone of individual trees. With implementation of Measures BIO-1

through BIO-6 provided in Section 2.13, along with Measures BIO-7 through BIO-10 which provide for the avoidance of retained oak tree root zones, monitoring of retained oak trees, tree pruning to be conducted in accordance with International Society of Arboriculture (ISA) standards, and replacing removed upland oak trees in compliance with State Senate Concurrent Resolution No. 17, construction of the Build Alternative would not result in significant impacts to sensitive natural communities. For impacts to oak trees located within riparian habitats under the regulatory jurisdiction of the California Department of Fish and Wildlife (CDFW), compensation will be provided under Measure BIO-11, as defined in Section 2.13.

Riparian and/or wetland habitats are under the regulatory authority of the United States Army Corps of Engineers (USACE), the CDFW, and the Regional Water Quality Control Board (RWQCB). Within the Coastal Zone, these habitats also fall under the jurisdiction of the California Coastal Commission (CCC)/Local Coastal Program (LCP). Compensatory mitigation for impacts to these areas will be determined during the permitting phase in coordination with these agencies. To the extent riparian areas are permanently impacted by the project, compensatory mitigation for this habitat will likely be required where it is associated with jurisdictional features that are subject to USACE regulatory authority under the Section 404 permitting requirements, the CDFW under the Section 1600 permitting requirements, and the CCC/LCP under the coastal development permitting requirements. The current compensatory mitigation proposal for impacts to jurisdictional features, to be confirmed during the regulatory permitting process, is outlined in Measure BIO-11, provided in Section 2.13. With the implementation of Measure BIO-11, permanent impacts to riparian habitats would be fully compensated and the impacts would be less than significant with mitigation incorporated.

c) Less Than Significant with Mitigation Incorporated

Construction activities would result in temporary impacts to 0.008 acre of delineated USACE non-wetland waters and 0.025 acre of delineated USACE wetland waters. The areas subject to RWQCB jurisdiction coincide with those subject to USACE jurisdiction (0.033 acre in total). Construction activities would also result in temporary direct impacts to 0.001 acre of streambed and 0.68 acre of riparian habitat under delineated CDFW jurisdiction. Measures

BIO-1 through BIO-11, provided in Section 2.13, would avoid and/or minimize temporary indirect impacts to delineated jurisdictional features.

Construction of the Build Alternative would result in 0.275 acre of permanent impacts to areas under USACE jurisdiction and 2.159 acres of permanent impacts to areas under CDFW jurisdiction associated with vegetation clearing and grubbing, remediating the base soil form, pouring the concrete check dam, slope grading, roadway demolition and excavation, undergrounding utilities, roadway structural work and paving, and constructing the articulated block channel. Permanent effects to wetlands and riparian communities will be mitigated with implementation of Measure BIO-11, provided in Section 2.13, Natural Communities. In July 2018, Caltrans conducted an assessment of potential riparian mitigation and planting areas within the project watershed (e.g., within Laguna Canyon and within adjacent OC Parks-managed lands). Several riparian/wetland creation and enhancement sites have been preliminarily identified as being potentially suitable for riparian and wetland compensatory mitigation. The boundaries of all potential mitigation and planting areas identified are subject to alterations based on stakeholder input (including landowner and resource agency approvals), as well as further technical analyses to determine the feasibility of any given site (e.g., soil and hydrology studies, and engineering constraints analyses, etc.). Therefore, Caltrans proposes to mitigate project-related impacts to jurisdictional features (including wetlands and riparian habitats) within the project watershed, where feasible. Figure 2.13-3, provided in Section 2.13, Natural Communities, provides an overview of the potential mitigation and planting areas identified within the project watershed. If additional mitigation acreage is required, Caltrans proposes that permanent effects will be mitigated off-site at a 3:1 ratio by purchasing mitigation credits from the San Luis Rey Mitigation Bank. The San Luis Rey Mitigation Bank is approved to provide mitigation for permitted projects under USACE Section 404 permits, RWQCB Section 401 certifications, and CDFW 1600 streambed alteration agreements. Therefore, impacts to wetlands would be less than significant with mitigation incorporated.

d) <u>Less Than Significant Impact</u>

Construction of the Build Alternative would not result in permanent barriers to wildlife movement within any designated wildlife movement corridors

within the BSA. Should species such as mountain lion, bobcat, mule deer, or coyote be present within the BSA, they are expected to move out of or avoid the work area during construction. Active construction activities could temporarily deter wildlife movement near the roadway and drainages due to increased noise and human activity; however, wildlife is expected to continue to use corridors when construction work is not occurring, particularly at dawn and dusk, or avoid the work areas during construction. Implementation of the Build Alternative is not expected to permanently affect wildlife movement or decrease the functionality of any wildlife crossings, as no new permanent barriers would be placed within any designated wildlife movement corridors. Wildlife movement is expected to continue throughout the area following construction. Therefore, construction of the Build Alternative would have a less than significant impact on wildlife corridors or movement.

e) **Less Than Significant Impact**

While the County does not have a tree ordinance requiring specific replacement ratios for oak tree removal, State Senate Concurrent Resolution No. 17 directs State agencies to preserve and protect native oak woodlands to the maximum extent feasible, or provide for replacement plantings where designated oak species are removed from oak woodlands. Caltrans proposes to replace upland oak trees at a 1:1 replacement ratio, and for heritage oaks, at a 3:1 replacement ratio. For impacts to oak trees located within riparian habitats under the regulatory jurisdiction of the CDFW, compensation will be provided under Measure BIO-11, as defined in Section 2.13. The Build Alternative would result in direct permanent impacts to approximately 0.06 acre of coast live oak woodland. Direct impacts to oak trees may include pruning of large limbs greater than three inches in diameter, removal, or activities occurring within the root zone. Although the oak tree roots may extend up to three times the extent of the dripline, the most important roots are located within the dripline of the oaks. For the purpose of balancing project constructability and tree protection, the protected root zone is considered coincident with the dripline. Potential direct impacts include adding or removing soil within the dripline, which would occur during utility undergrounding, slope contouring, and roadway widening, and could potentially damage oak trees. With implementation of Measures BIO-7 through BIO-9, compliance with State Senate Concurrent Resolution No. 17 (Measure BIO-10), and replacement of oak trees within riparian habitats in accordance with Measure BIO-11,

construction of the Build Alternative would not conflict with applicable policies related to tree preservation.

f) Less Than Significant Impact

While a portion of the project area lies within the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) Reserve, improvements within the project area were anticipated as planned infrastructure and are consistent with the NCCP/HCP. No permanent impacts to CSS habitat would occur within the NCCP/HCP Reserve under the current project design, and based on the County's role as a Participating Landowner and a signatory to the NCCP/HCP Implementation Agreement and its fulfillment of its NCCP/HCP responsibilities, no additional mitigation for NCCP/HCP covered resources is required. The Build Alternative is considered consistent with the NCCP/HCP, and impacts to lands covered under the NCCP/HCP would be less than significant.

3.2.5 Cultural Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☒	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☒	☐
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
d) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

The potential for the Build Alternative to result in adverse impacts related to cultural and paleontological resources was assessed in the *Historic Property Survey Report* for EA 0Q3600 (HPSR, May 2018), the *Supplemental Historic Property Survey Report* for EA 0N0600 (SHPSR, May 2018), the *Supplemental Historic Property Survey Report* for EA 0Q3600 and 0N0600 (September 2018), and the attachments to the HPSR and SHPSRs, the *Paleontological Identification Report/Paleontological Evaluation Report* (PIR-PER, May 2018), the *Supplemental Paleontological*

Identification Report/Paleontological Evaluation Report (2018), and Sections 2.6, Cultural Resources, and 2.9, Paleontology, of the IS/EA. In accordance with Public Resource Code (PRC) section 21080.3.1 and Assembly Bill (AB) 52, Caltrans initiated early consultation with California Native American Tribes in May 2017 and July of 2017. Refer to Chapter 4, Comments and Coordination, of this IS/EA for detailed information pertaining to California Native American Tribe consultation.

CEQA Significance Determinations for Cultural Resources

a–b) Less Than Significant Impact

According to the HPSR and SHPSRs, there are no historic properties within the 6.31-acre Area of Potential Effects (APE); further, site records updated during the HPSR processes recommend that there are no historical resources within the APE pursuant to CEQA. Although considered unlikely, there is the potential to encounter unknown buried cultural resources or archaeological materials within the project disturbance limits during construction of the Build Alternative. If buried cultural resources or archaeological materials are discovered during construction, Project Feature PF-CUL-1 would be implemented requiring the diversion of earthmoving activities in the vicinity until the discovery can be assessed by a qualified archaeologist. In the event that previously unknown buried cultural materials are encountered during construction, potential impacts to cultural resources would be less than significant with compliance with Project Feature PF-CUL-1. In addition, Caltrans will incorporate the County CEQA Measure CUL-3, as outlined in Section 2.6, Cultural Resources, which allows for archaeological and Native American monitoring during all ground-disturbing activities. No mitigation is required.

c) Less Than Significant with Mitigation Incorporated

Construction of the Build Alternative would not result in temporary impacts to paleontological resources because any impacts to those types of resources during construction would be considered permanent. Excavation depths for the various components of the Build Alternative range from one inch to 12 ft. Replacement of the detector loops would involve excavation to a depth of one inch to 1.5 inches. Construction of the new pavement and installation of the MGS would extend up to approximately 6 ft below the existing ground surface. Excavation associated with the drainage features, including the check

dam, RCB, articulate block lined channel, and storm drain inlets would extend to depths up to approximately 6 ft below the existing surface. Relocating the utility poles would involve drilling holes approximately15 inches in diameter to depths of up to 7 ft. Excavation for the utility undergrounding and vaults would extend up to approximately 12 ft deep. Re-grading the existing slope on southbound SR-133 south of El Toro to accommodate the widening would involve excavation into the slope up to approximately 9.5 ft vertically and up to approximately 90 ft horizontally. Some of these excavation activities would occur in deposits that are sensitive for paleontological resources. As such, excavation for some of these construction activities may have the potential to significantly impact paleontological resources. However, implementation of Measure PAL-1 would require the preparation and implementation of a Paleontological Mitigation Plan (PMP). With implementation of the Measure PAL-1, potentially significant impacts to paleontological resources would be reduced to a less than significant level

d) Less Than Significant Impact

No human remains are known to exist within the APE. Therefore, construction of the Build Alternative would not impact known human remains. However, ground-disturbing activities associated with construction of the Build Alternative have the potential to disturb previously unknown human remains. In the unlikely event that human remains are encountered during construction, Project Feature PF-CUL-2 would be implemented requiring compliance with State Health and Safety Code Section 7050.5, which states that further disturbances and activities shall cease in any area or nearby area suspected to overlie remains and that the County Coroner shall be contacted. Pursuant to California PRC Section 5097.98, if the remains are thought to be Native American, the Coroner will notify the Native American Heritage Commission, which will then notify the Most Likely Descendant (MLD). At the same time, the Caltrans District 12 Environmental Branch Chief or the District 12 Native American Coordinator will be contacted so they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC Section 5097.98 are to be followed as applicable. In the unlikely event that unknown human remains are encountered during construction, potential impacts would be less than significant with compliance with Project Feature PF-CUL-2. No mitigation is required.

3.2.6 Geology and Soils

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☒	☐
i) 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? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☒	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☐	☒	☐
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) 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?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒

The City of Laguna Beach is located in an area that is exposed to risk from multiple earthquake fault zones (e.g., the Newport-Inglewood fault zone, the San Joaquin Hills fault zone, and the Elysian Park fault zone) each with the potential to cause moderate to large earthquakes. The project area is also susceptible to landslides, liquefaction, and other related ground failure (i.e., seismically induced settlement) due to the topography and soil composition of the site. In December 2017, a *Preliminary Geotechnical Assessment* was performed by the Office of Geotechnical Design South (OGDS) for the Build Alternative based on visual observations and review of pertinent literature.

CEQA Significance Determinations for Geology and Soils

a) Less Than Significant Impact

The Build Alternative includes several drainage and roadway improvements within the Laguna Canyon area; however, these improvements would not constitute major structures. In addition, the Build Alternative would not include habitable structures. While the Build Alternative would take place within an existing roadway, it is not a capacity-enhancing project and would not result in an increase in traffic along SR-133. Therefore, the Build Alternative would not expose people or structures to substantial adverse effects related to the geologic hazards described below and impacts would be less than significant.

i. No Impact

According to the CDC Division of Mines and Geology (2000) the project area is not located within an Alquist-Priolo Fault Zone. The nearest fault to the project area is the San Joaquin Hills Fault located approximately 3.75 miles northeast of the project area. Therefore, there is no potential for rupture of a fault within the project area. No mitigation is required.

ii. Less Than Significant Impact

According to the *Preliminary Geotechnical Assessment* (2017) for the Build Alternative, the controlling fault is the San Joaquin Hills Fault, fault ID 376. The potential for strong seismic ground shaking on the project site exists. However, designing the project features to be in compliance with current standards and practice will mitigate the potential impacts to less than significant level.

iii. Less Than Significant Impact

According to the *Preliminary Geotechnical Assessment* (2017), the project area is broadly mapped as being susceptible to liquefaction by the California Geological Survey (Seismic Hazard Zones, Laguna Beach Quadrangle, 1998). However, the slopes south of El Toro Road Intersection are not located in an area susceptible to seismically induced liquefaction. The potential for seismically induced phenomena such as landsliding that could pose hazards to structures or the travelling public is less than significant when the project features were designed in accordance with current standards and practices.

These observations would be verified during the design phase through a site-specific geotechnical investigation.

iv. Less Than Significant Impact

The ascending slopes located adjacent to the roadway will be designed to meet the current standards for slopes under static and design seismic conditions. Designing the slopes in accordance with current standards and practice will provide adequate factors of safety against failures and thereby mitigate the potential for landsliding. Therefore, the hazards to structures or the travelling public is less than significant.

b) Less Than Significant Impact

Construction of the Build Alternative would disturb soil within the project footprint. During a storm event, soil erosion could occur at an accelerated rate. The construction of the Build Alternative would be required to adhere to the requirements of the General Construction Permit and to implement erosion and sediment control Best Management Practices (BMPs) specifically identified in a project Storm Water Pollution Prevention Plan (SWPPP) to keep sediment from moving off site into receiving waters. Erosion during project construction and operation would be addressed based on compliance with Project Features PF-WQ-1 through PF-WQ-5, described in Section 3.2.9 below. Additionally, the proposed check dam would decrease the existing erosive velocities within Laguna Canyon Creek to non-erosive levels. Therefore, with implementation of the Build Alternative features, impacts related to soil erosion would be less than significant.

c) Less Than Significant Impact

According to the City's General Plan, the floor of Laguna Canyon exemplifies characteristic construction hazards. Poorly consolidated, fine-grained and water soaked soil materials of considerable depth have required careful foundation design and construction, usually with pilings driven deep to support large structures. Further, up the watershed, materials are usually more sandy and the water table deeper, usually more stable. Even here, differential settlement can crack poorly constructed foundations, especially where improper drainage of rainwater (due to the lack of rain gutters, for example) is a contributing cause. The Build Alternative includes several drainage improvements within the Laguna Canyon area that would decrease the

potential for settlement in the project area. Soils in the project area would be more stable as a result of the proposed drainage improvements. Therefore, the Build Alternative would have a less than significant impact related to unstable soils. No mitigation is required.

d) No Impact

According to the USDA Web Soil Survey, the Build Alternative is not located in an area with expansive soils. In addition, the Build Alternative would not include the development of any habitable structures. Therefore, expansive soils would not cause a failure of any proposed improvements that would create a substantial risk to life or property. No mitigation is required.

e) No Impact

There are no septic tanks or alternative wastewater disposal systems included as part of the Build Alternative. Therefore, no impact would occur. No mitigation is required.

3.2.7 Greenhouse Gas Emissions

<table>
<tr><th>Would the project:</th><th>Significant and Unavoidable Impact</th><th>Less Than Significant with Mitigation Incorporated</th><th>Less Than Significant Impact</th><th>No Impact</th></tr>
<tr><td>a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?</td><td colspan="4" rowspan="2">Caltrans has used the best available information based to the extent possible on scientific and factual information, to describe, calculate, or estimate the amount of greenhouse gas emissions that may occur related to this project. The analysis included in the climate change section of this document provides the public and decision-makers as much information about the project as possible. It is Caltrans' determination that in the absence of statewide-adopted thresholds or GHG emissions limits, it is too speculative to make a significance determination regarding an individual project's direct and indirect impacts with respect to global climate change. Caltrans remains committed to implementing measures to reduce the potential effects of the project. These measures are outlined in the climate change section that follows the CEQA checklist and related discussions.</td></tr>
<tr><td>b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?</td></tr>
</table>

3.2.8 Hazards and Hazardous Materials

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) 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?	☐	☐	☐	☒
e) 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?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
h) 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?	☐	☐	☒	☐

Hazardous materials and hazardous wastes are regulated by many state laws, which are discussed below.

Hazardous waste in California is regulated primarily under the authority of the federal Resource Conservation and Recovery Act of 1976, and the California Health and Safety Code. Other California laws that affect hazardous waste are specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Worker health, safety, and public safety are key issues when

dealing with hazardous materials that may affect human health and the environment. Proper disposal of hazardous material is vital if it is disturbed during project construction.

An Initial Site Assessment was completed on March 12, 2014, for the Safety Project and on July 21, 2017, for the project area.

CEQA Significance Determinations for Hazards and Hazardous Materials

a) Less Than Significant Impact

The Build Alternative does not involve or require the transport or use of hazardous materials. The only potential for hazardous waste would be aerially-deposited lead from historical use of gasoline, lead chromate from yellow traffic striping and pavement-marking material, asbestos-containing material, or unknown contaminants present in exposed soil. As described in Chapter 2.10, Hazardous Waste/Materials, Project Features PF-HAZ-1 through PF-HAZ-4 would be implemented to investigate potentially contaminated soils in the project area. These site investigations would provide recommendations for proper disposal of any contaminated or hazardous soils found. Operation of the Build Alternative would not result in any changes to use of the roadway and would not require the use, transport or disposal of hazardous materials. Therefore, the Build Alternative would have a less than significant impact related to the use, transport, or disposal of hazardous materials. No mitigation is required.

b) Less Than Significant Impact

As stated in response 3.2.8(a) above, Project Features PF-HAZ-1 through PF-HAZ-4 would require site-specific investigations to identify the presence of any hazardous materials present within the project area soils. Therefore, construction of the Build Alternative would not create a hazard to the public or environment through a reasonably foreseeable upset or accident condition. No mitigation is required.

c) Less Than Significant Impact

A private school (Anneliese's School) is located south of El Toro Road at 20062 Laguna Canyon Road, less than 0.25 mile from the project area. As stated in 3.2.8(a), operation of the Build Alternative would not involve the transport or use of hazardous materials, substances or waste. The contractor

will be required to comply with Caltrans standard specifications as well as the Regional Air Quality Board regulations to limit the amount of hazardous emissions emitted during construction. Project Features PF-HAZ-1 through PF-HAZ-4 would also require site specific investigations for hazardous materials and would provide recommendations for proper disposal in the event that hazardous materials are present. Therefore, impacts related to the emission or handling of hazardous materials near a school would be less than significant. No mitigation is required.

d) No Impact

According to the California Water Board GeoTracker database and the Department of Toxic Substances Control EnviroStor database, there is no hazardous waste sites located within the vicinity of the project area. There is a former municipal waste disposal site adjacent to the project area on the southern side of SR-133 near Anneliese's School. However, this site is now used as a storage area for City building materials, equipment and waste products and the Build Alternative would not include work at this site. Therefore, the Build Alternative would have no impact related to hazardous materials sites. No mitigation is required.

e) No Impact

The project area is not located within any airport land use plan and is not located within two miles of public airport. Therefore, the Build Alternative improvements would have no impact related to safety hazards for airports. No mitigation is required.

f) No Impact

There are no private airstrips within the vicinity of the project area. Therefore, the Build Alternative would have no impact related to safety hazards for private airstrips. No mitigation is required.

g) Less Than Significant Impact

The Build Alternative would not impair the City's emergency response or evacuation plan. The City's General Plan identifies areas within the City of Laguna Beach as areas with limited access and evacuation potential. The project area is not located within an area of limited access and would not prevent residents in these areas from evacuating in the case of an emergency.

In addition, a Transportation Management Plan (TMP) (Project Feature PF-TR-1) will be prepared and implemented to keep traffic moving efficiently through the project area during construction. Therefore, impacts related to emergency response and evacuation would be less than significant. No mitigation is required.

h) Less Than Significant Impact

According to CALFIRE's Fire and Resource Assessment Program, the project area is located in Very High Fire Hazard Severity Zone. However, operation of the Build Alternative would not expose people or structures to hazards related to wildfires as the improvements do not include structures or housing. In addition, the Build Alternative is not a capacity-enhancing project and would not result in an increase in traffic along SR-133. Construction of the Build Alternative would be required to comply with Uniform Building Code requirements as well as the City's special building requirements for construction within a hazardous fire area.[1] Therefore, the Build Alternative would have a less than significant impact related to fire hazards. No mitigation is required.

3.2.9 Hydrology and Water Quality

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b) 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)?	☐	☐	☒	☐

[1] City of Laguna Beach Municipal Code. 2016. Chapter 15.01 California Fire Code and Amendments. https://qcode.us/codes/lagunabeach/

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) 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?	☐	☐	☒	☐
d) 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?	☐	☐	☒	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☒	☐
g) 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?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☒	☐
i) 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?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

The potential for the Build Alternative to adversely impact hydrology and water quality was assessed in the *Water Quality Assessment Report* (January 2018), *Water Quality Assessment Report Addendum* (May 2018), *Water Quality Technical Memorandum for the Safety Project* (October 2016), the *Location Hydraulic Study & Summary Floodplain Encroachment Report* (2018) and Section 2.8, Hydrology and Floodplains, and 2.9, Water Quality and Storm Water Runoff, of this IS/EA. The following discussions are based on those analyses.

CEQA Significance Determinations for Hydrology and Water Quality

a) Less Than Significant Impact

During construction of the Build Alternative, excavated soil would be exposed and there would be an increased potential for soil erosion and transport of sediment during storm events. Disturbed soil area during construction would be approximately 7.84 acres. In addition, material and wastes from construction activities, such as oil and grease, trash, petroleum products, sanitary waste, and other chemicals may be spilled or leaked and transported into receiving waters during storm events. Project Features PF-WQ-2 and PF-WQ-3, provided in Section 2.8, require compliance with the Construction General Permit, including preparation of a Storm Water Pollution Prevention Plan (SWPPP) and implementation of construction BMPs that would address the potential effects of soil erosion and pollutants of concern on receiving waters.

It is not anticipated groundwater dewatering during construction will be required. However, if groundwater dewatering is determined to be necessary, the discharge must comply with the *General Waste Discharge Requirements for Groundwater Extraction Discharges to Surface Waters within the San Diego Region*, as specified in Project Feature PF-WQ-6. This permit addresses temporary dewatering operations during construction and requires implementation of dewatering BMPs to control sediment and pollutants and minimize any temporary impact due to the discharge of groundwater to surface water.

The Build Alternative would result in a relatively small increase in impervious surface area (1.6 acres) which will result in an increase in storm water runoff. Pollutants typically generated during the operation of a transportation facility include sediment/ turbidity, nutrients, trash and debris, bacteria and viruses, oxygen demanding substances, organic compounds, oil and grease, pesticides and metals. However, the Build Alternative does not include the construction of any new travel lanes, therefore, there would be no additional pollutant loading that is typically associated with vehicles operating on the facility. Additionally, Design Pollution Prevention BMPs and Caltrans Approved Treatment BMPs would be implemented to reduce pollutants of concern in stormwater runoff, as required in Project Features PF-WQ-1, PF-WQ-4, and

PF-WQ-5. Based on compliance with the Project Features PF-WQ-1 through PF-WQ-6, water quality impacts during construction and operation of the Build Alternative would be less than significant and no mitigation is required.

b) Less Than Significant Impact

Groundwater dewatering during construction is not anticipated. If groundwater dewatering becomes necessary during construction, the volume of groundwater extracted would be minimal and would not be anticipated to 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. Operation of the Build Alternative would not require groundwater dewatering or extraction. The small increase in impervious surface area is small in comparison with the size of the groundwater basin and would, therefore, not substantially interfere with groundwater recharge. Impacts related to groundwater would be less than significant and no mitigation is required.

c) Less Than Significant Impact

None of the proposed improvements would substantially alter existing drainage patterns in and adjacent to the project disturbance limits or the capacity of the storm drain facilities. Erosion during project construction and operation would be addressed based on compliance with Project Features PF-WQ-1 through PF-WQ-5, as described in Section 2.8, Water Quality and Storm Water Runoff. Additionally, the proposed check dam would decrease the existing erosive velocities within Laguna Canyon Creek to non-erosive levels. Therefore, impacts related to drainage modifications that would result in substantial erosion or siltation on or off the project site would be less than significant. No mitigation is required.

d) Less Than Significant Impact

The Build Alternative includes drainage improvements to convey stormwater runoff and a check dam to reduce flooding during high frequent storm events. Although the check dam would increase the water surface elevation of the 100-year floodplain, the flow would still be contained within the existing channel and would not increase risk of flooding. Therefore, the Build Alternative does not include drainage modifications that would result in

substantial flooding on or off the project site. Impacts related to alteration of drainage patterns in a manner that would result in flooding would be less than significant and no mitigation is required.

e) Less Than Significant Impact

The project proposes to modify an existing transportation facility and implement drainage improvements. The Build Alternative would not substantively increase the total impervious surface areas as noted in response IX a), above, and, therefore, would not increase peak storm flows such that they would impact downstream drainage facilities. Compliance with the requirements of the Project Features PF-WQ-1, PF-WQ-4 and PF-WQ-5 in Section 2.8, Water Quality and Storm Water Runoff, would reduce pollutants of concern in stormwater runoff. With implementation of these measures, impacts related to the creation 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 would be less than significant, and no mitigation is required.

f) Less Than Significant Impact

As discussed above, runoff associated with the Build Alternative would be treated to remove pollutants of concern as required in Project Features PF-WQ-1 through PFWQ-6 in Section 2.8. In addition, refer to responses 3.2.9 a), above. Impacts related to substantial degradation to water quality would be less than significant, and no mitigation is required.

g) No Impact

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) No. 06059C0409J (December 3, 2009), there is one floodplain/floodway associated with Laguna Canyon Creek within the project limits. The Build Alternative does not include the construction of housing and would therefore not place housing within a 100-year flood hazard area. As discussed in Section 2.7, Hydrology and Floodplains, although the Build Alternative would place structures within the floodplain/floodway and would increase water surface elevation, it would not result an increase in water surface elevation that would result in additional flooding of housing. The hydraulic modeling demonstrates that the Build Alternative would result

in a minimal change in water surface elevation south of El Toro Road where residential uses are located adjacent to the floodplain. Therefore, the Build Alternative would not result in impacts related to the placement of housing in the 100-year floodplain. No mitigation is required.

h) Less Than Significant Impact

As detailed in Section 2.7, Hydrology and Floodplains, the Build Alternative would include placement of structures in the Laguna Canyon Creek floodplain/floodway. A maximum increase in water surface elevation of 7.55 ft would occur at the proposed concrete check dam (Location 1). The check dam would be constructed to create an attenuation basin to reduce peak flow rates and reduce erosive velocities during high frequent storm events. Although an increase in water surface elevation of the floodplain would occur, the 100-year storm events would continue to be contained within the existing channel at this location. The increase in water surface elevation of the floodplain at the other proposed encroachments would be minimal at Locations 2 and 3 but would exceed the zero ft increase allowed by FEMA in a floodway. No increase in water surface elevation would occur at Location 4. Because the proposed encroachments at Locations 1, 2, and 3 would result in an increase in water surface elevation exceeding the FEMA zero ft threshold, a Conditional Letter of Map Revision (CLOMR) and Letter of Map Revision (LOMR) must be processed through FEMA, as required by Measures HYD-2 and HYD-3. Additionally, as required by Measure HYD-1, the Build Alternative would be designed to provide adequate conveyance capacity at stream crossings to ensure no net increase in velocity. Additionally, a hydraulic analysis would be completed during final design to assess pre-project and post-project hydraulic conditions.

Although the Build Alternative would increase water surface elevation, the proposed encroachments are a result of the proposed check dam that is proposed to improve flow condition. Therefore, the Build Alternative would not place structures within a 100-year flood hazard area structures in a manner that would impede or redirect flood flows. Impact would be less than significant and no mitigation is required.

i) No Impact

The two primary dam inundation zones in Orange County are those associated with Prado Dam (Santa Ana River) and Santiago Dam (Santiago Reservoir). According to the Safety Element of the County of Orange General Plan, the project area is not located within either of these dam inundation zones. As a result, the Build Alternative would not expose people or structures to a significant risk of loss, injury, or death as a result of flooding. No mitigation is required.

j) No Impact

A tsunami is a large ocean wave produced by submarine earth movement or volcanic eruption. The southern terminus of the project segment of SR-133 is located approximately two miles away from the Pacific Ocean. The Tsunami Map for Emergency Planning for the Laguna Beach Quadrangle[1] shows that project site is not located within a tsunami inundation area. Based on the distance from the project area to the Pacific Ocean, there is no risk of inundation from a tsunami. No mitigation is required.

A seiche is a tsunami-like condition in an enclosed body of water like a lake or reservoir. The nearest enclosed bodies of water is Barbara's Lake, located approximately one mile north of the project area. Based on the distances and small size of this reservoir, there is no anticipated risk of inundation from a seiche. No mitigation is required.

Mudflows occur when soil is saturated and flows downhill. The project does not include improvements that would increase the risk of mudflow on the slopes adjacent to SR-133. Additionally, the surrounding slopes are vegetated which reduces risk of mudflow. As a result, there is no anticipated risk to the Build Alternative as a result of a mudflow. No mitigation is required.

[1] California Department of Conservation. March 15, 2009. *Tsunami Map for Emergency Planning for the Laguna Beach Quadrangle.*

3.2.10 Land Use and Planning

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b)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?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☒	☐

CEQA Significance Determinations for Land Use and Planning

a) No Impact

The project area is located along an existing highway (SR-133). In addition, the project area is made up almost entirely of open space land. Therefore, the Build Alternative would have no impact on established community. No mitigation is required.

b) No Impact

The Build Alternative would not conflict with the City's General Plan, zoning ordinance, or local coastal program. The project area is zoned as Open Space and Residential and that would not change as a result of the proposed roadway and drainage improvements. The project area is located within the coastal zone as defined by the California Coastal Commission (CCC) and coordination will be required with the City to obtain a permit, waiver or exemption. The Build Alternative is listed in both the 2016-2040 financially constrained RTP/SCS (RTP/SCS ID 2M0733) and the SCAG financially constrained 2017 FTIP (FTIP ID ORA001103). In addition, the Build Alternative is consistent with goals and policies outlined in the City of Laguna Beach General Plan requiring infrastructure development. Therefore, the Build Alternative would have no impact related to relevant land use plans and policies. No mitigation is required.

c) Less Than Significant Impact

As described in Section 3.2.4 (Biological Resources) above, while a portion of the project lies within the NCCP/HCP Reserve, improvements within the project area were anticipated as planned infrastructure and are consistent with the NCCP/HCP. No permanent impacts to CSS habitat would occur within the NCCP/HCP Reserve under the current project design and based on the County's role as a Participating Landowner and a signatory to the NCCP/HCP Implementation Agreement, and its fulfillment of its NCCP/HCP responsibilities, no additional mitigation is required. The Build Alternative is considered consistent with the NCCP/HCP and impacts would be less than significant.

3.2.11 Mineral Resources

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	☐	☐	☒	☐
b) 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?	☐	☐	☐	☒

CEQA Significance Determinations for Mineral Resources

a) Less Than Significant Impact

According to the CDC, California Geological Survey and the State Mining and Geology Board, Laguna Beach Quadrangle, the project area is classified as Mineral Resource Zones (MRZ) 1 and 3 for construction aggregate resources. MRZ-1 is an area that has little or no likelihood for the presence of significant mineral resources and a MRZ-3 area contains mineral resources of undetermined significance. The Build Alternative would include roadway widening, a Class II bike path, drainage improvements, and undergrounding of utilities and would not result in the loss of availability of a known mineral resource of value to the region. Furthermore, the Build Alternative would not

preclude future extraction of mineral resources. Impacts would be less than significant. No mitigation is required.

b) No Impact

The City's General Plan does not identify any locally-important mineral recovery sites within the project vicinity. The Build Alternative would not result in the loss of availability of a locally-important mineral resource recovery site. No impact would occur. No mitigation is required.

3.2.12 Noise

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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?	☐	☐	☒	☐
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
e) 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?	☐	☐	☐	☒
f) 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?	☐	☐	☐	☒

When determining whether a noise impact is significant under CEQA, the baseline noise level is compared to the build noise level. The CEQA noise analysis is completely independent of the NEPA/23 Code of Federal Regulations Part 772 (23 CFR 772) analysis discussed in Chapter 2, which is centered on noise abatement criteria. Under CEQA, the assessment entails looking at the setting of the noise impact and then how large or perceptible any noise increase would be in the given

area. Key considerations include: the uniqueness of the setting, the sensitivity of the noise receptors, the magnitude of the noise increase, the number of residences affected, and the absolute noise level.

CEQA Significance Determinations for Noise

a) Less Than Significant Impact

The Build Alternative includes the shoulder and bike path improvements along the existing roadway, drainage infrastructure improvements, and the undergrounding of utilities, the operation of which would not result in an increase in noise within the project area. Construction of the Build Alternative, including construction vehicles and equipment for grading and excavation, may generate high noise levels. Noise associated with the use of construction equipment is estimated between 55 and 85 dBA L_{max} at a distance of 50 ft from the active construction area for the grading phase. Each bulldozer would generate approximately 85 dBA L_{max} at 50 ft. The maximum noise level generated by water trucks/pickup trucks is approximately 55 dBA L_{max} at 50 ft from these vehicles. Each doubling of the sound source with equal strength increases the noise level by 3 dBA. Each piece of construction equipment operates as an individual point source. The worst-case composite noise level at the nearest residence during this phase of construction would be 88 dBA L_{max} (at a distance of 50 ft from an active construction area).

The closest receptor is the Anneliese School, which is approximately 45 ft east of the proposed project. While no construction activities are proposed along northbound SR-133 directly in front of the Annaliese School, an indirect temporary effect may occur due to construction-related traffic delays. This location may be subject to a short-term noise level of 89 dBA L_{max} generated by construction activities along the project alignment. Project Feature PF-N-1 as outlined in Section 2.12, Noise, will ensure compliance with Caltrans' Standard Specifications Section 14-8.02 (Caltrans 2015) and will be required to minimize construction noise impacts on sensitive land uses adjacent to the project site in accordance with Caltrans' Standard Specifications Section 14-8.02 (Caltrans 2015). In addition, with the incorporation of Measure N-1, which describes the sequencing of construction activities, construction-related noise impacts would be further minimized.

Through implementation of this standard feature, short-term construction noise impacts would be less than significant. No mitigation is required.

b) No Impact

The Build Alternative includes shoulder and bike path improvements, drainage infrastructure, and utility undergrounding, the operation of which would not result in exposure of people to groundborne vibration or groundborne noise levels. In addition, construction of the Build Alternative is not anticipated to require pile driving or other construction techniques that would result in substantial groundborne vibration. No impact would occur. No mitigation is required.

c) No Impact

The Build Alternative includes transportation and drainage infrastructure improvements. As this project is not a capacity-enhancing project, no additional traffic would occur and operation would not generate additional noise within the project area. No permanent increase in ambient noise levels would occur as a result of the Build Alternative. No impact would occur. No mitigation is required.

d) Less Than Significant Impact

As stated in 3.2.12(a) above, construction of the Build Alternative would result in temporary increases in ambient noise levels. However, this increase in noise would be short-term and would only occur during the temporary construction period. In addition, implementation of Project Feature PF-N-1 would require all noise from construction activities to comply with Caltrans standards for construction noise control and Measure N-1 would minimize construction noise by sequencing construction activities and properly staging construction equipment. Therefore, construction of the Build Alternative would not result in substantial temporary or periodic increases in ambient noise levels and impacts would be less than significant. No mitigation is required.

e) No Impact

The project area is not located within an airport land use plan and is not located within two miles of public airport that would expose people residing

or working within the project area to excessive noise levels. No impact would occur. No mitigation is required.

f) No Impact

The project area is not located within the vicinity of a private airstrip that would expose people residing or working within the project area to excessive noise levels. No impact would occur. No mitigation is required.

3.2.13 Population and Housing

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

The California Environmental Quality Act (CEQA) requires the analysis of a project's potential to induce growth. CEQA guidelines, Section 15126.2(d), require that environmental documents "…discuss the ways in which the project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment."

CEQA Significance Determinations for Population and Housing

a) No Impact

The Build Alternative is not a capacity-enhancing project and would not induce population growth by providing greater roadway capacity or access to the City of Laguna Beach or surrounding commutes. In addition, no residential or commercial uses are included. No impact would occur. No mitigation is required.

b) No Impact

The Build Alternative is located directly adjacent to the existing SR-133 and the SR-73 on-ramp loop. There are no residential uses within the project footprint and no impact to housing would occur. No mitigation is required.

c) No Impact

As stated in 3.2.13(b) above, there are no residential uses within the project footprint. No relocations or residential acquisitions would be required as a result of the Build Alternative. No impact would occur. No mitigation is required.

3.2.14 Public Services

a) Would the project 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 any of the public services:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☒	☐
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

CEQA Significance Determinations for Public Services

a) Less Than Significant Impact

The Build Alternative would not involve the alteration or expansion of any public or government facilities that provide public services. A Transportation Management Plan (TMP) will be prepared as part Project Feature PF-TR-1, in order to minimize construction traffic delays. As part of the TMP, Caltrans District 12 Orange County office would coordinate with local emergency response providers to ensure the Build Alternative would not interfere with emergency response times. The TMP will identify methods to reduce traffic

delay, maintain traffic flow through SR-133 and provide a safe environment for the construction zone and public use of the roadway. A public information and awareness campaign will also be included as part of the TMP to ensure the public is aware of detours and maintained access for vehicles, pedestrians, and bicyclists to schools, parks, and other public facilities in the vicinity. Therefore, the Build Alternative would have a less than significant related to public services.

3.2.15 Recreation

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project 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?	☐	☐	☒	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☒	☐

CEQA Significance Determinations for Recreation

a) Less Than Significant Impact

The Build Alternative would require approximately a 10 ft permanent easement for 0.75 acre at the edge of Laguna Coast Wilderness Park and 0.93 acre of permanent acquisition within the Laguna Coast Wilderness Park. However, this easement and acquisition would not affect access to the Laguna Coast Wilderness Park. Furthermore, as stated in Section 3.2.13 above, the project is not a capacity-enhancing project and would not induce population growth. Therefore, no increase in park use would occur as a result of operation of the project. Construction activities would not result in the use or substantial physical deterioration of the Laguna Coast Wilderness Park. As stated in Project Feature PF-LU-1, described in Section 2.1, all property temporarily impacted would be restored to a condition at least as good as it was prior to the easement being granted. In addition, Project Features LU-2 and LU-3, described in Section 2.1, would require compensation for publicly owned parks under the California Park Preservation Act and compliance with

the Uniform Relocation Assistance and Real Property Acquisition Policies Act. Therefore, the Build Alternative would have a less than significant impact. Furthermore, OC Parks has concurred on the description of the existing conditions, the analysis of project effects, and the measures to minimize harm with other suggested measures. Implementation of Measures PR-1 through PR-8 would further reduce impacts to parkland. No mitigation is required.

b) Less Than Significant Impact

As described above, the Build Alternative would require a permanent easement and permanent acquisition of land within the Laguna Coast Wilderness Park. However, these easements would not affect park access and would not require the construction or expansion of recreational facilities. Furthermore, the Build Alternative does not include the construction or expansion of recreational facilities. Impact would be less than significant. No mitigation is required.

3.2.16 Transportation/Traffic

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) 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?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Result in inadequate emergency access?	☐	☐	☒	☐
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☒	☐

CEQA Significance Determinations for Transportation/Traffic

a) Less Than Significant Impact

The proposed improvements would be placed adjacent to SR-133 and at the SR-73 on-ramp loop, but would not alter the alignment or operation of the existing roadways. The Build Alternative would not conflict with any plans, ordinances or policies pertaining to the performance of the circulation system. The Build Alternative would not propose new non-standard design features and would provide standard shoulder widths for SR-133. In addition, as described in Section 2.4, a Transportation Management Plan (TMP) is included as Project Feature PF-TR-1 and would be implemented during construction allowing for continual access through the project area for all modes of transport including pedestrian and bicycles. Impacts related to the circulation system would be less than significant. No mitigation is required.

b) No Impact

Implementation of the Build Alternative would not conflict with a congestion management plan. The Build Alternative would not increase the highway capacity or allow for greater amounts of traffic; therefore, it will not contribute to congestion or impede the level of service on the highway. No impact would occur. No mitigation is required.

c) No Impact

The Build Alternative will have no air traffic component and would have no impact on air traffic patterns, as most improvements would occur at ground-level. The relocation of overhead utilities would remove these existing poles

and relocate lines underground, removing objects from the project area. No impact would occur and no mitigation is required.

d) No Impact

The Build Alternative will not include any changes to operation of the existing roadway and would not introduce any hazardous design features or an incompatible use condition. The addition of standard shoulders and the Class II bike path would improve safety for vehicular and bicycle traffic. No impact would occur. No mitigation is required.

e) Less Than Significant Impact

As stated in Response 3.2.16(a) above, a TMP will be prepared and will ensure access through the project area will be maintained at all times during construction. Therefore, emergency vehicle access will not be impeded and impacts would be less than significant. No mitigation is required.

f) Less Than Significant Impact

As stated in Response 3.2.16(a) above, a TMP will be prepared and will ensure pedestrian and bicycle access is maintained at all times during construction. Implementation of the Build Alternative would not conflict with any transit, bicycle, or pedestrian facilities. Therefore, impacts would be less than significant. No mitigation is required.

3.2.17 Tribal Cultural Resources

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☐	☐	☒

CEQA Significance Determinations for Tribal Cultural Resources

a)b) <u>No Impact</u>

The cultural resource studies for this project are summarized in the HPSR, SHPSRs, and Archaeological Survey Report (ASR) described in Section 3.2.5 (Cultural Resources) above, and included a record search, field survey, and consultation with the Native Americans and the Native American Heritage Commission (NAHC). Only two resources were previously recorded within the project limits, the historic route of Laguna Canyon Road (P-30-177470) and a mortar site (CA-ORA-315). However, the mortar site has not been identified since it was recorded in 1966, and it is likely it was misidentified. Laguna Canyon Road was evaluated and determined not eligible for the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR). No tribal cultural resources were identified within the APE for this project through consultation and the lead agency in its discretion has not determined any resources to be significant to a California Native American tribe. Therefore, no impact would occur as a result of the Build Alternative.

3.2.18 Utilities and Service Systems

Would the project:	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

CEQA Significance Determinations for Utilities and Service Systems

a) <u>Less Than Significant Impact</u>

The Build Alternative includes surface water drainage infrastructure along existing roadways and the relocation and undergrounding of various utilities including electric and communications lines. No wastewater would be generated a result of operation of the proposed drainage improvements. Construction activities of the Build Alternative would generate a minimal amount of wastewater from portable toilets. Due to the limited duration and minimal generation of wastewater, treatment requirements would not be exceed and impacts would be less than significant. No mitigation is required.

b) Less Than Significant Impact

Operation of the proposed roadway and drainage improvements would not result in generation of any wastewater. As stated above, a minimal amount of wastewater would be generated during construction activities and would not require construction or expansion wastewater treatment facilities. Surface water runoff from the project area would not require the construction or expansion of any water treatment facilities. Impacts would be less than significant. No mitigation is required.

c) Less Than Significant Impact

The Build Alternative includes surface water drainage infrastructure improvements for the channel along southbound SR-133 and the check dam a at the SR-73 on-ramp loop to facilitate surface water drainage in the project area. These drainage improvements would not require the construction or expansion of additional drainage facilities beyond what is proposed. Impacts related to the construction of drainage facilities from the Build Alternative would be less than significant. No mitigation is required.

d) No Impact

The Build Alternative includes roadway and drainage infrastructure improvements and would not require water supplies for construction or operation of the proposed improvements. Therefore, no impact would occur. No mitigation is required.

e) No Impact

As stated in 3.2.17(a) above, minimal wastewater would be generated a result of construction and no wastewater would be generated from operation of the Build Alternative. Therefore, no impact would occur related to wastewater treatment capacity. No mitigation is required.

f) Less Than Significant Impact

The Build Alternative would require grading and minimal solid waste would be generated during construction activities. As the Build Alternative would not generate large quantities of solid waste, impacts to landfill capacity would be less than significant. No mitigation is required.

g) Less Than Significant Impact

As stated in 3.2.17(f) above, the Build Alternative will not generate large amounts of solid waste. The construction contractor will be responsible for controlling/disposing of solid waste in accordance with federal, state and local statutes and regulations. Furthermore, Project Features PF-HAZ-1 through PF-HAZ-4 would provide recommendations for proper disposal of hazardous materials or contaminated soils. Therefore, impacts related to solid waste disposal would be less than significant. No mitigation is required.

3.2.19 Mandatory Findings of Significance

	Significant and Unavoidable Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) 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, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) 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)?	☐	☐	☒	☐
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

CEQA requires the analysis of a project's mandatory findings of significance. The analysis of the mandatory findings of significance of the project is based on the findings of the project's impacts on all the required issue areas.

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this project. A cumulative effect assessment looks at the collective impacts posed by individual land

use plans and projects. Cumulative impacts can result from individually minor, but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive types of agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, and disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

CEQA Guidelines, Section 15130, describes when a cumulative impact analysis is warranted and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts, under CEQA, can be found in Section 15355 of the CEQA Guidelines.

CEQA Significance Determinations for Mandatory Findings of Significance

a) Less Than Significant with Mitigation Incorporated

As discussed in greater detail in Section 3.2.4, Biological Resources, impacts to special-status plant and animal species would be avoided and/or minimized with Measures BIO-1 through BIO-10 and BIO-12 through BIO-20 and impacts would be less than significant. While no permanent impacts to listed species are anticipated, if least Bell's vireo or California gnatcatcher are found during pre-construction surveys or project monitoring, Section 7 consultation has been completed, and the USFWS has issued a Biological Opinion and a CDFW Section 2081 permit may also be required; compensatory mitigation may be developed in consultation with USFWS and CDFW at that time to ensure no permanent impacts would occur to these listed species and impacts would remain less than significant. On August 30, 2018, the USFWS issued a Section 7 Consultation letter that concurs that the project is not likely to adversely affect any federally listed species. The letter contains Conservation Measures, some of which overlap with commitments made in Measures BIO-1 through BIO-16. However, these measures have been incorporated as

Measures BIO-21 through BIO-40 and will be implemented to avoid and/or minimize impacts to threatened and endangered species.

Mitigation Measure BIO-11 would ensure permanent impacts to riparian habitat would be mitigated to a level of less than significant. Similarly, the implementation of Project Features CUL-1 through CUL-3 and PAL-1 would ensure impacts to unanticipated cultural or paleontological resources would be less than significant, and would not eliminate an example of the major periods of California history or prehistory. Therefore, with these Avoidance and Minimization Measures, Mitigation Measures, and Project Features, impacts would be less than significant.

b) Less Than Significant Impact

The Build Alternative would result in less than significant impacts that are individually limited. Future transportation and infrastructure projects are planned in the vicinity of the project area. Cumulative projects in the vicinity are described in detail in Table 2.19.1 and are shown in Figure 2.19.1. The proposed improvements occur largely within the existing right-of-way and permanent impacts to habitat are minimal. In addition, all permanent impacts from the Build Alternative can be mitigated to a level of less than significant. Consequently, the Build Alternative would not contribute to cumulatively considerable impacts. Implementation of the avoidance and minimization measures for impacts during the permitting phase would ensure that biological resources would be sustained within the region.

c) Less Than Significant Impact

This project will have a less than significant impact to human beings, either directly or indirectly. Refer to the discussion in the other sections for additional information that supports this finding. There are no residential uses or sensitive receptors that would be significantly impacted by construction or operation of the Build Alternative. The TMP described in Project Feature PF-TR-1 would ensure impacts to vehicle, pedestrian, and bicycle traffic during construction would be less than significant.

3.3 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), HFC-23 (fluoroform), HFC-134a (1,1,1,2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation.[1] In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles) are the largest contributors of GHG emissions.[2] The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

Two terms are typically used when discussing how we address the impacts of climate change: “greenhouse gas mitigation” and “adaptation.” Greenhouse gas mitigation covers the activities and policies aimed at reducing GHG emissions to limit or “mitigate” the impacts of climate change. Adaptation, on the other hand, is concerned with planning for and responding to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels).

3.3.1 Regulatory Setting

This section outlines federal and state efforts to comprehensively reduce GHG emissions from transportation sources.

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1 Website: https://www.epa.gov/ghgemissions/us-greenhouse-gas-inventory-report-1990-2014.

2 Website: https://www.arb.ca.gov/cc/inventory/data/data.htm.

3.3.1.1 Federal

To date, no national standards have been established for nationwide mobile-source GHG reduction targets, nor have any regulations or legislation been enacted specifically to address climate change and GHG emissions reduction at the project level.

The National Environmental Policy Act (NEPA) (42 United States Code [USC] Part 4332) requires federal agencies to assess the environmental effects of their proposed actions prior to making a decision on the action or project.

The Federal Highway Administration (FHWA) recognizes the threats that extreme weather, sea-level change, and other changes in environmental conditions pose to valuable transportation infrastructure and those who depend on it. FHWA therefore supports a sustainability approach that assesses vulnerability to climate risks and incorporates resilience into planning, asset management, project development and design, and operations and maintenance practices.[1] This approach encourages planning for sustainable highways by addressing climate risks while balancing environmental, economic, and social values—"the triple bottom line of sustainability."[2] Program and project elements that foster sustainability and resilience also support economic vitality and global efficiency, increase safety and mobility, enhance the environment, promote energy conservation, and improve the quality of life. Addressing these factors up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making.

Various efforts have been promulgated at the federal level to improve fuel economy and energy efficiency to address climate change and its associated effects.

The Energy Policy Act of 1992 (EPACT92, 102nd Congress H.R.776.ENR): With this act, Congress set goals, created mandates, and amended utility laws to increase clean energy use and improve overall energy efficiency in the United States. EPACT92 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of EPACT92 addresses alternative fuels. It gave the U.S. Department of Energy administrative

1 Website: https://www.fhwa.dot.gov/environment/sustainability/resilience/.

2 Website: https://www.sustainablehighways.dot.gov/overview.aspx.

power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of the Program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005 (109th Congress H.R.6 (2005–2006): This act sets forth an energy research and development program covering: (1) energy efficiency; (2) renewable energy; (3) oil and gas; (4) coal; (5) Indian energy; (6) nuclear matters and security; (7) vehicles and motor fuels, including ethanol; (8) hydrogen; (9) electricity; (10) energy tax incentives; (11) hydropower and geothermal energy; and (12) climate change technology.

Energy Policy and Conservation Act of 1975 (42 USC Section 6201) and Corporate Average Fuel Standards: This act establishes fuel economy standards for on-road motor vehicles sold in the United States. Compliance with federal fuel economy standards is determined through the Corporate Average Fuel Economy (CAFE) program on the basis of each manufacturer's average fuel economy for the portion of its vehicles produced for sale in the United States.

Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, 74 *Federal Register* 52117 (October 8, 2009): This federal EO set sustainability goals for federal agencies and focuses on making improvements in their environmental, energy, and economic performance. It instituted as policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities.

Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*, 80 Federal Register 15869 (March 2015): This EO reaffirms the policy of the United States that federal agencies measure, report, and reduce their GHG emissions from direct and indirect activities. It sets sustainability goals for all agencies to promote energy conservation, efficiency, and management by reducing energy consumption and GHG emissions. It builds on the adaptation and resiliency goals in previous executive orders to ensure agency operations and facilities prepare for impacts of climate change. This order revokes Executive Order 13514.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be reasonably anticipated to endanger public health or welfare.

Responding to the Court's ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six GHGs constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions.

U.S. EPA in conjunction with the National Highway Traffic Safety Administration (NHTSA) issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010[1] and significantly increased the fuel economy of all new passenger cars and light trucks sold in the United States. The standards required these vehicles to meet an average fuel economy of 34.1 miles per gallon by 2016. In August 2012, the federal government adopted the second rule that increases fuel economy for the fleet of passenger cars, light-duty trucks, and medium-duty passenger vehicles for model years 2017 and beyond to average fuel economy of 54.5 miles per gallon by 2025. Because NHTSA cannot set standards beyond model year 2021 due to statutory obligations and the rules' long timeframe, a mid-term evaluation is included in the rule. The Mid-Term Evaluation is the overarching process by which NHTSA, EPA, and ARB will decide on CAFE and GHG emissions standard stringency for model years 2022–2025. NHTSA has not formally adopted standards for model years 2022 through 2025. However, the EPA finalized its mid-term review in January 2017, affirming that the target fleet average of at least 54.5 miles per gallon by 2025 was appropriate. In March 2017, President Trump ordered EPA to reopen the review and reconsider the mileage target.[2]

NHTSA and EPA issued a Final Rule for "Phase 2" for medium- and heavy-duty vehicles to improve fuel efficiency and cut carbon pollution in October 2016. The agencies estimate that the standards will save up to two billion barrels of oil and reduce CO_2 emissions by up to 1.1 billion metric tons over the lifetimes of model year 2018–2027 vehicles.

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1 Website: https://one.nhtsa.gov/Laws-&-Regulations/CAFE-%E2%80%93-Fuel-Economy.

2 Websites: http://www.nbcnews.com/business/autos/trump-rolls-back-obama-era-fuel-economy-standards-n734256 and https://www.federalregister.gov/documents/2017/03/22/2017-05316/notice-of-intention-to-reconsider-the-final-determination-of-the-mid-term-evaluation-of-greenhouse.

Presidential Executive Order 13783, *Promoting Energy Independence and Economic Growth*, of March 28, 2017, orders all federal agencies to apply cost-benefit analyses to regulations of GHG emissions and evaluations of the social cost of carbon, nitrous oxide, and methane.

3.3.1.2 State

With the passage of legislation including State Senate and Assembly bills and executive orders, California has been innovative and proactive in addressing GHG emissions and climate change.

Assembly Bill 1493, Pavley Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order S-3-05 (June 1, 2005): The goal of this executive order (EO) is to reduce California's GHG emissions to: (1) year 2000 levels by 2010, (2) year 1990 levels by 2020, and (3) 80 percent below year 1990 levels by 2050. This goal was further reinforced with the passage of Assembly Bill 32 in 2006 and SB 32 in 2016.

Assembly Bill 32 (AB 32), Chapter 488, 2006: Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 codified the 2020 GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases." The Legislature also intended that the statewide GHG emissions limit continue in existence and be used to maintain and continue reductions in emissions of GHGs beyond 2020 (Health and Safety Code Section 38551(b)). The law requires ARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions.

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order sets forth the low carbon fuel standard (LCFS) for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by the year 2020. ARB re-adopted the LCFS regulation in September 2015, and the changes went into effect on

January 1, 2016. The program establishes a strong framework to promote the low-carbon fuel adoption necessary to achieve the Governor's 2030 and 2050 GHG reduction goals.

Senate Bill 97 (SB 97), Chapter 185, 2007, Greenhouse Gas Emissions: This bill requires the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires ARB to set regional emissions reduction targets for passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a “Sustainable Communities Strategy” (SCS) that integrates transportation, land-use, and housing policies to plan how it will achieve the emissions target for its region.

Senate Bill 391 (SB 391), Chapter 585, 2009, California Transportation Plan: This bill requires the State’s long-range transportation plan to meet California’s climate change goals under AB 32.

Executive Order B-16-12 (March 2012) orders State entities under the direction of the Governor, including ARB, the California Energy Commission, and the Public Utilities Commission, to support the rapid commercialization of zero-emission vehicles. It directs these entities to achieve various benchmarks related to zero-emission vehicles.

Executive Order B-30-15 (April 2015) establishes an interim statewide GHG emission reduction target of 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050. It further orders all state agencies with jurisdiction over sources of GHG emissions to implement measures, pursuant to statutory authority, to achieve reductions of GHG emissions to meet the 2030 and 2050 GHG emissions reductions targets. It also directs ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent (MMTCO2e). Finally, it requires the Natural Resources Agency to update the state’s climate adaptation strategy, Safeguarding California, every 3 years, and to ensure that its provisions are fully implemented.

Senate Bill 32, (SB 32) Chapter 249, 2016, codifies the GHG reduction targets established in EO B-30-15 to achieve a mid-range goal of 40 percent below 1990 levels by 2030.

3.3.2 Environmental Setting

In 2006, the Legislature passed the California Global Warming Solutions Act of 2006 (AB 32), which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required ARB to develop a Scoping Plan that describes the approach California will take to achieve the goal of reducing GHG emissions to 1990 levels by 2020. The Scoping Plan was first approved by ARB in 2008 and must be updated every 5 years. The second updated plan, *California's 2017 Climate Change Scoping Plan*, adopted on December 14, 2017, reflects the 2030 target established in EO B-30-15 and SB 32.

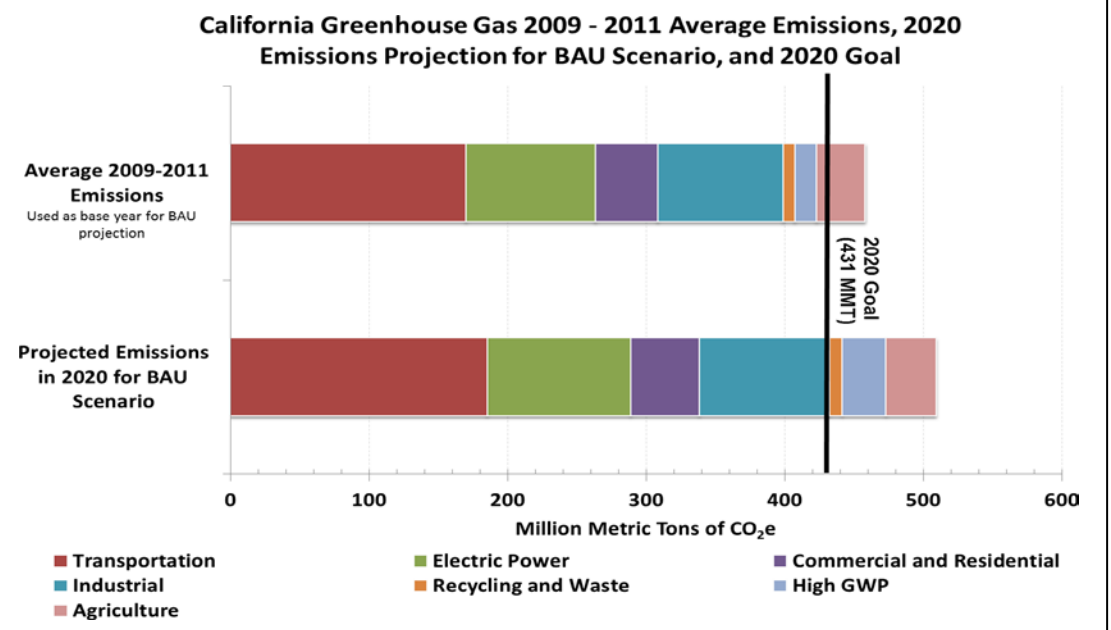
The AB 32 Scoping Plan and the subsequent updates contain the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the updated Scoping Plan, ARB released the GHG inventory for California.[1] ARB is responsible for maintaining and updating California's GHG Inventory per H&SC Section 39607.4. The associated forecast/projection is an estimate of the emissions anticipated to occur in the year 2020 if none of the foreseeable measures included in the Scoping Plan were implemented.

An emissions projection estimates future emissions based on current emissions, expected regulatory implementation, and other technological, social, economic, and behavioral patterns. The projected 2020 emissions provided in Figure 3.3-1 represent a business-as-usual (BAU) scenario assuming none of the Scoping Plan measures are implemented. The 2020 BAU emissions estimate assists ARB in demonstrating progress toward meeting the 2020 goal of 431 $MMTCO_2e$.[2] The 2017 edition of the GHG emissions inventory (released June 2017) found total California emissions of 440.4 $MMTCO_2e$, showing progress towards meeting the AB 32 goals.

1 2017 Edition of the GHG Emission Inventory Released (June 2017): Website: https://www.arb.ca.gov/cc/inventory/data/data.htm.

2 The revised target using Global Warming Potentials (GWP) from the IPCC Fourth Assessment Report (AR4).

Figure 3.3-1 2020 Business as Usual (BAU) Emissions Projection 2014 Edition



Website: https://www.arb.ca.gov/cc/inventory/data/bau.htm

The 2020 BAU emissions projection was revisited in support of the First Update to the Scoping Plan (2014). This projection accounts for updates to the economic forecasts of fuel and energy demand as well as other factors. It also accounts for the effects of the 2008 economic recession and the projected recovery. The total emissions expected in the 2020 BAU scenario include reductions anticipated from Pavley I and the Renewable Electricity Standard (30 $MMTCO_2e$ total).

With these reductions in the baseline, estimated 2020 statewide BAU emissions are 509 $MMTCO_2e$.

3.3.2.1 Project Analysis

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 contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other

sources of GHG.[1] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(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 to make this determination is a difficult, if not impossible, task.

GHG emissions for transportation projects can be divided into those produced during operations and those produced during construction. The following represents a best faith effort to describe the potential GHG emissions related to the proposed project.

3.3.2.2 Operational Emissions

The Build Alternative involves shoulder widening and striping for bike lanes, drainage improvements, and undergrounding existing overhead utilities. While construction GHG emissions would be unavoidable, the operations of the Build Alternative have low- to no-potential for an increase in GHG emissions.

3.3.2.3 Construction Emissions

Construction GHG emissions would result from material processing, on-site construction equipment, and traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be offset to some degree by longer intervals between maintenance and rehabilitation activities.

An estimate of the construction emissions was conducted using the Road Construction Emissions Model that was developed by the Sacramento Metropolitan

[1] This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the US Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

Air Quality Management District (SMAQMD). The SMAQMD Road Construction Emission Model is included in the models recommended by SCAQMD for roadway projects.[1] GHG emissions related to the roadway widening would be mainly from CO_2, nitrous oxide (N_2O), and methane (CH_4) (reported together as carbon dioxide equivalent, CO_2e) contained in exhaust from off-road diesel construction equipment/ vehicles (e.g., idling and operation of backhoes, cranes, and drilling rigs), from on-road trucks used by vendors (to deliver materials to the site) and on-site workers, and from use of portable equipment (e.g., generators). Construction is expected to start in early 2021 and would continue for 26 months. Total GHG emissions from construction would be 1,161 metric tonnes (MT) CO_2e per year, totaling 2,321 MT CO_2e for the construction period. The Roadway Construction Emissions Model spreadsheet is included in Appendix H.

Implementation of the following standardized measures, some of which may also be required for other purposes such as storm water pollution control, will reduce climate change impacts resulting from construction activities:

- The construction contractor must comply with Caltrans Standard Specifications in Section 14-9, Air Quality, which specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.
- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by California Code of Regulations Title 17, Section 93114.
- A Transportation Management Plan to reduce congestion and idling during construction will be developed and implemented. To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

3.3.2.4 CEQA Conclusion

While the project will result in a slight increase in GHG emissions during construction, it is anticipated that the Build Alternative will not result in any increase

[1] Sacramento Metropolitan Air Quality Management District. *Air Quality Modeling.* Website: http://www.aqmd.gov/home/regulations/ceqa/air-quality-modeling (accessed February 20, 2017).

in operational GHG emissions. While it is Caltrans' 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 impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

3.3.2.5 Greenhouse Gas Reduction Strategies

Statewide Efforts

In an effort to further the vision of California's GHG reduction targets outlined an AB 32 and SB 32, Governor Brown identified key climate change strategy pillars (concepts). These pillars highlight the idea that several major areas of the California economy will need to reduce emissions to meet the 2030 GHG emissions target. These pillars are (1) reducing today's petroleum use in cars and trucks by up to 50 percent; (2) increasing from one-third to 50 percent our electricity derived from renewable sources; (3) doubling the energy efficiency savings achieved at existing buildings and making heating fuels cleaner; (4) reducing the release of methane, black carbon, and other short-lived climate pollutants; (5) managing farm and rangelands, forests, and wetlands so they can store carbon; and (6) periodically updating the State's climate adaptation strategy, *Safeguarding California*.

Figure 3.3-2 The Governor's Climate Change Pillars: 2030 Greenhouse Gas Reduction Goals

The transportation sector is integral to the people and economy of California. To achieve GHG emission reduction goals, it is vital that we build on our past successes in reducing criteria and toxic air pollutants from transportation and goods movement activities. GHG emission reductions will come from cleaner vehicle technologies, lower-carbon fuels, and reduction of vehicle miles traveled. One of Governor Brown's key pillars sets the ambitious goal of reducing today's petroleum use in cars and trucks by up to 50 percent by 2030.

Governor Brown called for support to manage natural and working lands, including forests, rangelands, farms, wetlands, and soils, so they can store carbon. These lands have the ability to remove carbon dioxide from the atmosphere through biological processes, and to then sequester carbon in above- and below-ground matter.

Caltrans Activities

Caltrans continues to be involved on the Governor's Climate Action Team as the ARB works to implement EOs S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. EO B-30-15, issued in April 2015, and SB 32 (2016), set a new interim target to cut GHG emissions to 40 percent below 1990 levels by 2030. The following major initiatives are underway at Caltrans to help meet these targets.

California Transportation Plan (CTP 2040)

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce GHG emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future statewide, integrated, multimodal transportation system. It serves as an umbrella document for all of the other statewide transportation planning documents.

SB 391 (Liu 2009) requires the CTP to meet California's climate change goals under AB 32. Accordingly, the CTP 2040 identifies the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the state's transportation needs.

While MPOs have primary responsibility for identifying land use patterns to help reduce GHG emissions, CTP 2040 identifies additional strategies in Pricing, Transportation Alternatives, Mode Shift, and Operational Efficiency.

Caltrans Strategic Management Plan

The Strategic Management Plan, released in 2015, creates a performance-based framework to preserve the environment and reduce GHG emissions, among other goals. Specific performance targets in the plan that will help to reduce GHG emissions include:

- Increasing percentage of non-auto mode share
- Reducing VMT per capita
- Reducing Caltrans' internal operational (buildings, facilities, and fuel) GHG emissions

Funding and Technical Assistance Programs

In addition to developing plans and performance targets to reduce GHG emissions, Caltrans also administers several funding and technical assistance programs that have GHG reduction benefits. These include the Bicycle Transportation Program, Safe Routes to School, Transportation Enhancement Funds, and Transit Planning Grants. A more extensive description of these programs can be found in *Caltrans Activities to Address Climate Change* (2013).

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012) is intended to establish a department policy that will ensure coordinated efforts to incorporate climate change into departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013) provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce GHG emissions resulting from agency operations.

Project-Level GHG Reduction Strategies

The following measures will also be implemented in the project to reduce GHG emissions and potential climate change impacts from the project.

- The project will widen shoulders to 8 ft, pave, and stripe to accommodate a Class II bike lane. Facilities that support alternative transportation may help reduce GHG emissions by reducing automobile trips.
- The construction contractor must comply with Caltrans Standard Specifications for emissions reduction, including those in Section 14-9, Air Quality. Section 14-9 specifically requires compliance by the contractor with all applicable laws and regulations related to air quality, including air pollution control district and air quality management district regulations and local ordinances.

- Construction equipment and vehicles will be properly tuned and maintained. All construction equipment will use low sulfur fuel as required by California Code of Regulations Title 17, Section 93114.
- A Transportation Management Plan to reduce congestion and idling during construction will be developed and implemented. To the extent feasible, construction traffic will be scheduled and routed to reduce congestion and related air quality impacts caused by idling vehicles along local roads during peak travel times.

Adaptation Strategies

"Adaptation strategies" refer to how Caltrans and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage—or, put another way, planning and design for resilience. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and their intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. These types of impacts to the transportation infrastructure may also have economic and strategic ramifications.

Federal Efforts

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the CEQ, the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011[1], outlining the federal government's progress in expanding and strengthening the nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provided an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as fresh water, and providing accessible climate information and tools to help decision-makers manage climate risks.

[1] The White House President Barack Obama Council on Environmental Quality, Climate Change Resilience. Website: https://obamawhitehouse.archives.gov/administration/eop/ceq/initiatives/resilience.

The federal Department of Transportation issued *U.S. DOT Policy Statement on Climate Adaptation* in June 2011, committing to "integrate consideration of climate change impacts and adaptation into the planning, operations, policies, and programs of DOT in order to ensure that taxpayer resources are invested wisely and that transportation infrastructure, services and operations remain effective in current and future climate conditions."[1]

To further the DOT Policy Statement, on December 15, 2014, FHWA issued order 5520 (*Transportation System Preparedness and Resilience to Climate Change and Extreme Weather Events*).[2] This directive established FHWA policy to strive to identify the risks of climate change and extreme weather events to current and planned transportation systems. The FHWA will work to integrate consideration of these risks into its planning, operations, policies, and programs in order to promote preparedness and resilience; safeguard federal investments; and ensure the safety, reliability, and sustainability of the nation's transportation systems.

FHWA has developed guidance and tools for transportation planning that fosters resilience to climate effects and sustainability at the federal, state, and local levels.[3]

State Efforts

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California's vulnerability to sea-level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea-level rise and directed all state agencies planning to construct projects in areas vulnerable to future sea-level rise to consider a range of sea-level rise scenarios for the years 2050 and 2100, assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea-level rise. Sea-level rise estimates should also be used in conjunction with information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, and storm surge and storm wave data.

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1 USDOT FHWA Office of Planning, Environment, & Realty (HEP) Sustainability, Resilience. Updated September 6, 2018. Website: https://www.fhwa.dot.gov/environment/sustainability/resilience/policy_and_guidance.

2 Website: https://www.fhwa.dot.gov/legsregs/directives/orders/5520.cfm.

3 Website: https://www.fhwa.dot.gov/environment/sustainability/resilience/.

Governor Schwarzenegger also requested the National Academy of Sciences to prepare an assessment report to recommend how California should plan for future sea-level rise. The final report, *Sea-Level Rise for the Coasts of California, Oregon, and Washington* (Sea-Level Rise Assessment Report)[1] was released in June 2012 and included relative sea-level rise projections for the three states, taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge, and land subsidence rates; and the range of uncertainty in selected sea-level rise projections. It provided a synthesis of existing information on projected sea-level rise impacts to state infrastructure (such as roads, public facilities, and beaches), natural areas, and coastal and marine ecosystems; and a discussion of future research needs regarding sea-level rise.

In response to EO S-13-08, the California Natural Resources Agency (Resources Agency), in coordination with local, regional, state, federal, and public and private entities, developed *The California Climate Adaptation Strategy* (Dec 2009),[2] which summarized the best available science on climate change impacts to California, assessed California's vulnerability to the identified impacts, and outlined solutions that can be implemented within and across state agencies to promote resiliency. The adaptation strategy was updated and rebranded in 2014 as *Safeguarding California: Reducing Climate Risk* (Safeguarding California Plan).

Governor Jerry Brown enhanced the overall adaptation planning effort by signing EO B-30-15 in April 2015, requiring state agencies to factor climate change into all planning and investment decisions. In March 2016, sector-specific Implementation Action Plans that demonstrate how state agencies are implementing EO B-30-15 were added to the Safeguarding California Plan. This effort represents a multi- agency, cross-sector approach to addressing adaptation to climate change-related events statewide.

EO S-13-08 also gave rise to the *State of California Sea-Level Rise Interim Guidance Document* (SLR Guidance), produced by the Coastal and Ocean Working Group of

1 *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at: http://www.nap.edu/catalog.php?record_id=13389.

2 State of California. California Climate Change, California Climate Adaptation Strategy. 2011-2018. Website: http://www.climatechange.ca.gov/adaptation/strategy/index.html.

the California Climate Action Team (CO-CAT), of which Caltrans is a member. First published in 2010, the document provided "guidance for incorporating sea-level rise (SLR) projections into planning and decision making for projects in California," specifically, "information and recommendations to enhance consistency across agencies in their development of approaches to SLR." The March 2013 update[1] finalizes the SLR Guidance by incorporating findings of the National Academy's 2012 final Sea-Level Rise Assessment Report; the policy recommendations remain the same as those in the 2010 interim SLR Guidance. The guidance will be updated as necessary in the future to reflect the latest scientific understanding of how the climate is changing and how this change may affect the rates of SLR.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation, and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. Caltrans is actively engaged in in working towards identifying these risks throughout the state and will work to incorporate this information into all planning and investment decisions as directed in EO B-30-15.

To assess whether an individual project will potentially be impacted by SLR, a three-part screening criteria has been developed by the Caltrans Climate Change Workgroup, and the HQ Divisions of Transportation Planning, Design, and Environmental Analysis.[2]

The screening involves examination for the following three questions:

1. Is the project located on the coast or in an area vulnerable to SLR?
2. Will the project be impacted by the stated SLR?
3. Is the design life of the project beyond year 2030?

[1] Website: http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/.

[2] Caltrans. 2011. *Guidance on Incorporating Sea Level Rise*. Website: http://www.dot.ca.gov/ser/downloads/sealevel/guide_incorp_slr.pdf, accessed December 2017.

The *State of California Sea-Level Rise Guidance Document*[1] developed by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) shows a maximum projected SLR of 61 centimeters (0.6 meters; 2.0 ft) between the baseline year of 2000 and 2050 in the project vicinity. The design year of the project is 2043. Based on SLR maps shown on the Cal-Adapt website[2] and the NOAA Sea Level Rise Viewer,[3] the proposed project would be outside the areas affected by SLR of 61 centimeters and areas inundated between zero and four meters (13 ft) during a 100-year storm. Therefore, the project would not be affected by the stated SLR, and does not warrant further consideration of SLR.

1 The Coastal and Ocean Resources Working Group for the Climate Action Team (CO-CAT). 2013. *State of California Sea-Level Rise Guidance Document*. Website:http://www.opc.ca.gov/webmaster/ftp/pdf/docs/2013_SLR_Guidance_Update_FINAL1.pdf, accessed December 2017. Website: http://www.climatechange.ca.gov/adaptation/strategy/index.html. Website: http://www.opc.ca.gov/2013/04/update-to-the-sea-level-rise-guidance-document/.

2 Cal-Adapt. 2017. Sea Level Rise. Website: http://cal-adapt.org/tools/slr-calflod-3d/, accessed December 2017.

3 Website: https://coast.noaa.gov/slr/#/layer/slr/6/-13107653.63932376/3970847.716368506/14/satellite/none/0.8/2050/interHigh/midAccretion.